

Open Banking/ Open Finance Quarterly Trends Q2 2021



Data and Trends Report

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Platformable Mission

We support open ecosystems that:

- Build economic opportunities;
- Solve complex problems;
- Enable everyone to participate and co-create their own value.







Sharing Best Practices



Connecting Partners

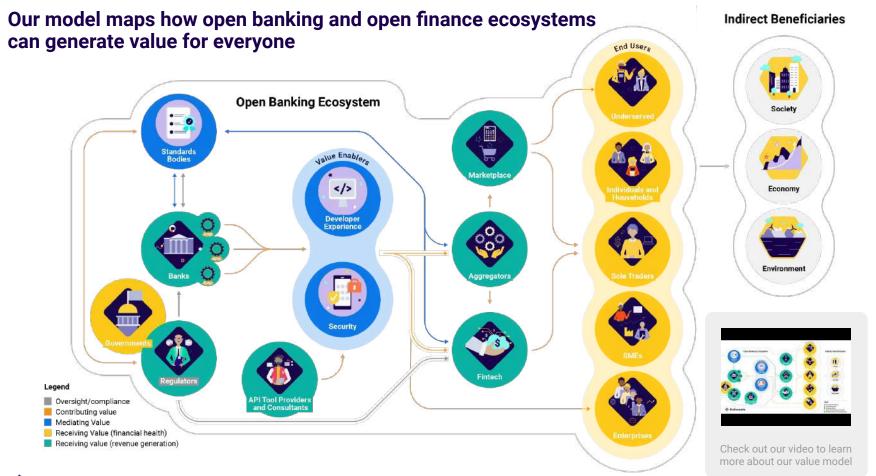


Measuring Value

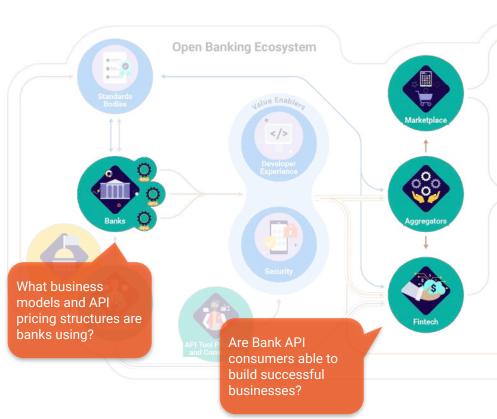
We do it by:

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Is wider society, the economy and the environment benefiting from these new financial systems?

Are end users (individuals, businesses and enterprises) increasing financial health?

Receiving value (revenue generation)



Q2 2021 Key Questions



What business models are most effective?

How do we transform into a platform?

Who should we partner with?

What sort of API products should we build and how should we price them?



Where are the greatest opportunities?

Which markets are ready to enter?

How are competitors pricing their products?

What product and feature innovations are most promising?

What is the addressable market size of fintech products?



Is open banking and open finance making a difference to financial inclusion levels?

Are vulnerable populations able to access financial services and build their financial health?

Are financial services extracting value from low and middle income countries or are they local economic enablers?

Q2 2021 Key Questions



Fintech associations

Are members able to build viable businesses by using open banking APIs?

What partnerships could members be pursuing?

Where are their greatest challenges and obstacles?



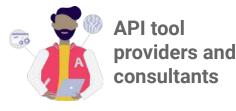
Banking regulators

Are open banking implementations meeting desired goals of the regulatory environment?

Are there any concerns?

Is everyone benefiting?

Are new open banking and open finance systems addressing wider societal benefits and enabling sustainability of economic resources?



What features do bank and fintech clients need in order to use my product?

Where are the opportunities to sell?



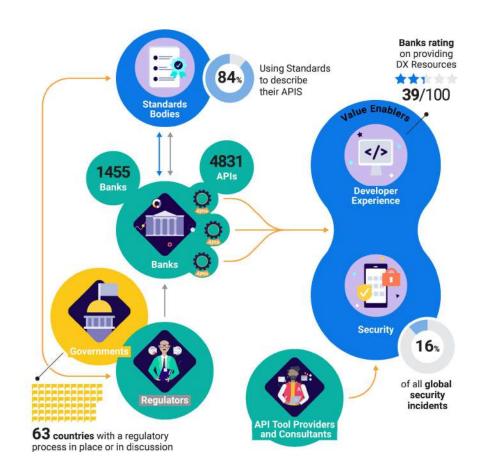
The open banking landscape

Open banking is unfolding at an annual growth rate of 489%...

...but the global movement is still just beginning.

Supply-side characteristics include:

- Regulations: We have identified 63 countries where open banking regulations have been introduced or are under discussion. 59 are either in implementation stages or under consultative review at present.
- Standards: Globally, 84% of bank platforms are using the OpenAPI Specification standard to describe their APIs, which is facilitating rapid adoption by third parties, as it helps potential API consumers more readily understand the bank APIs.
- Availability: We count 1455 banking platforms that make APIs available. Collectively, they publish 4,831 Open Banking API products as at Q2 2021, this is an annual growth rate of 489%.
- Ease of use: Overall, however, banks are not making it easy for API consumers to use their APIs. Globally, on average, they rate at 39/100 for providing DX resources.
- Security risks: In Q2, there were 6 security incidents involving banks and fintech, representing 16% of all industry-related security breaches.

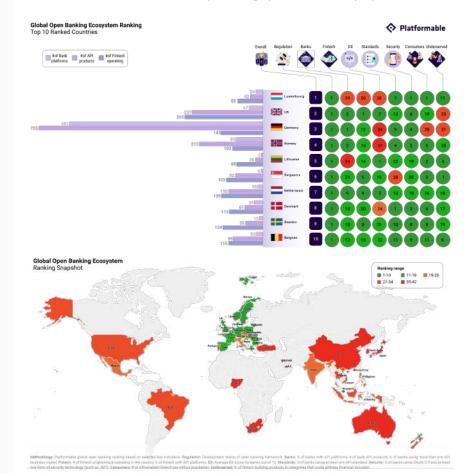


Europe, led by Luxembourg, UK, and Germany, is the most enabling ecosystem worldwide

We believe for an open banking/open finance ecosystem to thrive, a number of conditions must be met. Our global ranking analysis - based on selected indicators reflective of these conditions - places 9 UK and European countries in top 10 most enabling open banking ecosystems, alongside Singapore.

- ✓ Supportive regulations in place: PSD2 mandate has set a clear runway for open banking to take off in the UK and Europe, while Singapore has enabled open banking with a voluntary framework.
- ✓ Banks building platform business models: Germany, Norway, and UK lead in bank platform maturity thanks to: 1) a small number of universal banks developing strategic API-based platforms, and 2) a large number of regional saving, co-operative banks complying with PSD2.
- ✓ Fintech ready to build products with bank APIs: Of the top 10, UK and Singapore rank the highest on fintech readiness. Both UK and Singapore have relatively high absolute numbers of fintech originating and operating, although Singapore have less fintech offering their own APIs/platforms.

- ✓ Developer experience fostered for builders: Lithuania and Netherlands rank the highest. Banks in these countries tend to have well-described use cases, onboarding guides and other developer resources.
- ✓ Open standards adopted to speed up development: Most of top 10, except for Singapore, have at least 80% of all bank platforms following an open banking API standards - Berlin Group is de facto.
- ✓ Security measures incorporated to give confidence: Most of top 10 have at least 70% of all bank platforms using one or more security measures aside from 0Auth 2.0. The use of standards helps.
- ✓ Products built with open APIs meeting consumer needs: Smaller populations of Luxembourg and Lithuania have contributed to these countries' apparent high ranks.
- ✓ Products built with open APIs accessible to the underserved: Each of top 10 has at least 68% of fintech built on open banking APIs that could be used to improve financial inclusion. Singapore stands out with 93%.



Regulatory focus is shifting to open finance and data sharing in wider economy

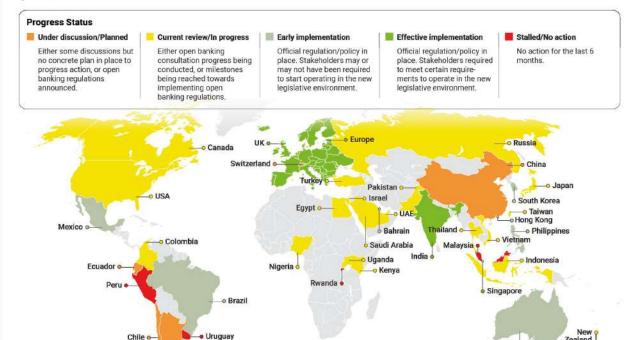
While there is a mix of industry- and government-led initiators, each guarter sees more efforts to formalise and regulate the open banking environment.

- The open banking pioneers Europe and the UK are now looking to widen their regulatory framework to open finance, with the regulators reviewing proposals put forward by recent public consultations.
- Elsewhere, open banking regulations are emerging in Australia, Bahrain, Brazil, Hong Kong, India, Mexico, Nigeria, Saudi Arabia, Singapore, South Korea, and more recently, Indonesia, the Philippines and the UAE. Some jurisdictions aim directly towards open finance (e.g. Brazil, Nigeria, Philippines) or even wider cross-sector data sharing (Australia). Others take a more tentative approach, starting with bank product information and payment services (Indonesia, Mexico, UAE).
- The US, Canada, Colombia and Russia also moved forward with the public consultation process on open banking in Q2 2021. The US, which has traditionally relied on industry-led standards, may soon be welcoming a more mandated framework following the recent public consultation on proposed rulemaking for consumer access to financial records.
- With the Canadian second government review of open banking still in progress, Retail Payments Activities Act has been introduced aiming to encourage more fintech participation. Canada is considering a hybrid framework for open banking.

Current progress of open banking regulations around the globe

02 2021





Methodology: Platformable reviews progress and activities of all open banking regulations around the globe and assesses progress of all actions.

Argentina

Zealand

Australia

Another round of regulatory push towards an open banking/open finance framework around the globe in Q2 2021

Key Open Banking Regulatory Development 02 2021





The ACCC published compliance guidance for data holders in the banking sector on 3 May. CDR rules & standards design papers released for public consultation, feedback received by 26 May. The Treasury and the Data Standards Body sought inputs on an implementation of:

- · a peer-to-peer data access model in the energy sector
- an 'opt-out' data sharing model for joint accounts in the banking and energy sectors.



Bank Indonesia revealed that an instant payment system BI-FAST and Open API standards are being developed





Issued Open Finance Framework, which will govern the customer-allowed sharing of financial data.



Bank of Russia started public consultation on "Ecosystems: Regulatory Approaches" on 2 April.





The European Banking Authority published a report on PSPs' SCA readiness on 11 June, noting that some jurisdictions not yet met the 30 April 2021 compliance deadline.



Open Banking Brazil published the security and identity standards on 20 May. SUSEP called for public consultation on an Open Insurance framework. Feedback received by 25 May. The Central Bank of Brazil has also postponed the full operation of open banking by 9 months.



National Assembly unanimously approved Data Protection Law, which is based on the EU General Data Protection Regulation.



Banks started sharing product and service data on 5 June.



The Financial Services Regulatory Authority of Abu Dhabi Global Market introduced a new regulatory framework to supervise TPP fintech



Bank of Uganda launched regulatory sandbox on 15 June, allowing fintech start-ups to test their innovative financial solutions in a controlled environment



Competition and Markets Authority examined proposals put forward during its consultation into the future of the Open Banking Implementation Entity.

Call for input on staging | Pensions Dashboards Programme also opened for public consultation.



Canada introduced Retail Payments Activities Act on 27 May, setting out the general framework for the regulation of retail payments activities in the country with aim to encourage more competition from fintech.



The Consumer Financial Protection Bureau reviewed proposals put forward during the public consultation on Proposed Rulemaking on Consumer Access to Financial Records.

USA

Methodology: Platformable reviews progress and activities of all open banking regulations around the globe and assesses progress of all actions



Key markets across the globe aim to achieve an open framework in the coming year

Several **Asian Pacific** countries are pressing on with their open banking agenda. Full implementation is set for 2022.

- New Zealand is looking to establish a Consumer Data Right framework similar to Australia.
- Indonesia is expecting to fully launch the <u>instant</u> payment system BI-FAST and Open API Standards.
- Philippines plans to implement its <u>Open Finance</u> framework with a tiered approach.

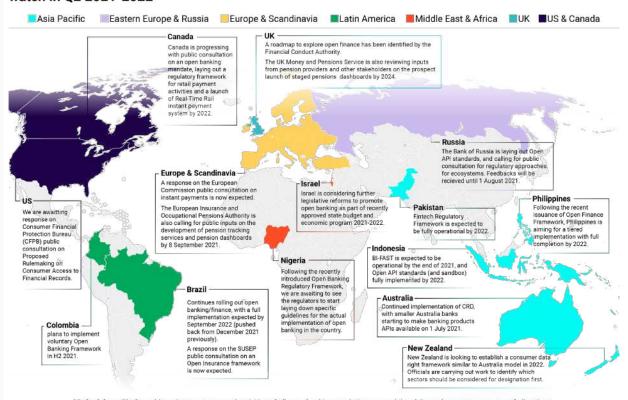
UK and European regulators have mapped out next steps to create open finance regulatory system (<u>UK</u>) in a wider context of <u>UK Smart Data initiatives</u> and <u>European</u> <u>Commission Digital Finance Strategy</u>. Relatedly, the UK Money and Pensions Service is reviewing stakeholder inputs on a <u>pensions dashboards ecosystem by 2024</u>, and the European Insurance and Occupational Pensions Authority is receiving <u>feedback on a pension tracking</u> <u>services and pension dashboards</u> by 8 September.

Brazil continues to roll out open banking despite some delay in full implementation expected. We are also excited to see next steps following recent public consultation on open insurance by the Superintendence of Private Insurance (SUSEP). Colombia is another Latin American market to watch given ongoing progress towards an expected voluntary framework later this year.

For **North America**, we still await further news following the US Consumer Financial Protection Bureau's recently completed <u>Advance Notice of Proposed Rulemaking for Consumer Access to Financial Records</u> and Canada oppoing second government review of open banking.

Key Open Banking Regulatory Milestones to watch in O2 2021-2022





Methodology: Platformable reviews progress and activities of all open banking regulations around the globe and assesses progress of all actions

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Berlin Group still the de facto Open Banking API standard

The Berlin Group continues to lead globally as a de facto API standard for open banking, and is used at times in conjunction with country-level standards. In some Central & Eastern European countries (Czech Republic, Croatia, Poland, Slovakia), where regulators have been seeking to encourage a standardised approach by creating their own country-level standards, Berlin Group has also been used as foundation for these national guidelines. Some banks such as Unicredit are looking to decommission use of these national standards in favour of Berlin Group. While this implies further consolidation of Berlin Group standards, we expect limited impact on open banking development in these countries.

The Berlin Group is currently extending its NextGen PSD2 open banking framework into standards for open finance, placing high priority on account information extensions, payment extensions, trade extensions, API management and administration/registration services.

Fintech looking to build with bank APIs would do well to familiarise themselves with this standard to help understand how an individual bank's APIs are structured.

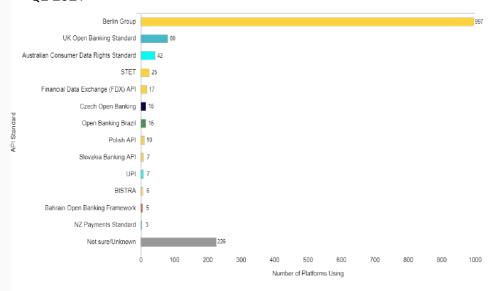
Fintech looking to build with bank APIs would do well to familiarise themselves with this standard to help understand how an individual bank's APIs are structured.

UK has developed a mature suite of open banking API standards which all banks in the UK must use. A similar approach is being taken in emerging regulatory schemes in Australia and Brazil.

In markets, where open banking is not mandated, or at least not yet, industry networks have stepped up to lay out industry-led standards. Examples are Financial Data Exchange in the US (see next page for more information) and Open Banking Project in Switzerland.

Global Open Banking Platforms Use of API Standards

02 2021





Financial Data Exchange, the template for a non-regulated environment

Background information: Financial Data Exchange (FDX) has successfully brought banks and fintech together to use common API standards to build new financial products/services when there is no open banking mandate in the US. FDX standard is voluntary based and the organisation is funded by its members.

Currently FDX have approximately 170 members of all sizes, half of which are banks, including nine of the top 10 by total assets and banking associations. The rest includes fintech, aggregators, credit bureaus, card networks, trade associations and academics. Over 12 million of end users in the US have been converted to API-based data sharing from the FDX collaboration.

Originated to serve the US market, FDX has also been expanding its footprint to the neighbouring country Canada, where stakeholders are still in the wait for a regulatory framework for data sharing. Currently, 25% of FDX members are Canadian, including the five largest banks.

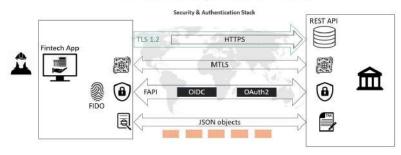
Financial products/services covered: FDX members primarily focus on removing screen scraping from the ecosystem and moving data requests to API-based model that is more controlled, safe, and at no cost to end users. As such, FDX standards have larger scope than most of other specs-including certificates of deposits, individuals retirement accounts, pension, insurance, mortgage, equity loans, auto loans, personal loans, tax forms, and various investment and brokerage data elements in addition to the more traditional products mandated in some other markets.

Standard & Security: Leveraging on its diversified membership, both in terms of sector and geography, FDX standards are broadly aligned with other emerging open API standards such as Berlin Group and UK Open Banking. FDX Open Finance spec currently has over 512 fields and growing.





Global Industry Standard Stack



Proprietary standards may create complexity as they are unevenly adopted in API design

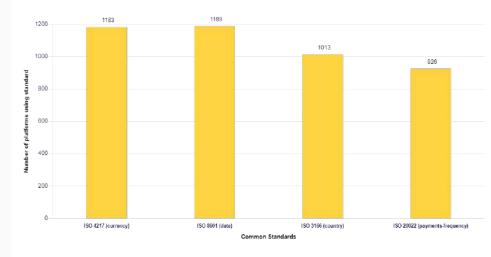
ISO standards may seem common but they are not ubiquitous, and the costs involved in their adoption may lead to some potentially unnecessary complexity. While the cost of a standards licence may be minimal, it automatically then triggers a legislative maintenance requirement to ensure a company is meeting the use of the standards licence appropriately. This differs from open standards where all stakeholders are encouraged to adopt agreed industry-led common approaches.

Using open standards offer economies of scale for new market entrants. Fintech are able to become viable businesses faster by integrating bank APIs that all have the same components like the way dates and currency are described. In turn, this can help banks grow their revenue and customer acquisition by leveraging their new open banking fintech partners who are able to get their products to market faster.

Between **70-82%** of all banking platforms in Q2 2021 of open banking APIs are standardising on country codes, currency codes and date formats - an increase from 45-75% in O1 2021.

This makes it easier for fintech to build out their applications to work with any bank's APIs as they do not need to add code that parse data into a standardized format before being able to use it in operational workflows.

Global Open Banking Platforms Use of ISO Standards in API Design 02 2021



Global open banking further becomes a foundation for building market-fit, meaningful financial products and services

As at the end of Q2 2021, we were tracking 1,455 open banking API platforms globally (up from 247 at Q2 2020), on which 4,831 API products are made available (up from 1,995 at Q2 2020).

Europe and Scandinavia, and Asia Pacific, lead both in banking platforms created and API products built, with 1,127 platforms opening 2383 APIs in Europe and 141 platforms offering 1,324 APIs in Asia. While most smaller regional banks in Europe still offer PSD2 APIs, their larger multinational peers are increasingly focusing on APIs that allow more market-fit products and service to be built. In Asia, banks are consolidating API products into more use-case oriented collections to grow their platforms.

It's interesting to see that more banking platforms has been created in the UK than US & Canada (47 versus 28 in Q2 2021), but both offer the same number of API products (237 APIs). The US industry-led model has a wider scope than the UK mandated framework at least up to now. That said, 50% of the US banking platforms are investment banks focused on creating enterprise and business services despite of some having launched BaaS platforms for retail clients (e.g. Marcus by Goldman Sachs).

Latin America and Middle East & Africa are catching up fast in the global open banking/open finance ecosystem, with 450 APIs offered on 68 platforms in the Middle East & Africa and 182 APIs on 41 platforms in Latin America.

Global Open Banking API Platforms and their API Products Q2 2021 (N =1455)

Platformable



Global Summary

1455 Open Banking Platforms

4831 Open Banking April Products

489% Annual Growth Rate (compared to Q2 2020)



API Specifications help improve developer experience and operational efficiency

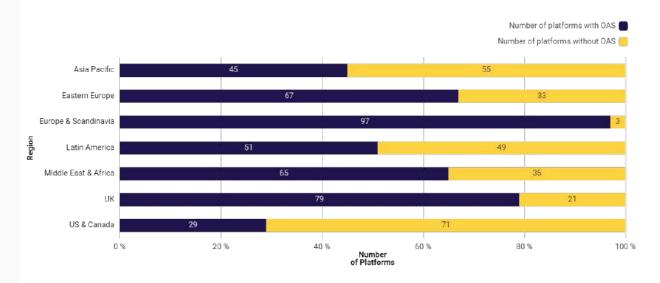
The OpenAPI Specification (OAS) is a way to describe an API in a standardised way that developers can understand. It is written in a machine-readable format so that it can be included in software development tools when fintech are building applications using a bank's open APIs.

Internally, a bank's API team can put the OAS into their API lifecycle tooling so that at testing and design stages, they can check whether the API being designed matches the original intention as described in the OAS.

When the API is made available externally, a fintech developer can then open the OAS file, and because it is laid out in a consistent, standardised manner, they can quickly understand the main functionalities (and any restrictions) of the API. They can also integrate the OAS file into their software tooling so that API endpoints (or resources) are more easily visible in their tooling, and their software development environment can alert them if they attempt to use the API in a way that is out of scope.

87% of global open banking platforms are describing their APIs using the OAS standard (84% in Q1 2021). We see there is the opportunity to increase OAS adoption in Asia Pacific and Latin America as key countries press on with their open banking/open finance agendas, laying out open standards. We expect this to accelerate ecosystem growth in the regions in the coming year - the same way UK Open Banking API standard helps enable rapid open banking and fintech ecosystem growth in the UK to date.

Global Open Banking Platforms Use of OpenAPI Specification Q2 2021 (N=1455)



Open Banking platforms continue to climb

The Europe & Scandinavia region still at the forefront in open banking platform deployment

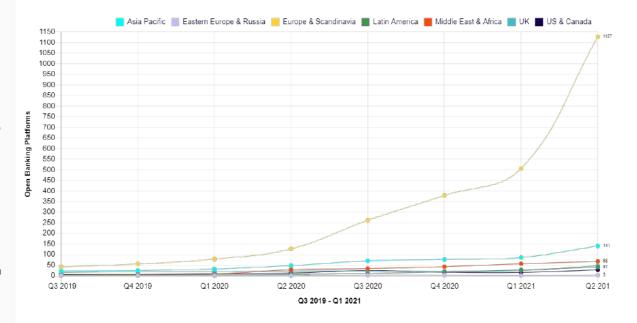
We track new bank platforms as they are published, but we also review clusters of countries in each region every quarter to see if any banks have quietly launched a platform. This quarter, we continued to review smaller banks in Europe and the UK, where more regional cooperatives and savings banks in Germany and France, in particular, have now published their API platforms. This has largely contributed to our uptick in data on European and Scandinavian banks in O2 2021.

Continued steady growth in API platforms in the rest of the world, largely driven by Asia Pacific and Latin America.

- API platforms grew by sixfolds over Q2 2020 in Latin America (from 6 to 41), mostly attributable to participant banks in Brazil continuing to roll out new API platforms under the new regulatory framework and corresponding to new open banking standards. Similarly, banks in Mexico have also started sharing products and services APIs.
- In Asia Pacific, API platforms grew 194% year-on-year in Q2 2021 (from 48 to 141), largely reflecting continued deployments in Australia under the CRD framework.
- In North America, API platforms doubled on Q2 2020 (from 13 to 28). The industry standard partner FDX continues to support the regional open banking development as stakeholders wait for further regulatory developments.
- In Middle East & Africa, API platforms also doubled on Q2 2020 (from 29 to 68). Turkey and Nigeria were key drivers of this annual growth, but the quarterly increase mostly came from HSBC's launch of new global open banking platform, which incorporated its businesses in the region.

Open Banking Platform Growth by Region

Q3 2019 - Q2 2021



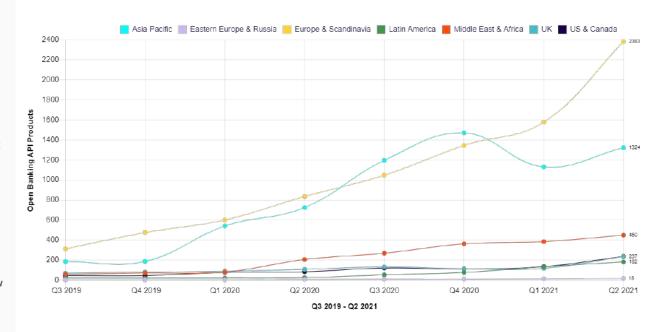
API products further surge on growing platforms

Growth in API products in Q2 2021 largely reflected the continued deployment of open banking platforms in the regulated markets. In Europe, API products grew 185% on Q2 2020, chiefly due to over 500 new platforms created among regional cooperative and saving banks in Germany. In Asia Pacific, API products grew 83% on Q2 2020 as smaller banks in Australia started to share products APIs, and the big four working to share customer APIs. Similarly, API products surged 600% year-on-year in Q2 2021 in Latin America, with banks in Brazil and Mexico rolling out open banking platforms under the new frameworks.

In Europe, one of the expectations of open banking is that it will enable smaller market entrants to compete. This may end up being the case with fintech able to build off open banking APIs in future, but we are already seeing that it is the larger banks and cross-country banking groups that are offering more diverse API products while smaller banks are simply meeting PSD2 requirements. If this continues, larger banks will win the fintech partners, driving the smaller banks even smaller.

In Middle East & Africa, API products growth of the past three months is skewed by HSBC's recent launch of its new open banking platform, which in our view, is very similar to the one developed by Standard Chartered. The new platform offered 67 (15%) of the region's APIs at the end of Q2 2021.

Open Banking API Products Growth by Region 03 2019 - 02 2021



Accounts and payments still take the lion's share, but more API product diversification is underway

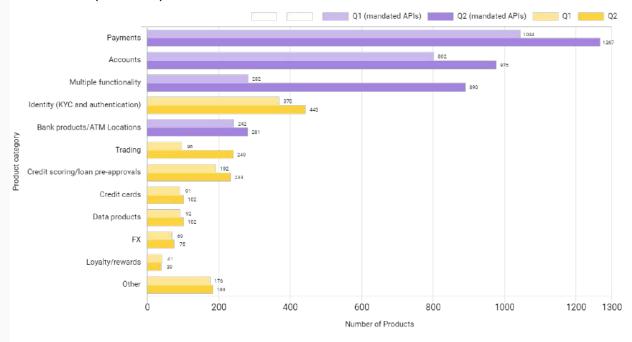
The bulk of new open banking APIs created in Q2 2021 were still payments and accounts (or APIs with both functionalities). This reflected regulatory requirements in many regions, particularly Europe, UK, Australia, and more recently Brazil, where banks have been required to make these capabilities available via APIs. The same case goes with bank product information APIs. Quarter on quarter, accounts, payments, multiple functionalities and bank products APIs grew 22%, 21%, 216%, and 16% in Q2 2021 respectively. The significant surge in multiple functionality APIs were largely attributable to PSD2 APIs developed by regional cooperative and saving banks in Germany.

Encouragingly, we saw another substantial uptick in quarterly growth of product APIs beyond these traditional products in Q2 2021: credit scoring APIs rose 22% and identity APIs up by 20%, indicative of banks' focus on driving new customer acquisition. Trading APIs also grew by 150%, although much of this is skewed by HSBC's new platform. As regulatory focus is shifting more towards open finance and open data in wider economy, we expect more banks globally to join the open ecosystem and offering more diversified and market-fit API collections in addition to these traditional capabilities.

(In the chart at right, those product APIs that tend to be mandated - payments, accounts, payments & accounts, and bank products - are shown in violet, while non-compulsory bank product APIs are shown in gold.)

Bank API Products by Category

Q2 2021 (N = 4,831)



Open banking API product innovation capacity is clearer in lesser regulated markets

Despite this new openness to creating product APIs outside regulatory requirements, the bulk of API product diversity is still occurring in markets where APIs are not regulated.

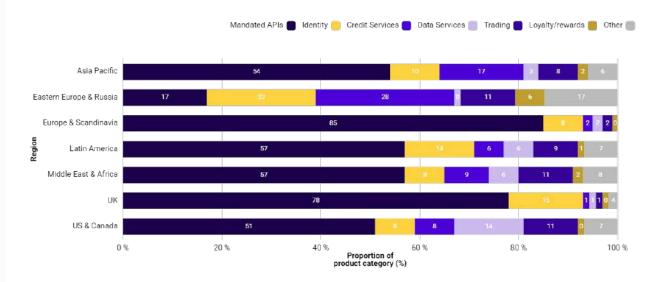
In Europe and the UK, mandated APIs still accounted for four-fifths of the product availability in Q2 2021, squeezing API product innovation into 20% of the offerings being made available by bank platforms. While a bulk of use cases may involve checking account balances or moving money, innovation also occurs when these functions are coupled with other capabilities like credit offerings, adding external data analysis, or enabling loyalty and rewards services.

In the US, reflecting the investment and commercial-led product offerings, products also reflect banking-as-a-service models where banks are encouraging large enterprises to offer banking and financial services to their own customers, underwritten by the bank. At end-Q2 2021, payments, accounts, payments and accounts, and bank products made up 51% of total APIs produced in the US & Canada.

Asia Pacific has been going through a consolidation of product offerings - a move from offering granular technical functionalities to grouping financial capabilities into more use case-oriented collections. The share of traditional APIs maintained at 54% of total APIs in Q2 2021. Similar trends were observed in Middle East & Africa, where 57% of total APIs were accounts, payments, payments and accounts and bank product.

Bank API Products by Category and Region

Q2 2021 (N = 4,831)



Banks and fintech can improve developer resources

In our view, there is still plenty of room for open banking and open finance to differentiate on the ease with which developers could build products on their platforms.

In most regions, fintech developer experience was higher, but only Latin America and Middle East & Africa saw one full point on average difference. We measure scores out of 15 based on three groupings:

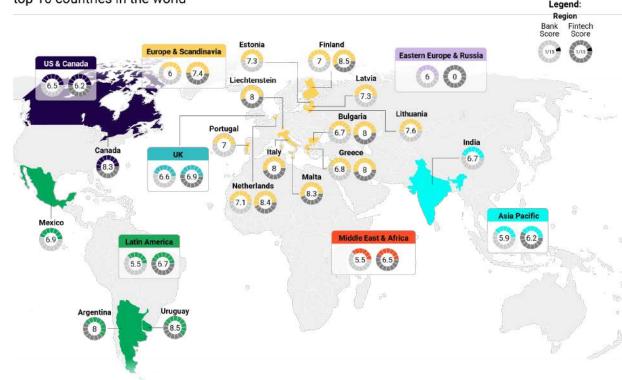
- onboarding support resources like a developer portal and sandbox environment:
- retention support resources like use case descriptions and getting started guides; and
- commercial support resources like clear pricing pages and marketplace opportunities to promote products built with the provider's APIs.

The top 10 countries with DX-friendly bank platforms in Q2 2021 included Baltic countries and the Netherlands: all are known for having vibrant open banking participants. Swedish banks have applied their best practices in banking platforms to their Baltic operations, which has contributed to the relatively high DX scores for these markets.

Anyone digging into the developer portals from banks in Finland and Greece would immediately understand why they feature in the top 10: they tend to have well-described use cases, onboarding guides and other developer resources. Portugal and Mexico are also in the top 10. In Portugal, many banks have relied on SIBS, a third-party LUXHUB-typed provider, for banking platform solutions with enhanced developer resources. In Mexico, large multinational banks have leveraged their global banking platform experience when launching the portals for their Mexican subsidiaries.

Average Fintech and Banks DX Score separated by region and by the top 10 countries in the world





Methodology: Platformable measures developer experience by scoring it on 15 parameters. These include the presence of developer portal, OAS, Guides & Tutorials, Blogs, Changelog, Status page and other important parameters, each having a weight of 1 towards the final score. Countries with less than 3 banking platforms have been excluded from this analysis.

Some security incidents involving fintech, but no significant open banking platform-related breaches reported in Q2 2021

Of notes are two incidents involving the pay-later platform LazyPay and a discount broker Upstox in India. LazyPay had an end point without an authentication, which made it vulnerable to attackers exploring personal identifiable information of its over 2.0 million users.

Cryptocurrency exchanges were targeted again in Q2 2021, highlighted with the case of the <u>Turkish BtcTurk</u>, which acknowledged

data leak of over 500,000 subscribers. Similarly, the Vietnamese cryptocurrency mining app for mobile users Pi Network may have also been connected to 17 GB worth of personal data leak.

Other incidents included API vulnerability found at the insurer <u>GEICO</u> and credit scoring company <u>Experian</u> in the US. Most of these incidents are examples of Broken object level authorisation OWASP API Security Risk.

Entity involved OWASP API Security Risk Top 10 classification Date Country Broken object level authorization, Broken GEICO function level authorization 9 April **u**pstox Broken object level authorization 12 April experian. Broken object level authorization 28 April Security misconfiguration, Improper assets 17 May management Security misconfiguration, Improper assets **BtcTurk** 18 May management LAZYPAY Broken authentication. Broken object level 16 June authorization

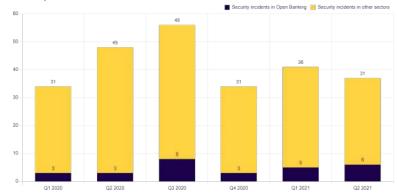
Market with API Security Incidents

Q2 2021 (N=37)



Quarterly number of API security incidents

Q1 2020 - Q2 2021



Methodology: Platformable tracks API-related security incidents uncovered globally on a quarterly basis, based on two key sources:

- Weekly API vulnerabilities blog posts from 42Crunch: APIsecurity.io
- Data breach weekly security report from gearbrain.com
- 3) Monthly list of data breaches and cyber attack itgovernance.co.uk

Open API standards encourage authentication protocols and security technologies being clearly baked into API design

Banks can apply industry best practices during the creation and publication of open APIs to ensure that they do not expose any vulnerabilities, as described in the Top 10 OWASP Open Web Application Security Risks.

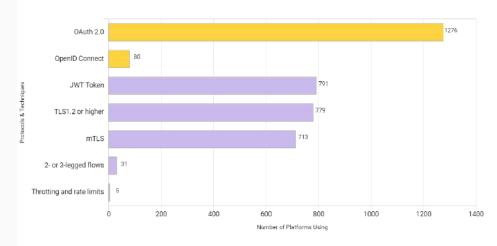
Authentication is the process of ensuring that external API consumers are checked and credentialled each time they attempt to make an API call. Robust authentication and authorisation processes ensure the bank can be confident they are only sharing the agreed data with the appropriately identified API consumer. 88% of banks indicate that they use OAuth 2.0 standards for authentication processes. Most of the key standards (UK Open Banking, Berlin Group, STET) recommend using OAuth 2.0 for authentication.

Other security technologies such as two-factor authentication (mTLS, TLS1.2 or higher) can be enforced when assessing how fintech manages the customer consent flow. These security technologies can ensure that a customer knowingly gives their consent to the fintech to use a bank's APIs to connect their product to the bank's customer. Approximately half of the bank platforms that we track globally indicate that they use at least one of these technologies. Most of these banks follow an emerging open API standard - most German regional, saving banks offer PSD2 APIs through a third provider platform that follows Berlin Group standards.

Other security measures such as rate limiting and throttling (which ensure that fintech are applying best practices when making API calls and not generating inefficient data retrievals) also help prevent brute force security attacks if an API is not protected against an excessive amount of calls or payload sizes. We saw few bank APIs specifically discussing rate limiting in API documentation.

Most Common Forms of Authorisation Protocols and Security

Q2 2021 (N=1455)



Open banking platforms are starting to monetise their APIs

Bank	Country		Predominant Business Model
AXIS BANK	•	India	Partnerships model
KBank 🥸		Thailand	Open and Premium APIs
COMMERZBANK 😃		Germany	Open and Premium APIs, Partnerships model
ING 🌺		Netherlands	Open and Premium APIs, Partnerships model
3 Banrisul	\(\)	Brazil	Partnerships model
NatWest Group		UK	Open and Premium APIs, Partnerships model

Definition Table



Open Platforms

Open banking platforms with a catalogue of APIs is available to test and use by any fintech (Production use must be approved by the bank)



Premium APIs

Banks make high value product APIs available to potential API consumers for a price, for example, a tiered subscription-based on number of API calls made (production use must be approved by the bank)



Partnership Platforms

Banks seek out fintech partners with non-competitive products and use partner APIs with selected fintech to extend product range to their consumers.



Incubators and Acquisitions

Banks offer a pool of funding to early stage startups to help them build new products and mentor/advisee them along the way. Banks acquire existing fintech in order to extend their API capabilities or infrastructure.



Banking-as-a-service

Banks provide full range of white-labelled core functionalities in order for fintech and enterprises to build their own customer-facing bank offerings built on the bank's infrastructure.

KBank (Thailand)

An encouraging platform initiative in a less regulated environment









KBank offers open APIs for payments and collection, client onboarding, and remittance mostly targeting SME/merchant and individual customers.

Developer portal is engaging, and is provided in both Thai and English, targeting both local and international developers.

KBank has a product landing page for each API, organised into introduction of the API and its use cases, and documentation (with API reference). This indicates the bank's understanding both commercial cases of an API program and the developer experience needs.

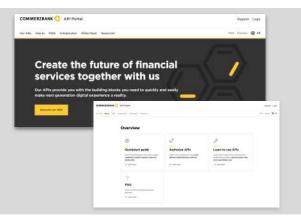
KBank does not provide the list of fintech partners that have built products with services with their APIs. Neither do they provide some specific use cases (with specific merchant customer example). This is an area for further improvement.

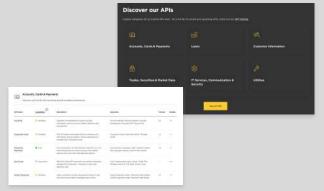
It's encouraging that KBank has initiated open banking despite a less supportive regulatory environment in Thailand. However, by fully embracing open ecosystem, it would be able to encourage more adoption of their APIs and hence more market-fit products provided to their bank target end customers.

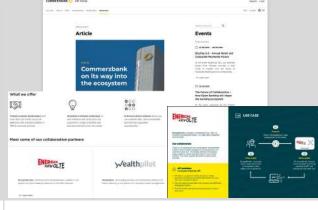
Commerzbank AG (Germany)

A platform catered to both end-users' and fintech partners' needs









Commerzbank has divided its API program into two streams: PSD2 APIs and Premium APIs, which suggests revenue sharing opportunities.

Commerzbank' developer portal landing page is organised into an API catalogue, Guidelines, and Partners and Use Cases, which is engaging, both technically and commercially.

Commerzbank's developer portal organises its API products into use-case collections, which implies the bank's commercial understanding of an API platform. It also shares details of forthcoming APIs in order to assist third parties design new products and services, and provides a wide range of Banking-as-a-Service APIs to corporate customers.

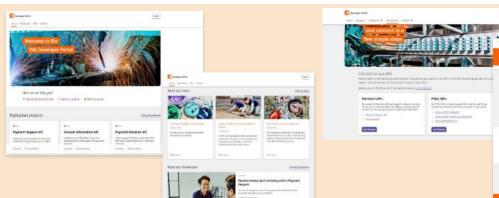
Commerzbank promotes the fintech partners that have built products and services with their bank APIs, with links to sites and related specific case studies.

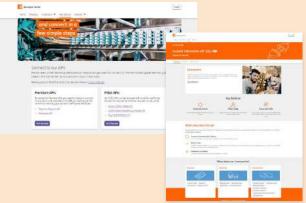
Commerzbank's selection of commercial use case areas, in which it seeks to collaborate with fintech partners, implies the customer-focused approach of the bank's API strategy. Of note is its partnership with the pre-paid power supplier Energie Revolte, which used Commerzbank's Corporate Payments API to help enable leaner and safer payment process for its SME customers.

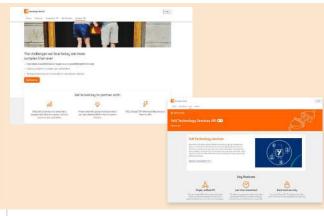
ING (Netherlands)

A partnership-based API program









ING has a full suite developer portal, including:

- Extensive API catalogue, including Partners APIs.
- Developer toolbox, including CLI on Github, SDK.
- Outlines ING's customer base (38 million spread across 40 countries) and partnership pool (200+), which indicates potential revenue pool.
- Blog posts, including updates of forthcoming APIs in order to assist third parties design new products and services

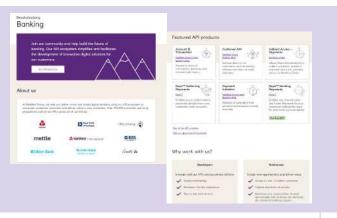
ING goes beyond regulatory compliance, also offering both PSD2 APIs and premium APIs. This suggests partnership-based business model with revenue sharing opportunities.

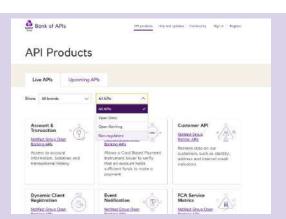
ING has a product landing page for each API, organised into an overview of the API and its use cases. documentation, and API reference, which indicates the bank's understanding of enhanced developer experience. ING has developed partnerships with account aggregators (Yolt), business software solution providers (FINN), and instant payment solution providers (Payvision) to build products and services targeting business customers. ING developer portal lists its partners' APIs with links to websites.

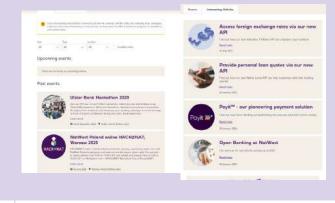
Recently, ING Venture has also invested in the Buy-now-pay-Later fintech Divido, and ING Bank is considering offering the services to its customers.

Natwest Group Xxx









Natwest Group specifically targets businesses, offering access to the banking group's 10 million customers. It pledges to partner with fintech for shared revenue creation.

Natwest Group's developer portal categories its API products into three groups: open data, open banking, and non-regulated. Half of non-regulated APIs are "Partner" APIs, including those providing access to customer identity and internal credit rating, illustrative loan quotes, and Natwest Group' internal financial crime database. Registration is required to use Partner APIs.

Up until the onset of the pandemic, Natwest Group was active in organising hackathons to identify and recruit potential fintech partners.

Community page includes updates on the group's featured and forthcoming APIs, and their use cases, which helps assist third party providers with product innovation ideas

It would be an area of improvement to publish the list of fintech partners that have worked with the group, with links to websites and contact details. This should help attract a larger community to the developer portal.



The Open Finance Landscape

Fintech platforms
Fintech building with open banking APIs

How we see open banking generating value for everyone

To date, Platformable's ecosystem model has tracked fintech built with open banking APIs. As regulations and use cases extend to open finance, we have widened our model to include:

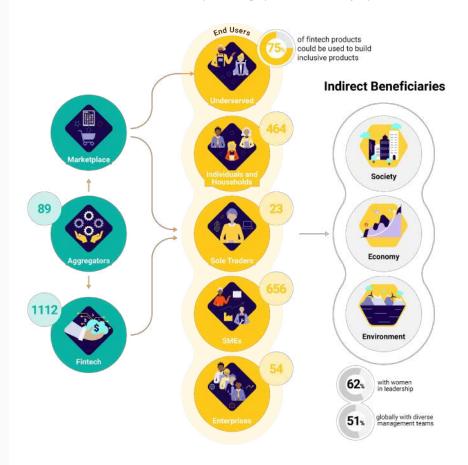
- open banking platforms,
- fintech built with open banking APIs and
- fintech that offer API platforms in their own right.

The next category we measure will be fintech and other services that build products and services with either open banking or open fintech platforms. Together, all of these stakeholders are part of the open banking/open finance ecosystem.

There are few models that comprehensively measure this entire ecosystem. We have the model, and continue to build out the datasets. We are excited to offer our Quarterly Trends subscription services, as that helps us expand our data collection and build out our data roadmap.

Demand-side characteristics include:

- Fintech: We currently track 1201 fintech that make use of open banking APIs or that are fintech platforms in their own right.
- Aggregators: Of these 1201, 89 are API aggregators specialising in harmonising fintech and bank APIs in order to speed up product development.
- Marketplaces: With the surge in embedded finance, it will be essential to start mapping how finance APIs are used in marketplaces.
- End Users: The bulk (55%) of fintech built on banking and finance APIs focus on the SME market.
- Indirect Beneficiaries: From a societal perspective, it appears that fintech is making some impact on diversity measures, with 62% of fintech appearing to have women in leadership positions and 51% having diverse management teams. We are tracking fintech with sustainability use cases, and will release data in our May use cases report.

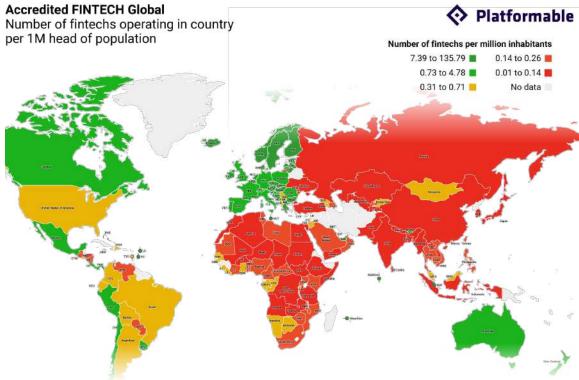


Singapore leading in Asia Pacific

The Top 10 countries with highest number of fintechs operating within the country (per million inhabitants) have remained the same (with the exception of Norway replacing Croatia) that are Luxembourg, Estonia, Cyprus, Latvia, Slovenia, Lithuania, Singapore, Ireland, Denmark & Norway. They have also seen growth in their numbers in Q2 2021, mostly attributing to established PSD2 in Europe and Singapore Financial Data Exchange (SGFinDex) in Singapore.

Singapore has been able to leverage its position as a financial hub in the region and lead in innovation through its unique approach to open-banking and democratizing data with SGFinDex. It offers a data aggregation platform that uses 'SingPass' digital identity for consent, giving access to an individual's financial information from participating financial institutions. It has triggered other countries in Asia Pacific to fastrack similar regulations in countries such as South Korea, Hong Kong, New Zealand, India and Australia.

It is challenging to compare those in the bottom 10 per million, as it includes countries with large populations like China, Pakistan, India, and Bangladesh, which by their sheer size skew indicators based on "per million inhabitants", although ideally residents would have just as much access to fintech as in less populated countries.



Methodology: Platformable tracks all fintech globally that are accredited or known to use bank APIs. We then review what products they are making available and tally them according to category, and we measure other characteristics such as their target customer segments and business model/monetisation approaches. We review each fintech at least once every three months.

Countries with population below 500.000 have been excluded from the rankings. Due to the large size of populations in countries such as China, India and Indonesia as well as countries with population less than 500.000, fintech per million head of population is more challenging as a comparative indicator.

Open Finance adoption in Latin America

To enable comparisons across different regions, we calculate fintech in the open banking ecosystem per million inhabitants (excluding countries with populations smaller than 500,000 inhabitants).

While **UK** still remains the region with the highest number of fintechs per 1 million inhabitants, there's also a noticeable growth in **Latin America**. While this region only has 0.38 fintechs per 1 million inhabitants, it has doubled from 0.19 in Q1 2021 indicating that financial institutions in the region have been embracing open finance.

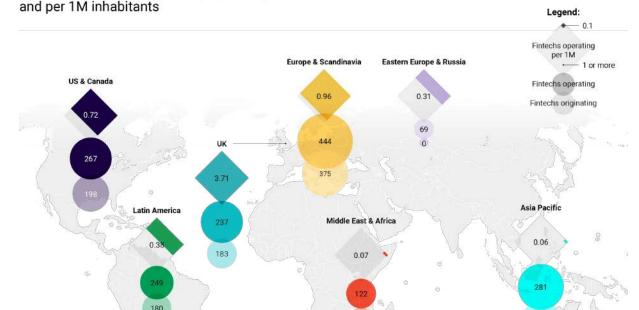
According to our methodology, number of fintechs increased from 67 in Q1 2021 to 180 in Q2 2021 in Latin America. Not only is there a growing adoption of data aggregation, but also a versatility in the types of financial services being offered, from 'card & wallet management', 'accounting & budgeting' to 'buy now pay later' as well as 'crypto payments'.

On the other hand, fintechs per 1 million inhabitants in **Asia Pacific** has remained the same, mostly skewed due to the countries with large population across this region. While number of open finance platforms have increased in the region from last quarter, fintech density is still the lowest.

Accredited FINTECH Global Number of fintechs originating, operating

Platformable

212



Methodology: Platformable tracks all fintech globally that are accredited or known to use bank APIs. We then review what products they are making available and tally them according to category, and we measure other characteristics such as their target customer segments and business model/monetisation approaches. We review each fintech at least once every three months.

Due to the large size of populations in countries such as China, India and Indonesia, fintech per million head of population is more challenging as a comparative indicator,



Fintech products going beyond payments and banking operations

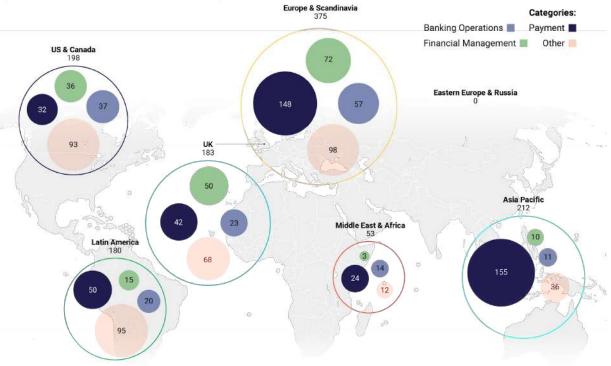
Since there has been a growth in a number of unified instant payment services in Asia Pacific, Latin America and Africa, like UnionPay in East Africa, Interswitch in West Africa, PIX in Brazil and UPI in India, these regions have the highest proportion of payments providers adopting and building on the instant payments systems. Moreover, the payment services being offered are diverse in themselves and includes forex, card & wallet management and payment back-end & infrastructure.

Europe and UK have been able to expand and offer more advanced financial services beyond payments to incorporate services like digital banking, capital raising, accounting & budgeting and cashflow balance transfer management. These regions have been growing faster in those categories compared to other regions.

Latin America along with Europe, US & Canada have seen fintechs originating that are using open finance platforms to provide more sophisticated services like **wealth management, crypto payments, insurance** as well as **lending** services.

Fintechs Originating in each region by total amount and in selected categories





Methodology: Platformable tracks all fintech globally that are accredited or known to use bank APIs. We then review what products they are making available and tally them according to category, and we measure other characteristics such as their target customer segments and business model/monetisation approaches. We review each fintech at least once every three months.

Open banking regulations are not an indicator of the potential for fintech creation

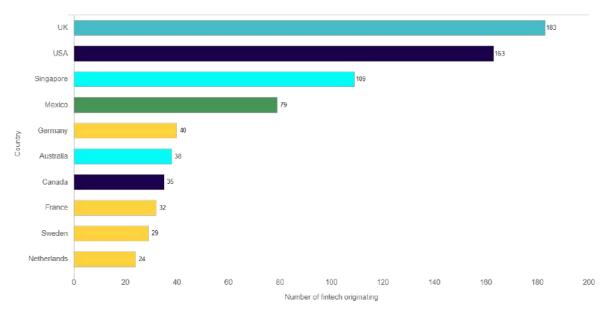
To date, Platformable's quarterly trends reports have focused on a subset of fintech, that is, the fintech that is built using open banking APIs. Given the shift towards open banking and open finance, we have now started tracking fintech that are platforms in their own right, that offer APIs for others to build off

We believe that having a standardised API design which all banks must conform to has been a key factor in the UK's top positioning as a creation hub for fintech (other factors, such as UK's wider financial services maturity and larger population of financial services professionals able to create their own fintech startup have also played a part). The United States' tech startup culture has helped it position well, although around half of the open banking-related fintech originating in US that we track are built on Financial Data Exchange (FDX) standard APIs, showing that building to open standards acts as an ecosystem accelerator. A few US startups may have familiar names but the majority we track are fairly new market entrants, leveraging Al-related technologies where access to bank account information is essential to have enough data to help make decisions.

Mexico's high rate of originating fintech is a reflection of their <u>accreditation register</u>: we track all fintech that are registered to be part of the open banking ecosystem. Similarly, Singapore and Australia have accreditation databases we can analyse.

Top 10 countries with the largest number of originating fintechs

Q2 2021 (N=1201)



Services offered through fintech open ecosystem collaborations

With no global fintech taxonomy available, at Platformable we have created our own, and aligned it with other models so that we can easily compare categorisation.

The leading sub-service categories include FX services, accounting & budgeting, card & wallet management, digital identity and digital banking. This reflects the diversity of top offerings and a diverse target market for these services. By embracing open ecosystem and financial data exchange, fintechs have also been able to successfully collaborate through banks' as well as each others' platforms.

For instance, Unnax, based in Barcelona, is an API aggregator that uses APIs from Banc Sabadell, Caixa Bank, Liberbank and more. While ID Finance uses Unnax platform to offer online consumer loans. ID Finance is able to use the financial data aggregated by Unnax from various banks, enabled by an open ecosystem, to then offer a unique service.

Given the possibility of further collaborations and access to financial data, there is opportunity for inclusive growth for the industry as a whole. This also leads to innovative financial services like P2P lending, alternative lending, discount brokerage trading platforms as well as blockchain solutions.



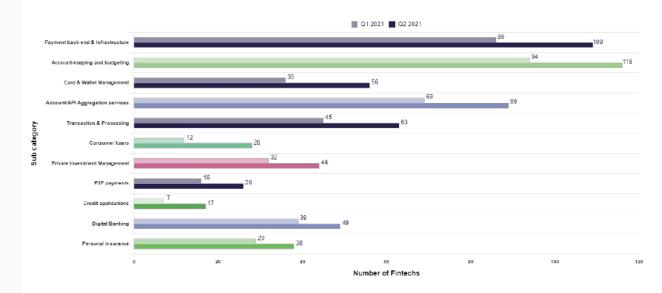
Increased access to lending services

Fintech sub-service categories that have grown most in numbers are 'payment back-end & infrastructure', 'account keeping & budgeting' and 'card & wallet management'. However 'consumer loans' as well as 'credit applications' have shown the highest growth with 133% and 143% respectively.

With increased access to credit history data as well as credit scores and employment data, it has become easier to offer online lending services for individuals and SMEs in the form of consumer loans, P2P lending, business line of credit as well as invoice factoring. Platforms that can provide access to such data to third parties have also led to alternate credit scoring models, further increasing access to credit.

Private investment management services showed a 38% growth this quarter reflecting an increasing level of financial literacy among consumers as well as a need for better financial planning. Low barriers to entry like easing the minimum portfolio requirements has also led to an increased access and paved an opportunity for fintechs.

Top Fintech sub-categories by growth Q2 2021 (N=1201)

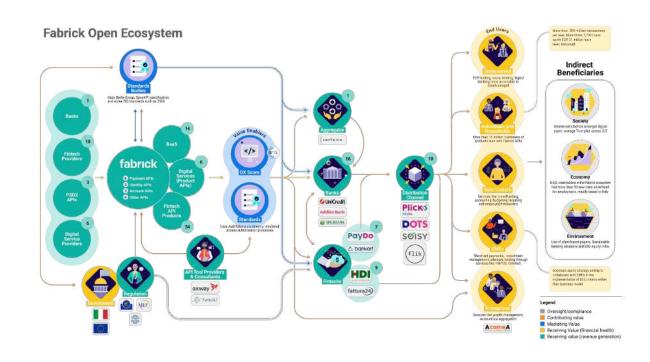


Fabrick ecosystem

Fabrick ecosystem can be defined as an almost ideal open finance ecosystem that involves all stakeholders enabling value creation for Fabrick as well as for each other while also benefiting **society, economy** and the **environment**. Fabrick can be classified as a financial service provider as well as an **API aggregator** that uses its own developer APIs, bank APIs and other fintech APIs to facilitate firms to create their own financial service for end consumers. This also involves value enablers, that are the **API tool providers & consultants, developer experience, standards, security** and **regulation**. Fabrick also offers an API marketplace that can then be used by other aggregators, banks and fintechs to build their own platforms for financial services.

Fabrick has been able to leverage its APIs as well as digital financial services to enable banks and fintechs to create new products for their consumers. For instance, **Credit du Nord** uses Fabrick's Identity Check Mobile solution to offer its customer biometric authentication through its own app, 'Mon e-paiement sécurisé'.

Distribution channels can vary for each customer, since these platforms are often used by other financial providers to replicate the services through their own end consumer applications. This means an increased access for end consumers in different regions further benefiting the underserved. Flikpay is one of the instant payments application used by 10 banks in Slovenia including Addiko Bank, Sberbank and Unicredit among others which was built by Bankart using Fabrick APIs. Each bank could be using its own end consumer apps like NLB Pay but it was built using the same platform for Bankart.





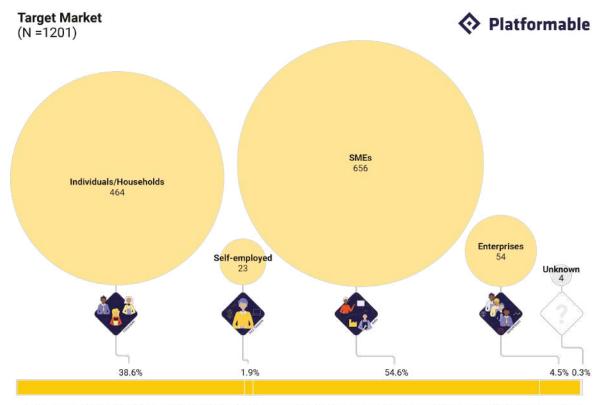
Consumer Benefits of Open Banking

The bulk of open finance products are targeting small and medium-sized enterprises

Fintechs often focus on small and medium enterprises as a reliable segment with less regulatory compliance requirements than individuals and households, and potentially a more discretionary expenditure base. The trend has continued in Q2 2021 where most fintechs are targeting SMEs especially in Europe & Scandinavia and Latin America.

The fintech service categories leading this quarter that target SMEs include 'financial management', 'banking 'operations', 'payments' and 'lending'. Since the financial data is more accessible, the financial services catering to small and medium businesses have also seen a significant growth. While the some of the services being offered could be more traditional like 'account keeping & budgeting', their user interface has been simplified to appeal to more businesses that have lower budgets and need minimum trainings.

While fintechs targeting specifically **self-employed** is lower at 23, some of the fintech products that are being created for individuals/households and SMEs also offer a more accessible pricing plans for self-employed which includes freelancers and sole traders. This enables them to access similar services at a lower cost and enables them to grow and fuel the SME sector.



New products aimed at Individuals/Household end users (N= 464)

Platformable



Card & Wallet Management



Number of APIs provided:

Neaui

Financial management platform that enables access to all bank accounts and cards in one place



Women in leadership? yes

Borsadelcredito

Platform that offers

peer to peer lending

API consumers:

Nexi Payments

Women in leadership?

Non-white people in

yes

management leadership?

Non-white people in Jobs created this quarter: management leadership?

Card & Wallet Management

MACH

Platform that

enables aggregation

of bank accounts to

manage personal

Women in leadership?

yes



finances Bank/Fintech APIs used: API consumers: Flow, Banco BCI

Number of APIs provided:

Non-white people in Jobs created this quarter: management leadership? 10

Card & Wallet Management



Bank/Fintech APIs used: Enfuce

Number of APIs provided:

Jobs created this quarter:

Number of APIs provided:



enables personal finance management by connecting all cards and accounts in one place

API consumers: N/A

Women in leadership?

Non-white people in management leadership?

Bill payments



Bank/Fintech APIs used: KBC, ING, Belfius Bank, RaboBank, BNP Paribas Fortis, VDK Bank, Crelan, AXA Bank Belgium, Spuerkeess, Bancontact

Number of APIs provided: N/A

Jobs created this quarter:



one place

API consumers Limonetik, Joyn, Posgard. Trivec Group, Adyen, Viva Wallet, Worldline, Ingenico. Multisafepay

Women in leadership?

Non-white people in management leadership?

— Lendina

N/A

Alternative Lending



services to small and medium enterprises

Bank/Fintech APIs used Fabrick

Number of APIs provided:

Jobs created this quarter: 2



Consumer loans

Bank/Fintech APIs used: Banco BTG Pactual

Number of APIs provided:

Jobs created this quarter:

Noverde

Online lending platform that provides consumer loans digitally increasing access to those excluded from traditional institutions

API consumers:

Non-white people in management leadership?

Consumer Credit Services

platform by Banca Sella that offers credit cards, online credit to consumers easing the lendina process

Non-white people in ves

Blockchain/Crypto

Crypto Exchange trading

Bank/Fintech APIs used: Banco Industrial (BIND)

Number of APIs provided:

19

Ripio



API consumers: N/A

Women in leadership?

Non-white people in management leadership?

Sella Personal Credit

Bank/Fintech APIs used: Banca Sella

Women in leadership?

Jobs created this quarter.

Sella Personal Credit

Consumer lending

API consumers: App Pago, Fabrick

Women in leadership?

management leadership?

Jobs created this quarter



CONSUMERS New Products aimed at SMEs (N= 656)



Payments

FX Services



Bank/Fintech APIs used: Kasikorn Bank

Number of APIs provided:

Jobs created this quarter: 51

Tunes

Platform that offers forex payment solutions online for small and medium businesses

API consumers: Paypal, M-pesa, Worldremit, Ecocash, Western Union, Remitly, Bkash, Grab Women in leadership?

Non-white people in management leadership?

Merchant Payments



Bank/Fintech APIs used:

Santander - Poland,

mBank, Getin Noble

Italia, Bank Pekao,

Bank, Crédit Agricole

BNP Paribas Poland

Number of APIs provided:

Jobs created this quarter:

ING Poland, Alior Bank.

Blik is part of Polish payment scheme that enables e-commerce payments, merchant payments as well as cash withdrawals API consumers: N/A

Blik

Women in leadership?

Non-white people in management leadership?

Payments back-end & Infratructure



Bank/Fintech APIs used First Data, Societe Generale France. Crédit du Nord, Groupe BPCE, Banrisul

Number of APIs provided:

Jobs created this guarter:



Point of Sale (POS) services API consumers:

N/A

Women in leadership?

Non-white people in management leadership?

E-commerce Payments

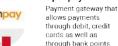


Bank/Fintech APIs used: BBVA Mexico, Mati

Number of APIs provided

Jobs created this quarter:

Openpay



API consumers: N/A

> Women in leadership? yes

Non-white people in management leadership?

Lending

Payments back-end & Infrastructure



Bank/Fintech APIs used

ING. Revolut. Barclays

Germany, SEB - Group

Estonia, Swedbank Latvia,

Jobs created this quarter:

UK. Deutsche Bank

Sweden, Swedbank

Sweden, Swedbank

Swedbank Lithuania Number of APIs provided:

Kevin

Payments platform that offers online transaction services through APIs as well as through Point of Sale (POS)

API consumers: N/A

Women in leadership?

Non-white people in management leadership? yes

Line of Credit



Bank/Fintech APIs used: Klama

Number of APIs provided:

Jobs created this quarter: 17

Liberis

Open finance platform that offers business credit services through embedded finance

API consumers: PayX, SagePay, Worldpay

Women in leadership?

Non-white people in management leadership? yes

Banking Operations

Account/API Aggregation Services



Celcoin

Open platform that enables fintechs to offer financial services by aggregating APIs

Bank/Fintech APIs used Banco BTG Pactual

Number of APIs provided:

Jobs created this quarter: 16

API consumers: Itau Unibanco Holding

SA, Banco Bradesco, Caixa Econômica Federal Santander - Brazil, Bankinter Portugal, Banco Original Women in leadership?

Non-white people in management leadership?

Is Open Banking and Open Finance improving financial inclusion?

Platformable

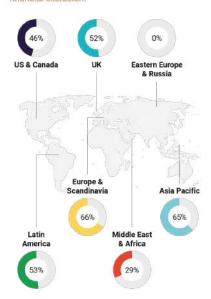
Financial inclusion had a stagnant growth across regions

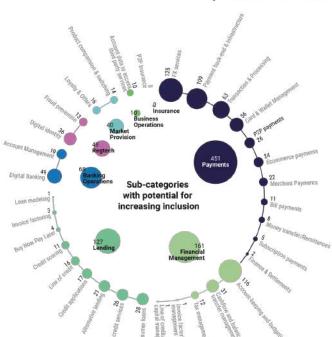
In Q2 2021, we have identified 53% of the fintechs that have the potential to increase financial inclusion (Our model has identified that 33 of the 59 fintech product categories in our taxonomy could be used to support financial inclusion). While Europe & Scandinavia has the highest proportion of fintechs involved in financial inclusion at 66%, it has remained constant from the last quarter.

On the other hand this proportion has reduced in Asia Pacific and Latin America which has the most people with limited access to financial services. Since both these regions are in the infancy stage of data democratization, the target market tends to be the middle and high net income individuals that already have a financial history. However the proportion is still above 50% for both regions that shows their positive intentions towards the underserved.

Proportion of fintech products with potential to increase financial inclusion 02 2021 (N =896)

Globally, 53% of all fintech operating in the open banking and open finance ecosystems are creating products that could serve to reduce financial exclusion.





Methodology: Platformable has identified a subset of the fintech product taxonomy to identify which products have the greatest potential to improve financial inclusion. These are tallied as absolute numbers and as a proportion of all fintech operating in each region in order to show the potential of fintech using open banking APIs and fintech open finance platforms to address financial inclusion.

There is significant value extraction from fintech operating in low and middle income countries

Every fintech being created in a low and middle income country is immediately competing against 4 fintech providers that come from higher income countries.

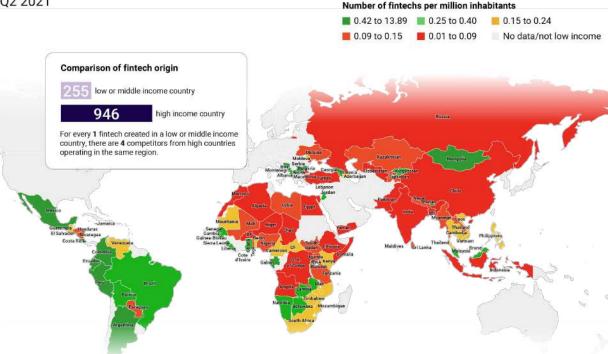
Inspired by Astha Kapoor & Richard Whitt's paper on Nudging Towards Data Equity and IT For Change's Unskewing the Data Value Chain policy research project, we have begun calculating this value extraction that occurs in low and middle income countries when fintech operating in-country is dominated by those from high income countries. Our methodology can be improved: at present, we compare fintech originating in each country against the total fintech operating in each country and then aggregate for all countries defined as low and middle income, so we are double counting fintech that operate in more than one country. We will be improving this methodology for the coming guarters.

Middle East & Africa and Asia Pacific regions have the least number of fintech per million inhabitants, while Latin America is comparatively higher.

With John Musser, Platformable also helped build the cgap.apidashboard.io which tracks the availability of financial service APIs in low and middle income countries that could be used to help build fintech products aimed at improving financial inclusion.

Fintechs in Low/Middle Income Countries number operating per 1M head of population 02 2021





Methodology: Platformable tracks all fintech operating in low and middle income countries (as categorised by World Bank) and calculates whether they originated in-country or are operating from higher income countries. Because fintech operate in more than one country in a region, these figures show total number of fintech operating in all countries in a region, and therefore may be counted twice where a fintech operates in more than one country in the region. Countries with population below 500.000 have been excluded from the rankings. Due to the large size of populations in countries such as China, India and Indonesia as well as countries with population less than 500.000, fintech per million head of population is more challenging as a comparative indicator.

Is Open Banking and Open Finance creating societal benefits?

Models to measure the broader benefits of open banking and open finance are in their infancy



Society



with women in leadership



BANK INDONESIA

globally with diverse management teams

Bank Indonesia (BI) is promoting financial inclusion by collaborating with the financial services authority in Southeast Asia's biggest market that are formulating provisions in a new framework to welcome the open finance era, looking to achieve the Payment System Vision of

There are some indications that

fintech built on open banking and

open finance could be redrawing

social participation boundaries, at

least within the fintech companies.

with growing diversity observed

amongst management teams.

Indonesia goals by 2025.



Economy



Southeast Asian Fintech firm **Grab** has revealed that it will be creating about **350 new jobs** in **Singapore** during 2021 in order to support its ongoing growth and development plans.



Ripio, a crypto exchange trading platform from Argentina has over 19 positions currently available, creating local employment opportunities which in turn contributes to the local economy.



Environment



Greenly, the leader in carbon footprint tracking, joins forces with **BridgePay** network to help VSEs and SMEs analyze their emissions



GFT Spain is promoting **green coding** practices which includes some basic principles such as 'shut down when idle', 'avoiding real time processing' and 'investment in green infrastructure'.



Siemens has taken its pioneering Managed Credit solution and combined it with payment technology from CGI, and Open Banking innovator Ordo.



Help your bank or fintech to enter the platform economy with our training

Rebuild and reorient your team to take advantage of the open banking evolution.

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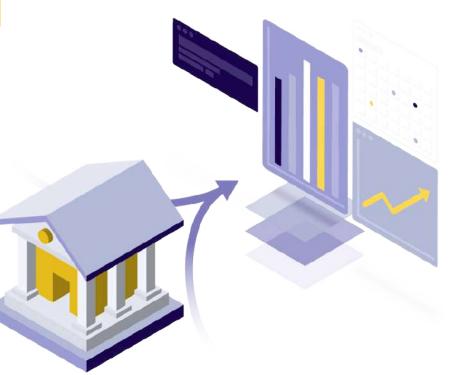








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