Global Open Finance Adoption Report

2024-2030

Unveiling the Growth Frontiers for a Billion Users

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SECTION 4

Foreword

The rapid evolution of financial service frameworks has fundamentally transformed how individuals and businesses interact with financial systems worldwide. At the core of this transformation lies the promise of Open Finance—a vision where personal financial data moves with the user at the centre in a seamlessly, securely, and consented fashion, enabling inclusion, innovation, and user empowerment at an unprecedented scale.

India's journey with the Account Aggregator framework has demonstrated the power of collaboration between regulators, technology leaders, and financial institutions. This journey highlights a critical insight: Open Finance is not just a technology play; it is a movement that thrives by putting users at the centre, on trust, shared infrastructure, and a commitment to creating equitable opportunities for all.

From enabling micro-entrepreneurs to access credit to facilitating hyper-personalised financial services for the digitally savvy, the potential is vast, and we are just scratching the surface.

The Global Open Finance Adoption Report 2024-2030 is a landmark publication that captures the essence of this global transformation. By examining the adoption, challenges, and opportunities across 48 countries, this report serves as a crucial resource for policymakers, innovators, and stakeholders in their quest to harness the benefits of Open Finance. It underscores the importance of interoperability and robust governance frameworks in scaling Open Finance to its full potential.

As we look toward a future where over one billion users might benefit from Open Finance by 2030, it is essential to remember that this journey is as much about inclusion and empowerment as it is about innovation. The insights presented in this report remind us of the shared responsibility we carry to ensure that Open Finance remains a force for good—a tool to democratize access, foster resilience, and drive equitable growth.

I am pleased to contribute to this forward-looking endeavour and hope that this report inspires meaningful dialogue, collaboration, and action across the global Open Finance ecosystem.

Dr. Pramod Varma
Fmr Chief Architect of Aadhaar and India Stack

Setting the Stage

Introduction

The global financial landscape is undergoing a transformative shift, driven by the rapid adoption of Open Finance. This evolution is redefining how financial services are delivered and how consumers, businesses, and economies interact with financial data and technology.

The Global Open Finance Adoption Report (GOFAR) 2024-2030 represents an extensive effort to understand this evolving landscape. Our goal is to map the path to a Billion Open Finance users by examining the driving forces, opportunities, and challenges that will shape this growth.

By exploring key markets like India, Brazil, the US, and the UK, alongside emerging Open Finance markets such as the UAE, Saudi Arabia and Bahrain, this report offers a comprehensive, globally-informed analysis.

Purpose

This report intends to empower policymakers, regulators, and business leaders with actionable insights for leveraging Open Finance to drive economic growth and innovation.
We aim to provide a practical roadmap for stakeholders to scale their initiatives and make strategic decisions in this rapidly evolving ecosystem.

Challenges and Methodology

One of the significant challenges encountered during this research was the limited availability of up-to-date data on financial habits of how consumers and businesses use, share, and manage financial data and services and behaviours to enable us to predict the adoption and growth of Open Finance ecosystems accurately.

To address this, we had to rely on alternative variables to construct statistical models that closely approximate reality. Despite these constraints, we have worked diligently to ensure that our findings remain accurate and reflective of the current landscape.

The Role of Trust and Consent Management

The key to the success of Open Finance lies in effective consent management. Giving agency to consumers and businesses to control their financial information is a monumental step in empowering people.

Alongside this, Open Finance frameworks that incorporate robust security measures and continuous data protection enhancements to guard against fraud will drive the most critical factor of adoption: Trust.

As consumers and businesses feel more secure in managing and sharing their data, adoption will grow exponentially.

Adoption Rates and Advantages

Countries will adopt Open Finance at different paces. While some will progress rapidly, others may take longer. However, there are advantages to being a slower adopter: the technological, legal, and economic model challenges will have been addressed by pioneering countries like India, Brazil, the US, and the UK, creating a structured roadmap for others to follow.

Opportunities for Growth

Countries that implement smart data localization and data protection regulations that take data movement across borders into account will see their citizens and businesses thrive in an environment where data moves quickly within and across borders. This progress will stimulate economic growth and foster a more interconnected world.

Projects like BIS' Aperta, which advances interoperability between Open Finance ecosystems, will enable data to move and be accessed wherever consumers or businesses need it.

This seamless capability is key to enabling financial and non-financial services that transcend geographic boundaries and fuel innovation that leads to economic prosperity.

Looking Ahead

Building on this foundation, our upcoming research will delve deeper into Open Finance adoption patterns. We will gather more granular data across markets, incorporate qualitative research to understand cultural and political contexts and analyze emerging use cases.

This expanded scope will provide even richer insights for stakeholders navigating the Open Finance ecosystem.

A New Beginning

The Open Finance transformation presents an immediate opportunity for action. Whether you're a policymaker crafting regulations, a financial institution building consent frameworks, or an innovator developing cross-border solutions, this report provides your roadmap.

Meet the Authors

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Founder,
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Kiran Gopinath is a thought leader in Open Finance and the Founder of Open Finance Connect (OFC), a platform dedicated to advancing Open Finance globally through research, insights, and ecosystem collaboration.

With a proven track record in marketing, digital advertising, and fintech innovation, Kiran has been instrumental in driving initiatives across large economies like the US, India, and emerging markets.

His expertise spans consumer-driven use cases and private data sharing, with a focus on empowering businesses and individuals in the evolving Open Finance landscape.

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Rutvik Paikine is a public policy professional who focuses on digital public infrastructure and its impact on innovation and inclusion in the financial sector. His current role as a Policy & Communications Analyst at Sahamati revolves around institutionalizing the Account Aggregator (AA) ecosystem—India's pioneering implementation of Open Finance.

Rutvik is passionate about exploring themes at the intersection of technology, finance, and governance. With a forward-looking approach, he combines strategic thinking, impactful communication, and a deep commitment to public interest, to drive meaningful change in the financial landscape.

Acknowledgements

The creation of this report has been enriched by the collaboration and expertise of thought leaders and partners dedicated to a more inclusive financial future driven by Open Finance.

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- **Dr. Pramod Varma**, former Chief Architect of Aadhaar and India Stack: For his insightful Foreword.
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Executive Summary

The **Global Open Finance Adoption Report 2024-2030** offers an in-depth analysis of Open Finance, highlighting its transformative potential in reshaping financial ecosystems across 48 countries.

These countries were carefully selected based on their readiness, spanning from initial evaluations of Open Finance to advanced stages of implementation and operational frameworks in diverse forms.

The report begins with an **Introduction to Open Finance**, outlining its foundational principles and its potential to reshape global financial systems. It then explains the **Methodology for the Report**, detailing the data sources, parameters, and analytical frameworks that underpin the findings.

A section on **Key Drivers of Open Finance** explores the forces shaping its growth, divided into **supply-side** and **demand-side** drivers. It delves into regulatory, technological, and consumer trends influencing adoption worldwide.

The chapter on **Assessing Global Potential in Open Finance Adoption** introduces the **Impact Potential Score**, categorizing countries into readiness tiers.

The Global Open Finance: Userbase Estimates and Projections chapter provides userbase estimates for 2024 and forecasts through 2030, supported by visual charts. It explains the analytical techniques and offers actionable insights from the projections.

This is followed by **Inferences and Insights** from the analyses in the previous section, along with a closer look at **India's Growth Story,** highlighting the country's outlying success in using Open Finance and **CRED's** drive to promote responsible credit.

A comprehensive **Global Open Finance Readiness Outlook** with a Country-by-Country Analysis, summarizes the regulatory landscapes, infrastructure readiness, and adoption potential across 48 nations.

This is complemented by **Practical Insights,** featuring expert articles and case studies, such as **Pawan Bakhshi's** exploration of financial access through Open Finance, **Cenfri's** insights into Africa's Open Finance potential, and **Perfios's** take on how Open Finance is revolutionizing financial services globally.

The report concludes with a strategic summary in the **Conclusion**, offering recommendations for stakeholders to harness Open Finance's potential.

The **Appendix** provides the TOPSIS and Projections tables and references.

The **Global Open Finance Adoption Report 2024-2030** is an essential resource for financial institutions, fintechs, policymakers, and regulators.

Combining robust analysis, expert insights, and actionable strategies, it lays the foundation for accelerating Open Finance adoption while improving customer experiences and achieving global financial inclusion.

Introduction to Open Finance

Open Finance is a paradigm shift in financial services, from a traditional custodian-centric industry to a user-centric ecosystem that leverages customer-consented data-sharing to drive inclusion and hyper-personalization. Open Finance not only aims to improve the customer experience but also holds the potential to increase financial inclusion, as institutions leverage scattered financial data to serve historically unserved and underserved segments.

Open Banking, the precursor to **Open Finance**, was a movement within the global financial sector that empowered customers to securely share their banking data with third-party providers or banks through open APIs. Open Finance extends this framework beyond banks, including institutions in securities, investments, insurance, pensions, and tax. Giving customers control over their data facilitates a personalized and transparent financial landscape.

Customers have always longed for greater transparency, control, and simplicity in managing their finances. They have increasingly sought tools to view all their accounts in one place, access personalized products, and make informed decisions based on their full financial picture. At the same time, policy initiatives worldwide aim to foster fair competition, support innovation, enhance data privacy and security, and promote inclusion.

The advent of digitization, particularly the "API-ization" of finance, has opened new ways to address customer needs and policy goals across markets. At the same time, regulatory initiatives like PSD2 in the EU, the Consumer Data Right in Australia, and the Account Aggregator framework in India have actively supported the opening up of the financial services industry.

Open Finance has gained momentum worldwide, with countries and regions adopting regulatory-driven and market-driven frameworks—or a blend of both—to enable secure data sharing and foster innovation. This report examines the potential of Open Finance across various jurisdictions and analyzes developments that shape frameworks in different markets.

[1]Building a Safe Finance Regime
To fully harness the transformative potential of Finance while mitigating associated risks, a user-centric data protection regime must be at the core of its framework.

Such a regime should prioritize safeguarding customer data against misuse, mishandling, and privacy breaches while empowering individuals to exercise greater control over their personal information. This dual focus ensures that Open Finance ecosystems remain secure and user-focused, facilitating trust and transparency.

[2]A key pillar of this regime is granular consent management combined with transparent data-handling practices. This framework introduces a paradigm shift in data governance by enabling users to selectively determine who can access their data, for what purposes, and for specific durations.

It moves beyond traditional protection standards, transforming data security into a proactive, user-driven mechanism—effectively a "+1" over conventional data protection approaches. This advanced model fosters compliance and trust within the financial ecosystem and drives innovation.

Users, equipped with secure channels for sharing data, can access tailored, value-added financial services. Simultaneously, financial institutions benefit from elevated standards of transparency and strengthened institutional integrity, creating a resilient, future-ready ecosystem.

By embedding these principles, Open Finance regimes can unlock greater financial inclusion and institutional accountability, ensuring long-term sustainability.

Potential of Open Finance

Open Finance is poised to transform the financial sector by driving operational efficiency, reducing costs, and unlocking new revenue opportunities. Through data sharing and open APIs, financial institutions can streamline operations, improve customer experiences, and offer financial services at better terms.

This creates a win-win situation, where institutions reduce operational overheads while improving service delivery. Moreover, Open Finance provides an opportunity to better serve underserved and populations, expanding market access to those previously excluded from traditional financial systems.

By leveraging alternative data sources, financial institutions can assess creditworthiness and offer tailored products to customers who lack traditional credit histories.

Beyond operational improvements, Open Finance stimulates product and business model innovation. By democratizing access to financial data, it encourages competition and fosters the development of new, disruptive financial products and services. Ultimately, the Open Finance ecosystem will continue evolving, driving increased competition, innovation, and global financial inclusion.

Methodology for the Report

We have employed a comprehensive approach in the Global Open Finance Adoption Report by combining quantitative and qualitative methods. At the same time, we adopt a multidimensional approach that takes into account economic development, digital adoption, and the regulatory environment. Collectively, these enablers shape the market potential for the adoption and scaling of Open Finance regimes.

Enablers of Open Finance

Economic Development

Economic indicators, such as per capita income levels, expenditure patterns, and credit access, reflect the financial capacity of individuals and institutions to engage with Open Finance. A higher disposable income or wider access to credit often translates to a higher adoption rate for innovative financial tools.

Digital Adoption from Customers

Mobile penetration, internet usage, and digital engagement highlight the technological enablers essential for the ecosystem's operational success. Without robust digital infrastructure, the benefits of Open Finance remain inaccessible to large segments of the population.

Regulatory Environment

Open Finance thrives in jurisdictions with forward-thinking policies, clear data governance frameworks, and consumer protection laws. Regulatory clarity fosters trust among users and stakeholders, encouraging wider participation and innovation.

Digital Public Infrastructure (DPI)

The scope and extent of the DPI in a jurisdiction play a significant role in catalyzing the readiness and acceptability of an Open Finance implementation.

Additionally, to address contextual differences in these jurisdictions, the analyses are structured around the categorization of countries into four groups:

- **Emerging Digital Finance Hubs:** Countries with advanced digital finance ecosystems, high mobile money adoption, and increasing consumer engagement in Open Finance.
- **Developing Markets with Scaling Potential:** Economies with growing financial inclusion and digital infrastructure but requiring targeted initiatives to scale Open Finance adoption.
- **Nascent Markets with Growth Opportunities:** Markets with relatively low enablers and significant untapped potential to be driven by improving regulatory frameworks or technological advancements.
- **Stable Markets with Steady Growth:** Markets with growth driven by mature economic and high technological adoption factors.

Multidimensional Analyses

The **quantitative analysis** encompasses the Impact Potential Score (IPS), derived using the TOPSIS (Technique for Order of Preference by Similarity to Ideal Solution) framework, to measure readiness of countries across economic development and digital adoption dimensions. Similarly, we have undertaken User Projections that outline growth trajectories for Open Finance adoption across jurisdictions.

To enrich the quantitative analyses, we have undertaken a comprehensive **qualitative analysis** of the regulatory environment and digital public infrastructure (DPI) across all the countries.
By integrating these perspectives, the report delivers a richer, multi-dimensional understanding of how diverse factors converge to shape the potential for Open Finance implementation and its transformative impact globally.

Focus on the Future of Open Finance

We took a deliberate approach to move beyond analyzing the current state of Open Banking or Finance to focus firmly on the future. This reflects our optimism for growth across all jurisdictions, regardless of their current levels of readiness.

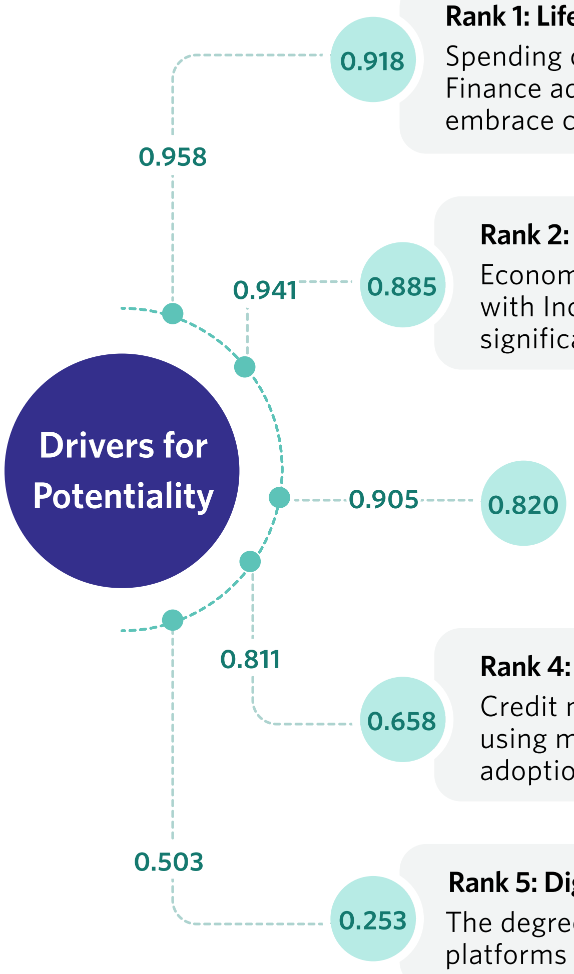
Irrespective of the analyses and projections that are benchmarked on retrospective parameters, we believe that jurisdictions, even those with relatively low readiness scores and regulatory momentum today, can chart contrarian paths to unlock the transformative potential of Open Finance. Taking the right policy, technological, and institutional steps can accelerate adoption and drive inclusive economic development. This future-oriented perspective seeks to inspire stakeholders to act decisively and responsibly.

Section 1

Global Open Finance Readiness Outlook

Global Open Finance Readiness Outlook

The drivers of Open Finance adoption encompass the critical factors that shape how individuals engage with financial ecosystems. These drivers provide insights into consumer behavior, economic activity, and technological readiness, enabling a nuanced understanding of the conditions that promote or hinder adoption. They include variables such as lifestyle choices, credit accessibility, digital engagement, and technological adoption, which collectively reflect the readiness of populations to embrace Open Finance. Analyzing these drivers, we can identify opportunities to accelerate adoption and address barriers to engagement in diverse demographic and economic contexts.



Rank 1: Lifestyle
Spending on essentials like food, housing, and transport aligns with Open Finance adoption. Higher lifestyle spenders are more likely to actively embrace convenient, personalized financial solutions.

Rank 2: Strata
Economic stability, reflected by Per Capita Income (Share of Population with Income>USD 5K) and Purchasing Power Parity (PPP), is a significant indicator of Open Finance potential.

Rank 3: Mobile Usage & Digital Spend
High mobile usage, especially with smartphones, is closely linked to a population's openness to fintech innovations, shows a significant potential for Open Finance.

Rank 4: Credit Access
Credit mechanisms, enablingborrowing from financial institutions and using mobile money accounts, boost the likelihood of Open Finance adoption.

Rank 5: Digital Engagement
The degree of digital engagement measured by time spent on digital platforms play a crucial role in the adoption of Open Finance.

Legend:

R-squared Values (in bubbles); Path Coefficients (along the lines)

These demand-side drivers collectively highlight the conditions that support Open Finance adoption, emphasizing the importance of a blend of economic strength, consumer habits, and digital infrastructure readiness.

R-squared Values

The R-squared values, as a whole, indicate how well the model fits that data. Each R-squared value measures the proportion by which Potentiality of Open Finance varies with variation in the driver with which the value is associated.

Example: Lifestyle has the biggest influence on the Potentiality of Open Finance. One unit of variance in Lifestyle causes 0.918 variance in Potentiality of Open Finance.

Path Coefficients

Path Coefficients indicate the strength of the relationship between the Potentiality of Open Finance and the drivers (akin to weights). A positive Path Coefficient indicates a positive relationship and a negative Path Coefficient indicates a negative relationship.

Example: Lifestyle has the strongest relationship and Digital Engagement has the weakest relationship with Potentiality of Open Finance.

Methodology Overview

A multivariate regression model was applied to quantify the relationship between the drivers (independent variables) and Open Finance adoption rates (dependent variable) to arrive at these scores. This process involved normalizing data to a uniform scale, ensuring comparability across diverse countries and contexts. The derived coefficients from the regression analysis were standardized to create the weights.

These weights were further validated through the TOPSIS (Technique for Order Preference by Similarity to Ideal Solution) methodology, which was chosen for its ability to objectively rank and prioritize multiple drivers by comparing each to an ideal solution. TOPSIS evaluates the proximity to the best-performing scenario and the distance from the worst-performing scenario, ensuring a balanced, robust, and transparent assessment. The weights presented in the diagram signify the extent of influence each driver has on overall adoption readiness, offering a clear and data-driven evaluation of their impact.

Significance of the Impact Potential Score (IPS)

The Impact Potential Score (IPS) in global Open Finance is calculated using TOPSIS (Technique for Order of Preference by Similarity to Ideal Solution). This method ranks financial options by comparing them to both the best and the worst possible outcomes.

It helps decision-makers identify which options have the greatest potential for positive impact. Essentially, the score shows how close each option is to the ideal scenario, making informed and measurable choices easier.

The Impact Potential Score quantifies the potential for acceptance of Open Finance based on various macroeconomic and human development indicators. For example, a country, say Z, with a relatively high per capita income and digital engagement tends to score high, signaling a higher potential acceptance of Open Finance in the country.

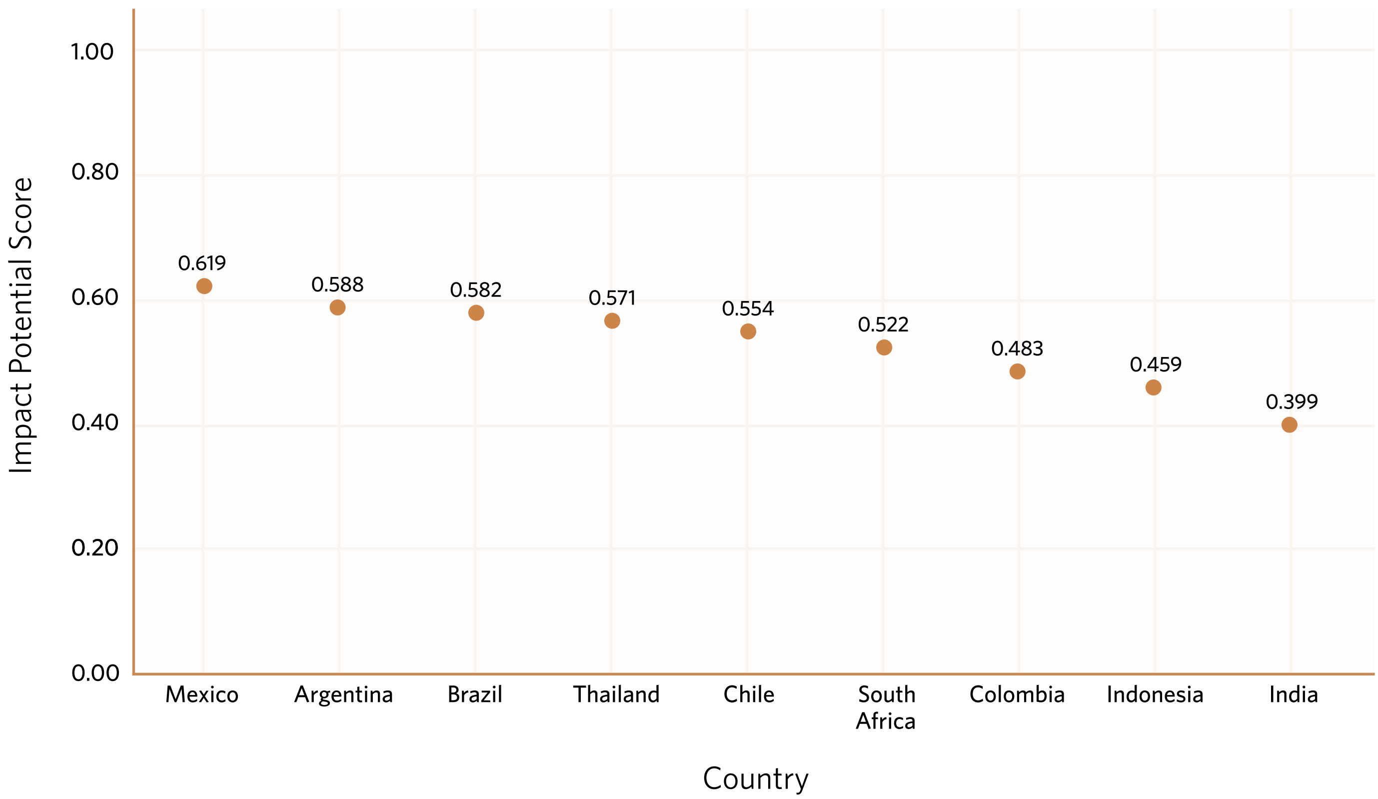
Conversely, low- and middle-income countries or those with high populations tend to score low, signifying a lower potential for finance acceptance due to other pressing development concerns such as inadequate digital infrastructure, financial literacy gaps, and economic inequality.

However, low-scoring jurisdictions can leapfrog economic growth and development due to a low-base effect. Lower-ranked regions must sustain strong implementation momentum driven by market and regulatory progress to accrue economic development gains from Open Finance implementations. We have attempted to capture this metric in the CAGR categorizations in the subsequent projections exercise. We believe that looking at both analyses holistically and not in isolation is crucial for a well-rounded assessment of an Open Finance regime.

1. Emerging Hubs

Countries like Mexico, Argentina, and Brazil have higher Impact Potential Scores ranging from 0.582 to 0.619. These scores highlight their relative standing in economic development and a higher potential for accepting open finance. In contrast, India, with an

Impact Potential Scores for Emerging Digital Finance Hubs Countries



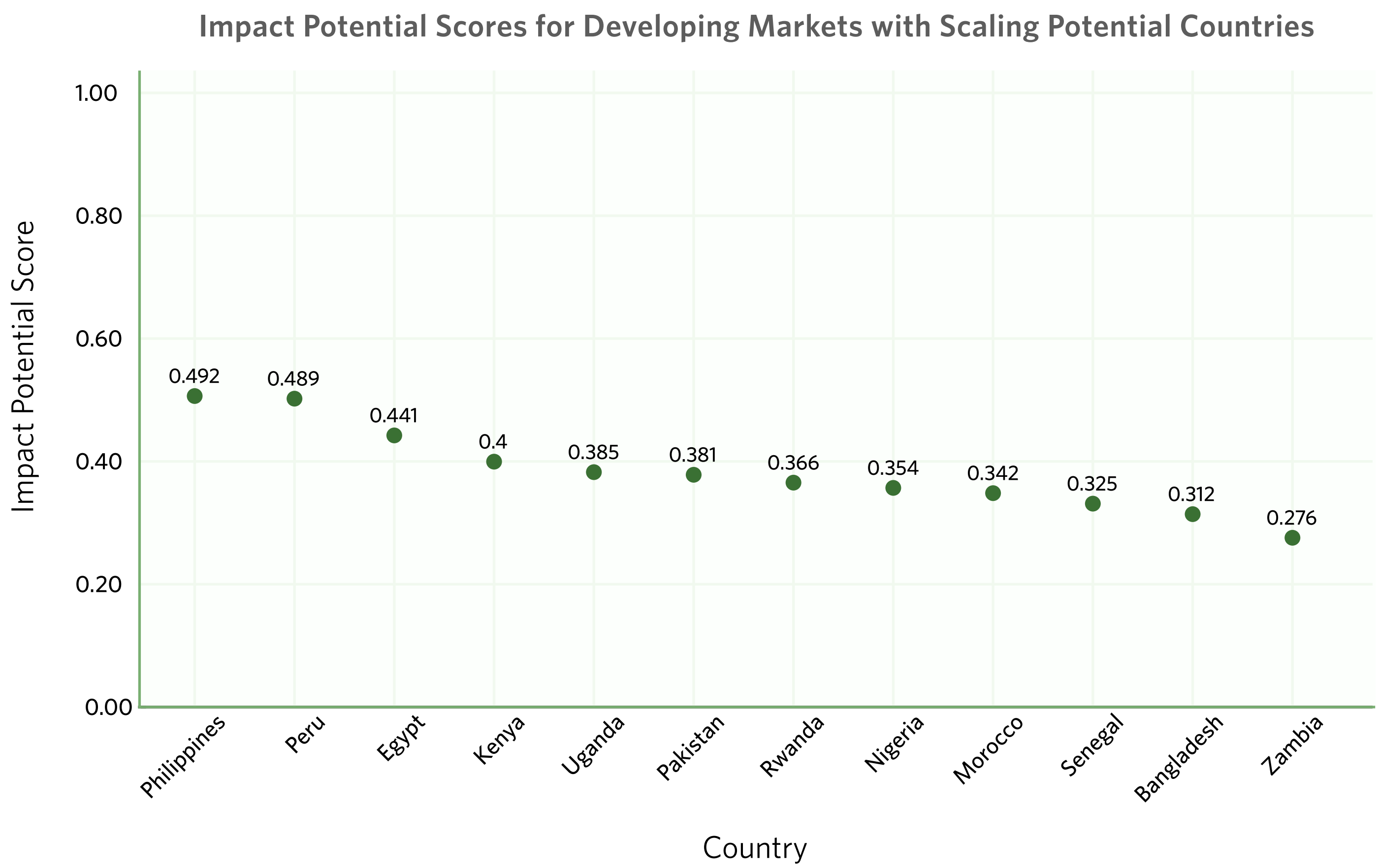
Impact Potential Score of 0.399, reflects untapped economic potential and a longer trajectory for growth. Without active initiatives, this score signifies a lower acceptance rate of Open Finance.

However, coupled with a favorable financial regulatory environment and increasing consumer awareness, India is emerging as a hot market for Open Finance.

2. Developing Markets with Scaling Potential

In the developing markets, the Philippines (0.492), Peru (0.489), and Egypt (0.441) are emerging as key players with substantial scaling potential in Open Finance.

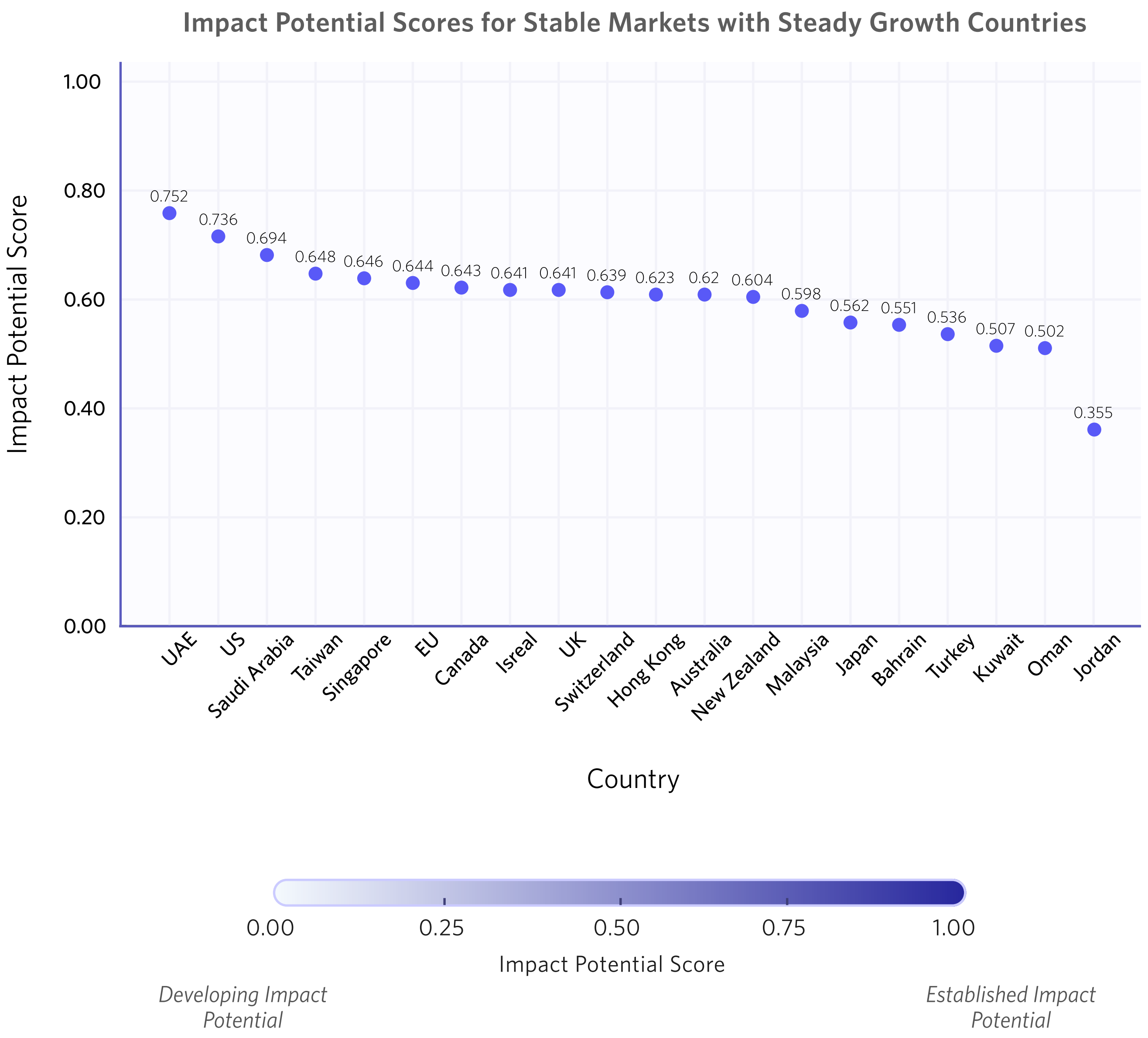
These nations are beginning to align with global standards and have favorable market dynamics that could drive further expansion.



3. Nascent Markets with Growth Opportunities

Nascent markets such as Kazakhstan (0.459) and Tanzania (0.357) present early-stage growth opportunities in Open Finance. Although their impact scores are modest, these countries demonstrate promising groundwork that could be accelerated with targeted policies and investment. Countries with lower scores, like Gambia (0.164), hold significant potential for development, creating opportunities for foundational enhancements that could drive meaningful progress in Open Finance.

4. Stable markets with Steady Growth with High Impact Potential
Amongwith stable markets, the UAE (0.752), the US (0.736), and Saudi Arabia (0.694) lead with high impact potential scores, highlighting well-developed economic and financial ecosystems that define global standards. These nations possess advanced digital infrastructures and supportive regulatory landscapes. The high score reiterates their high potential for acceptance of Open Finance implementation. On the other hand, countries like Jordan (0.355) have lower scores, indicating potential for growth as they work to strengthen their Open Finance frameworks and infrastructure.



Global Open Finance Userbase Estimates for 2024 and Projections 2025-2030

This section presents a comprehensive analysis of the global Open Finance landscape, detailing userbase estimates for 2024 and forward-looking projections through 2030, based on a rigorous, data-driven methodology tailored to diverse market dynamics. We combine baseline estimations and future projections to analyze Open Finance adoption across 46 countries out of the total 48 countries considered, excluding South Korea and China. It uses a structured, multi-step framework for precision, comparability, and adaptability.

Baseline Estimations (2024)
To estimate the initial user base, data normalization was performed to harmonize variables like financial inclusion and technological penetration across countries. Regression equations anchored on data from five representative countries modeled critical variables, including GDP per capita and mobile penetration.

Advanced statistical techniques minimized residuals, such as least squares and non-negative constraints, ensuring practical realism. Cross-validation using a TOPSIS-based potentiality index confirmed consistency with theoretical frameworks and infrastructural readiness.

Projections (2025–2030)
Future projections were developed by identifying growth factors, such as socio-economic characteristics, technology adoption, and market maturity.

Countries were segmented into four categories—emerging digital hubs, developing markets, nascent markets, and stable markets with steady growth—each assigned tailored growth rates. Year-on-year growth projections were calculated and fine-tuned for category-specific trends. A consistent projection formula was applied to maintain comparability across markets.

The TOPSIS-based Impact Potential Score, validation ensured alignment with market realities, providing reliable insights into growth opportunities and saturation thresholds. This holistic approach balances rigor and practicality, offering actionable intelligence on Open Finance adoption globally.

Notes on Few Exclusions

We have excluded China and South Korea from the analysis due to their unique market contexts and challenges in aligning with global Open Finance frameworks or obtaining reliable userbase data.

- **China**: The country is populous, technologically advanced, and fits all the criteria of a potentially enormous Open Finance market. However, China has been excluded from the list because it is unlikely to become part of the global, mainstream, standards-based Open Finance realm anytime soon.

- **South Korea:** South Korea is an emerging market for Open Finance. However, obtaining individual user statistics proved challenging. The high user base figure of 117.8 million subscribers likely reflects a combination of multiple mobile money accounts per individual and business accounts[3]. Consequently, South Korea has been excluded from the analyses due to the lack of reliable data on its individual user base.

The data outlines the projected growth in Open Finance users across countries from 2024 to 2030, segmented into four categories: **Emerging Digital Finance Hubs, Developing Markets, Nascent Markets and Stable Markets.**

The baseline estimations represent the potential users in 2024 if Open Finance were introduced today across 46 countries.

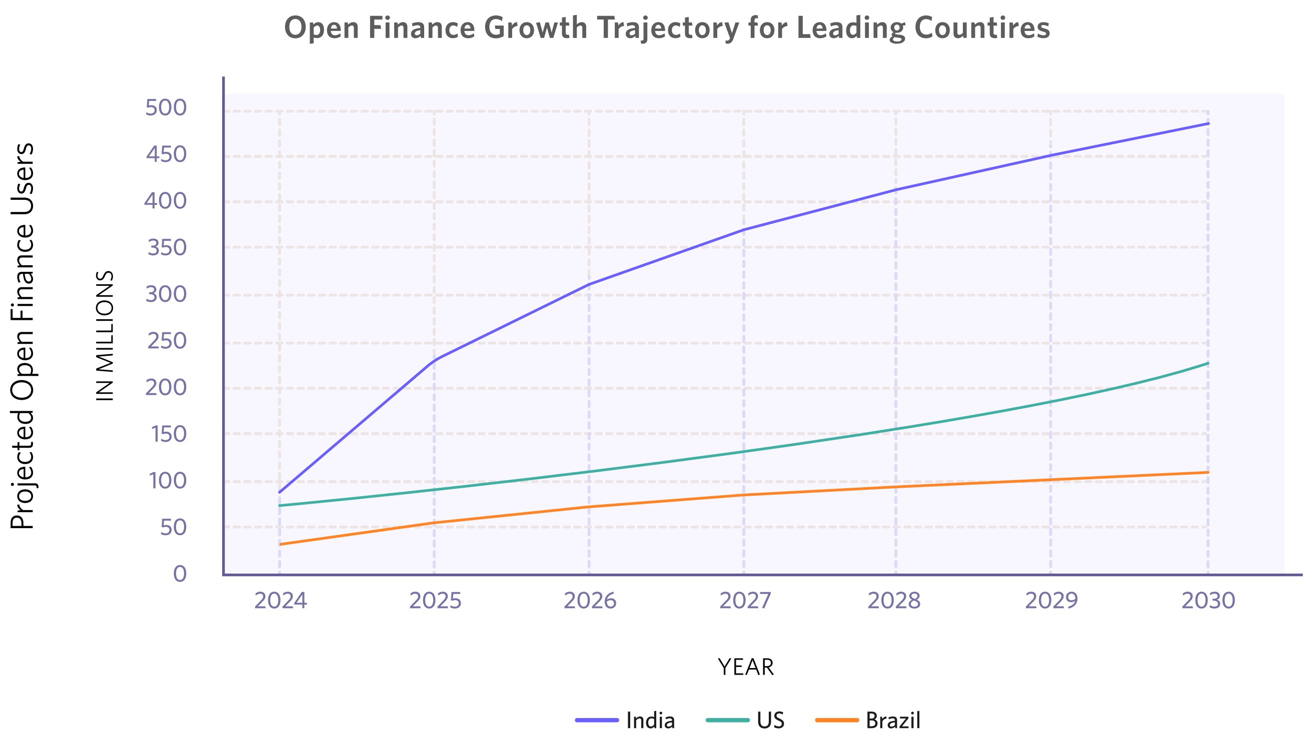
By 2030, India, the United States, and Brazil are set to lead the Open Finance domain, demonstrating remarkable growth and performance.

India is on track to reach 479 million users, driven by its large population and rapidly expanding digital ecosystem, which makes financial services more accessible to millions.

The United States, with an anticipated 223 million users, benefits from its well-established financial infrastructure and high rates of digital adoption, ensuring it remains a dominant force in Open Finance.

Brazil's user base, projected to reach 107 million users, is fueled by increasing mobile financial services and a dynamic digital banking environment. Together, these three nations represent the pinnacle of growth in the global Open Finance landscape, setting an ambitious benchmark for the future.

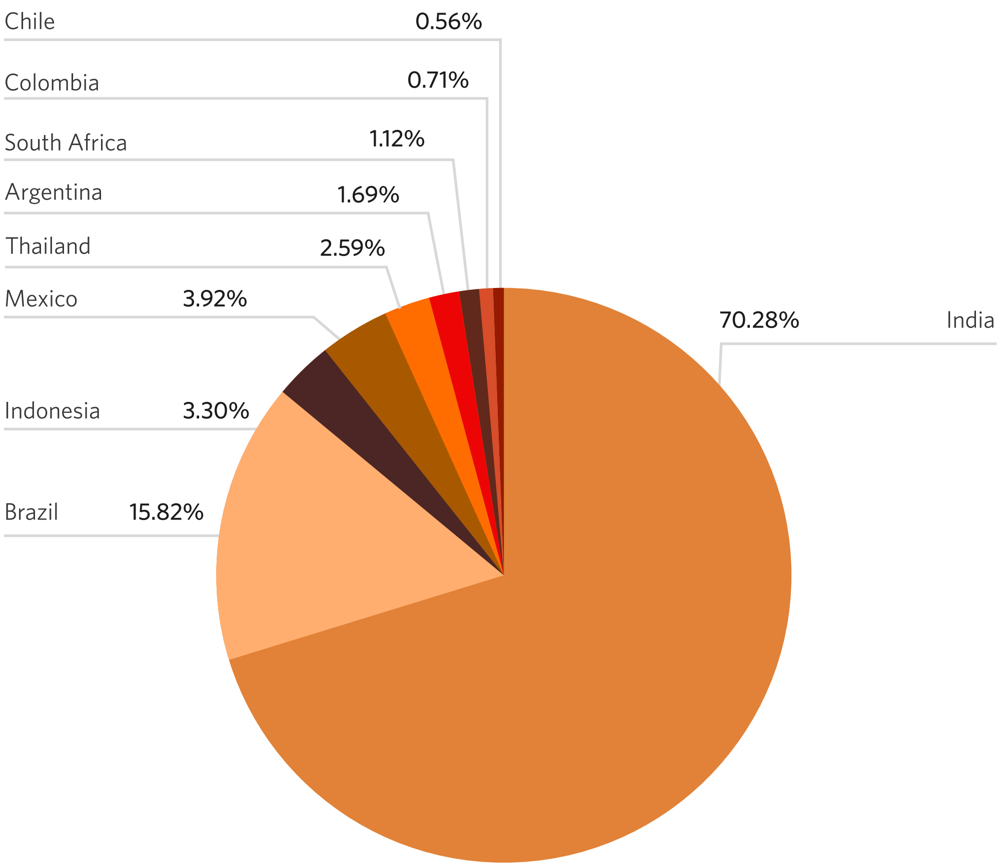
NOTE: The US does not have a functioning regulatory framework for Open Finance, yet market-led developments are very strong. Although implementations would benefit from a standardized regime, we believe that the momentum of the US toward implementing user-controlled data-sharing across the financial landscape is exceptionally significant.



Projected Open Finance User Distribution:

Emerging Digital Finance Hubs

The top three countries expected to lead this cohort by 2030 are India, Brazil, and Mexico, collectively capturing a significant share of the projected 659.3 million users. India takes the lead with 72.68%, driven by a surge in digital activity that fuels rapid advancements in financial technology. Brazil follows closely with 16.36%, leveraging its robust digital presence to accelerate the adoption of Open Finance. With 3.92%, Mexico benefits from a growing mobile ecosystem, enhancing access to Open Finance across its population. Collectively, these countries are poised to shape the future of Open Finance in emerging markets, each drawing its unique strengths to foster growth.



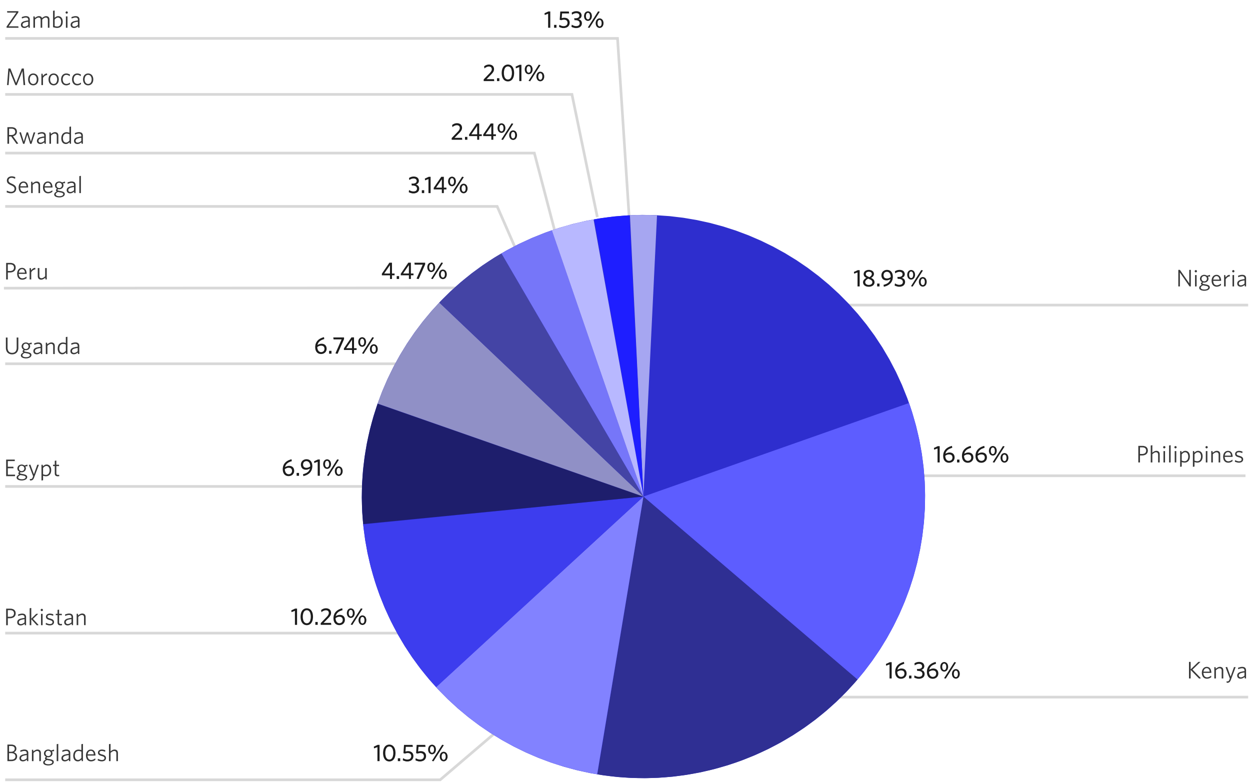
Projected Open Finance User Distribution in Emerging Digital Finance Hubs - 2030 (Total Users: 681.77 Million)

Developing Markets with Scaling Potential

In this category, Nigeria, the Philippines, and Kenya are set to lead in Open Finance adoption by 2030, accounting for a substantial portion of the projected user base.

With 18.9%, Nigeria benefits from widespread mobile usage, extending financial services to underserved communities. The Philippines, capturing 16.66%, has effectively utilized mobile services to make Open Finance increasingly accessible to a broader population.

With 16.36%, Kenya stands out for its high mobile money adoption, a key driver of Open Finance usage. These countries are leveraging mobile access and credit expansion as central pillars to support the growth of Open Finance, improving financial inclusion across their populations.



Projected Open Finance User Distribution in Developing Markets with Scaling Potential - 2030 (Total Users: 50.8 Million)

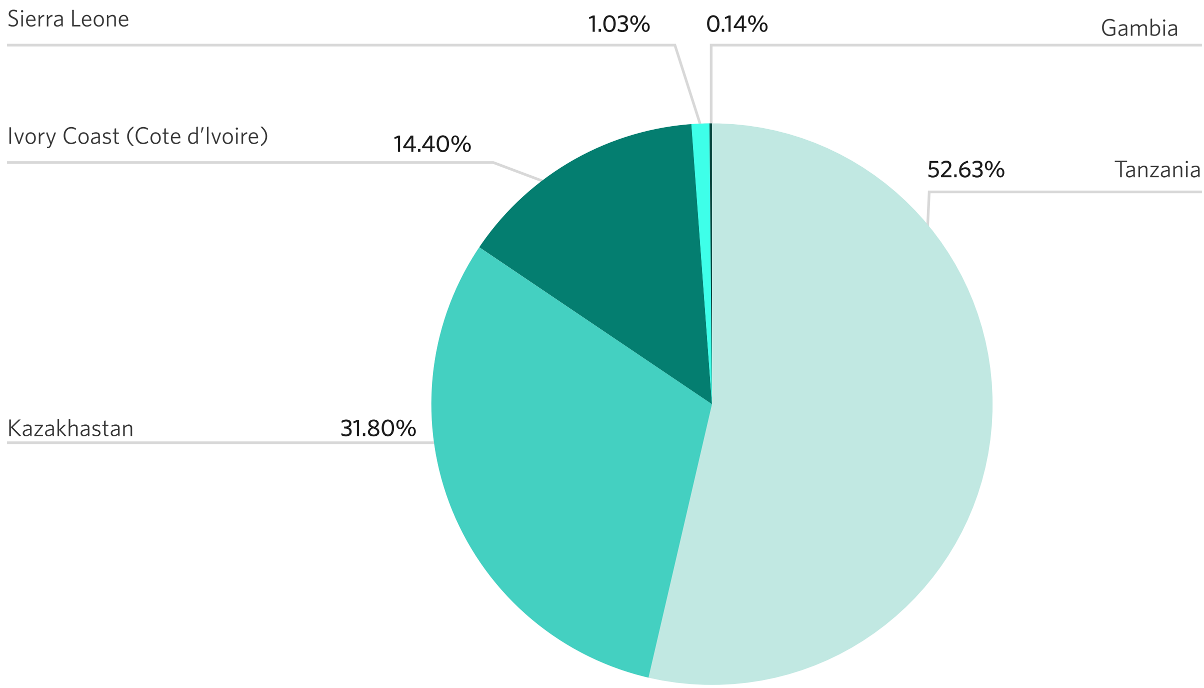
Nascent Markets with Growth Opportunities

Tanzania, Kazakhstan, and Ivory Coast are projected to lead in Open Finance by 2030 for this category, making the majority of the expected 7.7 million users.

With 52.62%, Tanzania is set to lead the charge in Open Finance growth, driven by expanding mobile usage that provides crucial access to financial services. Kazakhstan follows with 31.8%, where strong digital engagement lays the foundation for greater financial digitalization.

Ivory Coast, at 14.4%, is tapping into mobile usage to support the development of foundational Open Finance services.

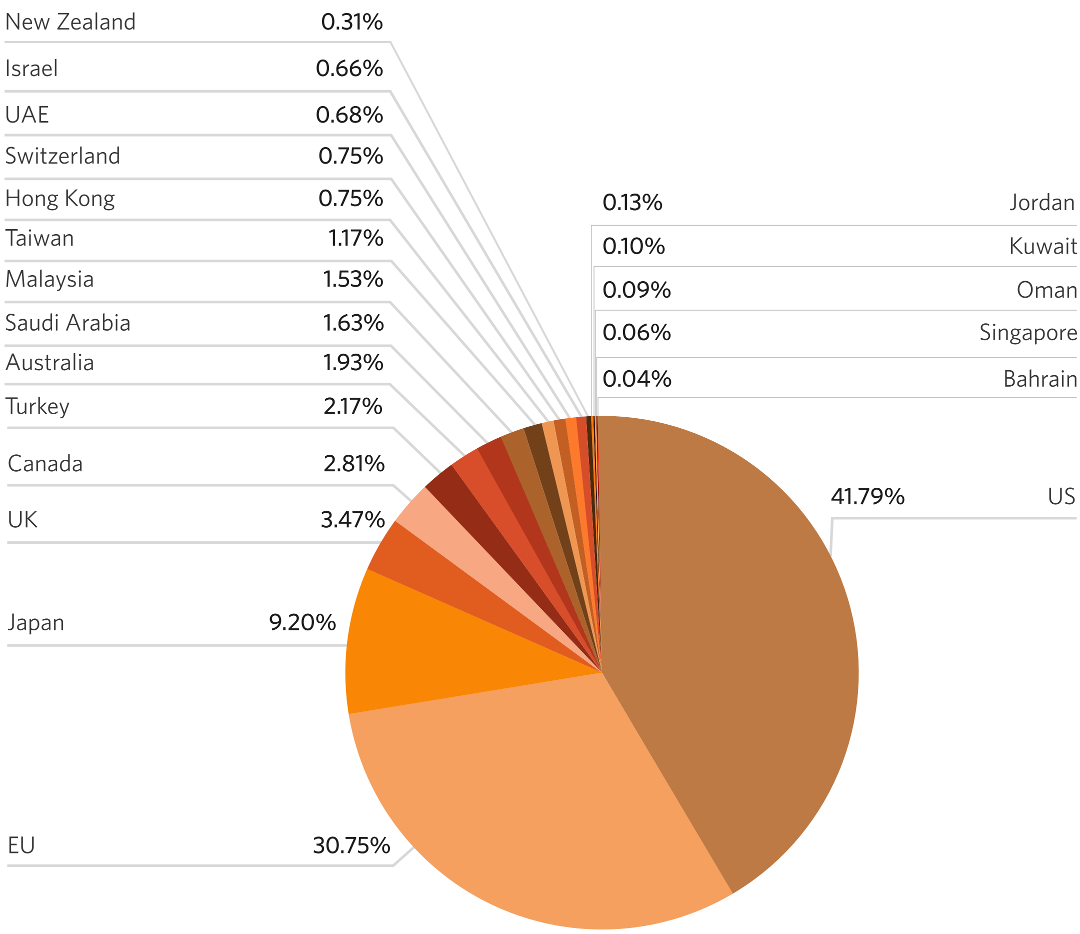
These countries are making significant strides by expanding mobile and digital access, laying a solid groundwork for the growth of Open Finance as infrastructure continues to evolve.



Projected Open Finance User Distribution in Nascent Markets with Growth Opportunites - 2030 (Total Users: 7.7 Million)

Stable Markets with Steady Growth:

In the Stable Markets with Steady Growth, the US and EU are projected to lead in Open Finance users by 2030, collectively accounting for the largest share of the anticipated 387.65 million users. With 40.1%, the US benefits from established credit systems and a mature financial infrastructure, creating an ideal environment for Open Finance growth. The EU, with 29.51%, is leveraging high levels of digital engagement to maintain a sophisticated and well-developed financial ecosystem. With 8.83%, Japan continues to rely on strong credit access and a stable Open Finance environment to support widespread adoption. These regions utilize mature financial systems, robust digital engagement, and established credit structures to drive significant growth in Open Finance services, setting the stage for continued expansion and access to financial services.



Projected Open Finance User Distribution Stable Markets with Steady Growth 2030 (Total Users: 534.439 Million)

Key Takeaways

High-Growth Markets with Infrastructure Potential
India (32.14% CAGR, IPS 0.399) and Brazil (22.19% CAGR, IPS 0.582) represent high-growth markets with large projected user bases currently 90 million and 32.4 million (15% of the total population, respectively).

These regions present prime opportunities for volume-driven expansion through investments in digital infrastructure and focused strategies to boost per-user impact, positioning them as pivotal drivers of Open Finance.

Balanced Growth in Emerging Markets
Turkey (9% CAGR, PIS 0.536) and Colombia (10.99% CAGR, IPS 0.483) illustrate sustainable growth potential due to their unique enablers:

- Turkey: A robust digital payments ecosystem, significant government backing for fintech innovation, and initiatives like Open Banking regulations lay a strong foundation for Open Finance adoption. However, economic volatility and limited consumer awareness remain barriers to address.

- Colombia: High financial inclusion growth, supported by mobile money adoption and pro-active fintech policies, makes Colombia a promising market. The government's efforts in digitizing payments for social programs and fostering a competitive financial environment further amplify its potential. Targeted policy support and infrastructure improvements could amplify Open Finance adoption and financial engagement in these developing markets.

Innovation and Engagement in Mature, High-Impact Markets
The US (19.68% CAGR, IPS 0.736) and Bahrain (9.25% CAGR, IPS 0.551) are mature markets with high impact scores but slower growth.

For sustainable development, these markets should focus on deepening user engagement through innovative financial products, prioritizing user retention, and enhancing value within an established base.

Note:
- **CAGR:** Compound Annual Growth Rate – the year-over-year growth rate of an investment or user base over a specified period.
- **IPS:** Impact Potential Score – a measure indicating the expected readiness and acceptability of Open Finance in a specific jurisdiction. It also signifies the relative upside potential for economic development

Inferences and Insights

Orchestrating an Open Finance regime demands a nuanced understanding of the interplay between a society's economic and human development, policy frameworks, and market dynamics.

The Impact Potential Score (IPS) measures the readiness and acceptability of Open Finance implementation in a specific jurisdiction, while the Compound Annual Growth Rate (CAGR) and user projection calculations establish policy and market momentum. Together, these indicators capture the intricate balance required for effective implementation.

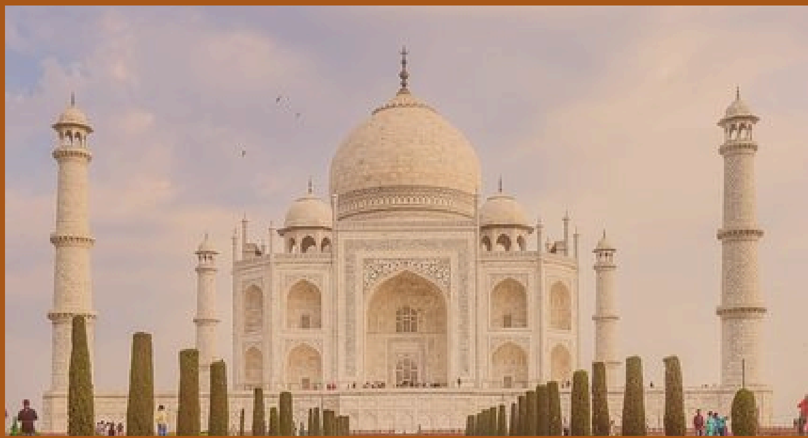
We believe Open Finance regimes will manifest differently in countries with low and high IPS scores. In low-IPS countries, primary use cases and customer value propositions will likely focus on credit and lending, addressing foundational financial inclusion needs.

In contrast, high-IPS countries may prioritize advanced applications such as personal finance and wealth management, reflecting their more mature financial ecosystems.

Nonetheless, low-IPS countries hold a significant opportunity to leapfrog into democratized access to advanced financial services, leveraging Open Finance to accelerate inclusive economic development. Countries with low IPS present unique opportunities as innovation hubs, offering valuable insights that can shape global best practices

India's story of architecting one of the leading and fastest-growing Open Finance implementations is a classic case for charting a contrarian path toward Open Finance.

🇮🇳 *India's Growth Story: Implementation of Open Finance*



India's Account Aggregator (AA) framework has laid the foundation of a robust, inclusive Open Finance model. The AA ecosystem has pioneered a ground-up implementation approach by fostering collaboration among regulators, financial institutions, and technology providers.

Foundational Vision & Policy Framework (2016–2018)
During this period, various developments established the legal and policy foundations for rolling out Open Finance in India. Together, RBI's Master Directions on the Account Aggregator (AA) framework, the Srikrishna Committee's work on data protection, and the Supreme Court's ruling on privacy as a fundamental right provided the foundation for secure, consent-based data sharing, positioning the AA framework as a cornerstone of India's financial ecosystem.

Framework Building & Early Adoption (2019-2021)
With policies in place, India built and rolled out the AA framework. Through collaborative efforts among regulatory bodies, industry stakeholders, and technology providers, the Reserve Bank of India Information Technology (ReBIT), the data standards body for the AA ecosystem, established operational standards.

The launch of Sahamati, an industry alliance, helped drive ecosystem adoption, while regulatory support from entities like RBI, NITI Aayog, and the Ministry of Finance amplified momentum. In 2021, The AA framework officially went live in 2021, marking the start of a function Open Finance network.

Cross-sectoral Expansion & Accelerated Adoption (2022-2023)
This period marked rapid expansion and increased cross-sectoral participation in the AA ecosystem. Financial institutions across banks, pensions, securities, investments, and the Goods and Services Tax Network (GSTN) joined the ecosystem, allowing access to tax, pension, and depository data. Policy advancements, like the Digital Personal Data Protection Act 2023, reinforced data privacy and user control, while ReBIT introduced enhanced technical standards for scalability.

Empowering Financial Inclusion: *Open Finance and Responsible Credit*

Following the exploration of the India Growth Story, this section presents an engaging conversation between BG Mahesh, CEO of Sahamati, and Kunal Shah, Founder of CRED. This discussion explores the transformative potential of Open Finance frameworks, such as the Account Aggregator (AA), and their role in catalyzing financial inclusion and empowerment in India. Through this exchange, Shah articulates CRED's vision of fostering trust within the financial ecosystem while addressing the unique challenges credit users face. The dialogue underscores how Open Finance and responsible credit practices shape India's future economic progress.

Can you share CRED's vision?

"Before starting CRED, I spent much time traveling and studying developed nations. One thing consistently caught my attention - the level of trust the system placed in its individuals was very high. Petrol pumps had no attendants. People rarely ever requested a demand draft. They trusted your cheque.

I realized that a system that trusts its citizens leads to a frictionless environment that creates financial progress for its citizens. People trusted the system because it consistently rewarded good, trustworthy individuals. But back home, trustworthy individuals kept paying a price for the actions of others.
I felt the need to create a system that rewards trustworthy and creditworthy individuals of India and inspires others to be like them. This was the thought that seeded the idea for CRED. Until CRED, credit card holders were not reminded to pay their bills, let alone incentivized for it. Creditworthy individuals deserve better, and we've made it our mission to catalyze their financial progress. We reward financial prudence, enable good financial actions, and make managing money delightful.

What unique challenges in the Indian credit landscape does CRED aim to address, and how does the AA framework help tackle these issues?

India's financial landscape is at an inflection point. With over 100 million credit cards in circulation and outstanding balances growing rapidly, more Indians are using credit to achieve their aspirations. But for many, especially first-generation credit users, financial literacy hasn't kept pace.

The Account Aggregator (AA) framework is a game-changer in this context. It empowers individuals to take control of their financial data—deciding who to share it with and for what purpose.
By offering a clear view of their cash flows, financial cycles, and obligations, AA enables better planning, reduces missed EMIs, and makes the consequences of poor financial decisions more transparent. It's a tool for financial self-

awareness, which is the foundation of responsible credit use.

How does CRED define "responsible credit," and what core elements shape your approach?

Credit is a powerful enabler—it allows people to elevate their quality of life and unlock aspirations. But it works best when it's offered with fairness, transparency, and responsibility. Responsible credit empowers members to use it to improve their lives. That's why we ensure credit products are always available to qualified members but never promoted aggressively. Transparency is at the heart of our approach—charges are surfaced up front, so every decision is an informed one.

We've designed CRED to make the credit-using experience seamless and stress-free. Every feature is built to enable responsible behavior, from timely reminders that encourage on-time payments to tools that help members pay in full and avoid unnecessary debt.

Security and privacy are non-negotiable. As one of the few fintechs in India with multiple security certifications, we prioritize protecting our members' data with rigorous audits and safeguards. Responsible credit is ultimately about trust—creating a system where members, lenders, and platforms like us work together to build confidence and enable progress.

Could you describe how CRED uses the Account Aggregator (AA) framework to help users gain a clearer, unified view of their financial status?

Money management shouldn't feel like a chore. With CRED Money, we turn financial planning into an empowering experience, enabling members to stay on top of their goals with minimal effort. The reality is that financial complexity grows with wealth.

Transactions become fragmented—spread across multiple accounts, subscriptions, and payments—making it easy to lose track. Nearly 70% of India's affluent population faces this challenge. The AA framework helps us give members a unified view of their finances, consolidating balances, transactions, and patterns across accounts. Using advanced data science, we translate these into personalized, actionable insights, empowering members to plan better and take control of their money.

> *"Money management shouldn't feel like a chore"*

Recurring payments—like SIPs, EMIs, rent, or premiums—can feel overwhelming. With CRED Money, members receive timely reminders and can act directly through CRED UPI, ensuring they never miss a payment. Every payment becomes a step toward financial confidence, not a source of stress.

By analyzing spending patterns and categorizing transactions, members can *make more intentional decisions—whether that means cutting back on unnecessary expenses or reallocating resources toward investments. It's about giving members clarity and control to align their money with what they truly value.*

How has integrating with AA improved users' ability to manage credit responsibly and make informed decisions?

The AA framework enables CRED to present financial data in an intuitive, actionable, and secure way. Members don't need to share login credentials or upload statements. Instead, they get a clear, categorized view of their finances with zero manual intervention.

For example, members can track recurring payments like EMIs—seeing a history of what's been paid and preparing for what's due. This helps them maintain the right balance to avoid missed payments, which can hurt their credit score. By making financial patterns more visible and decisions easier, we're enabling responsible credit behavior at scale.

How does CRED help users understand and manage their credit, particularly with the insights provided through AA?

CRED Money simplifies financial management, especially for recurring obligations like EMIs. If a member has a car loan, for instance, they can easily check their payment history, upcoming due dates, and plan balances to prevent auto-debit failures. We also focus on demystifying credit—helping members understand their credit score, what impacts it, and how to improve it. With tools like reminders, timely payments, and visibility into fees, we make financial progress tangible and achievable.

What impacts has CRED seen from implementing responsible credit practices?

Since joining CRED, over 80 lakh (8 million) members have improved their credit scores. Members are tracking their credit scores more frequently and making on-time payments a habit.

By surfacing charges and late fees, we're helping members understand the cost of financial missteps. Through incentives and rewards, we've made every step of their financial journey delightful, turning good financial behavior into something members enjoy.

Contributors

BG Mahesh,
CEO of Sahamati

Kunal Shah,
Founder of CRED

Section 2

A Country-by-Country Perspective

A Country-by-Country Perspective

A combination of regulatory mandates, consumer demand, digitization of financial institutions, and technological advancements propel the adoption of Open Finance.

Drivers such as regulatory frameworks, digital infrastructure, and market innovations enable ecosystems to expand and evolve beyond traditional financial service delivery mechanisms. For Open Finance, the following drivers play a key role–

Regulatory Frameworks and Mandates
Global regulations drive Open Banking and its shift to Open Finance. PSD2 in Europe set the standard, spreading to the Americas, APAC, and Africa. Countries like Nigeria and Saudi Arabia have adopted regulations for financial inclusion and cashless transactions. PSD3 in Europe targets better cross-border payments and innovation. The Middle East's regulator-led model shows faster adoption, with 80% of UAE bankers seeing Open Finance as a natural step forward, backed by government support.

Consumer Demand for Convenience and Innovation
The rapid evolution of digital ecosystems has heightened consumer expectations for convenience and innovation in financial services. Consumers now demand seamless, personalized experiences that integrate effortlessly into their daily lives. Innovation plays a crucial role in addressing these expectations, with features like one-click transactions, real-time insights, and tailored financial advice becoming the norm.

At the same time, convenience is paramount; consumers increasingly favor platforms that simplify complex processes, such as loan approvals, wealth management, and personal financial management.

Digitization and Technological Collaboration
A key requirement of Open Finance is digitizing financial institutions to make data accessible in digital formats. This enables seamless data flow, interoperability, and integration with third-party services, fostering innovation and meeting consumer expectations for convenience and personalization.

The availability of an API-based framework based on acceptable standards by all stakeholders and smartphone penetration is key to adopting Open Finance.

Current Regulatory Landscape and Potential for Open Finance

Regulatory and policy developments mark a decisive step toward initiating Open Finance implementations. We have mapped crucial regulatory developments across 46 jurisdictions worldwide, including direct finance regulations, to assess the potential for Open Finance worldwide.

Table Showing Open Finance Regulation Status by Category

	COUNTRY	REGULATORY DEVELOPMENTS	OPEN FINANCE REGIME
DEVELOPING MARKETS WITH SCALING POTENTIAL	Bangladesh	Mobile Financial Services (MFS) Regulation, promoting convenient financial access to poor and unbanked populations	Not Yet Implemented
	Egypt	Application for Cohort 3 in Regulatory Sandbox Published Fintech Law No.5 for regulating and using financial technology in non-banking financial activities.	In Progress
	Kenya	Five-year Digitalization Plan supporting Open Banking Implementation	In Progress
	Morocco	Development Policy Financing (DPF), aimed at advancing financial and digital inclusion in Morocco, which supports the implementation of Open Banking initiatives.	In Progress
	Nigeria	Regulatory Framework for Open Banking	Not Yet Implemented

	COUNTRY	REGULATORY DEVELOPMENTS	OPEN FINANCE REGIME
EMERGING DIGITAL FINANCE HUBS	Argentina	Transferencias 3.0, enabling real-time account-to-account payments	Partially Implemented
	Brazil	Open Banking Regulations	Operational
	Chile	Open Banking System	Not Yet Implemented
	Colombia	Open Finance Decree 1297 issued (following the May 2023 signing of the National Development Plan mandating Open Data)	In Progress
	India	Account Aggregator Ecosystem	Operational
	Mexico	Mexican Fintech Law, recognizing Open Banking by mandating standardized APIs	Not Yet Implemented
	South Africa	Innovation Hub to promote experimentation and innovation in fintech	In Progress
	Thailand	Regulatory Sandbox is currently still in the testing phase	In Progress
	Indonesia	National Open API Payment Standard (SNAP), aimed to enhance integration and interoperability	Operational

	COUNTRY	REGULATORY DEVELOPMENTS	OPEN FINANCE REGIME
DEVELOPING MARKETS WITH SCALING POTENTIAL	Pakistan	Licensing and Regulatory Framework for Digital Banks, aimed at boosting financial inclusion, accessibility, and digital ecosystem	Not Yet Implemented
	Peru	Legislative Decree No. 1531 allows digital operations for financial system companies.	Partially Implemented
	The Philippines	National Retail Payment System aimed to advance digital payment adoption and access	Partially Implemented
	Rwanda	Open Banking Framework	In Progress
	Senegal	Introduced new Open Banking Regulation: allows banking data sharing via APIs.	In Progress
	Uganda	Open Banking Framework aimed at promoting competition and innovation in the financial sectors.	In Progress
	Zambia	The National Payment System Bills	In Progress

	COUNTRY	REGULATORY DEVELOPMENTS	OPEN FINANCE REGIME
NASCENT MARKETS WITH GROWTH OPPORTUNITIES	Gambia	The National Financial Inclusion Strategy (NFIS)	In Progress
	Ivory Coast (Cote d'Ivoire)	Ordinance No 2023-875 on the fight against money laundering and terrorist financing, enhances the framework for digital financial services, including provision for electronic payments and mobile money.	In Progress
	Kazakhstan	Open API Platform, still focusing on fintech development. AIFC Regulatory Sandbox, allowing fintech to test and develop solutions	In Progress
	Sierra Leone	National Payment Switch	In Progress
	Tanzania	The Banking and Financial Institutions (Licensing) Regulations	In Progress
	Australia	Consumer Data Right, expanding into Open Finance	Partially Implemented
	Bahrain	Regulatory Sandbox Open Banking Framework	In Progress
	Canada	Open Banking Framework	Not Yet Implemented

	COUNTRY	REGULATORY DEVELOPMENTS	OPEN FINANCE REGIME
STABLE MARKETS WITH STEADY GROWTH	Australia	Consumer Data Right, expanding into Open Finance	Partially Implemented
	Bahrain	Regulatory Sandbox Open Banking Framework	In Progress
	Canada	Open Banking Framework	Not Yet Implemented
	Oman	Open Banking API Framework project in advanced stages.	In Progress
	European Union	Financial Data Access as part of its Digital Finance Strategy, expanding Open Banking to support Open Finance.	Operational
	Hong Kong SAR	Open API Framework, setting out a four-phase approach for Open API implementation within banks	Operational
	United Arab Emirates	Open Finance Regulation	Operational
	Israel	Regulation of Payment Services and Payment Initiation Law 5783-2023	In Progress

	COUNTRY	REGULATORY DEVELOPMENTS	OPEN FINANCE REGIME
STABLE MARKETS WITH STEADY GROWTH	Jordan	The Central Bank of Jordan issued instructions governing Open Finance services by all banks and online payment companies in the Kingdom.	In Progress
	Kuwait	Regulatory Sandbox Open Banking product testing	Not Yet Implemented
	Malaysia	BNM/s Digital Banking License aimed to promote fintech growth and innovation in Open Banking	In Progress
	New Zealand	Payments NZ Account Information API v2.1 standards, ensuring secure API services	Partially Implemented
	Saudi Arabia	Saudi Central Bank Open Banking Services	In Progress
	Turkey	Regulation of Banks' Information Systems and Electronic Banking Services CBRT launches Open Banking Infrastructure	In Progress
	Japan	Regulation for Enforcement of the Banking Act	In Progress
	Taiwan	FSC announces third phase of Open Banking to begin in early 2024	In Progress

	COUNTRY	REGULATORY DEVELOPMENTS	OPEN FINANCE REGIME
STABLE MARKETS WITH STEADY GROWTH	Singapore	APIX, a cross-border, open-architecture API marketplace and sandbox Financial World: Finance-as-a-Service API Playbook provides governance and Implementation Strategies for Open Banking	In Progress
	Switzerland	A market-based approach, with an MOU to provide access to private, savings, and current account data	Partially Implemented
	United Kingdom	Payment Services Directive 2, Open Finance, is currently guided by the Financial Conduct Authority.	Operational
	United States	Personal Financial Data Rights mandates that financial institutions grant consumers access to their data for third-party use, laying the groundwork for broader Open Finance adoption.	In Progress

Argentina 🇦🇷

Open Finance in Argentina is evolving, with significant advancements in mid-2023 to enhance the financial ecosystem. The government and financial institutions are working towards frameworks enabling consumers to securely manage their financial data. In July 2023, Argentina launched Open Banking initiatives allowing users to transfer funds between institutions via a single fintech app, with major companies like **Mercado Libre and Ualá** participating in pilot tests[4].

While Argentina lacks a fully established Open Finance regulatory framework, efforts are underway to promote better data sharing and consumer empowerment. Open Finance presents opportunities for increased competition, financial inclusion, and easier access to services, though challenges like cybersecurity risks and the need for robust data protection remain. The government is addressing these hurdles to create a secure environment for Open Finance

Chile 🇨🇱

In October 2022, the Chilean Senate approved the **Fintech Law** to regulate Open Banking and digital assets. This legislation allows Chileans to authorize third-party providers to access their financial information, including bank accounts, loans, and insurance policies. The law is expected to be enacted in July 2026[5], following a gradual implementation period that begins with technical adaptations over the next two years.

The Comisión para el Mercado Financiero (CMF) oversees the implementation of the Fintech Law and establishes rules for the **Open Finance System (SFA)**. This system will require all regulated financial institutions—such as banks and insurance companies—to participate in sharing data that users consent to share.
However, challenges such as data protection, implementation complexity, and market readiness remain.

Colombia 🇨🇴

Colombia is making significant strides toward implementing Open Finance to enhance competition, promote financial inclusion, and leverage technology within the financial sector. In early 2023, the government issued a decree establishing a regulatory framework for transferring consumer data between financial entities, enabling third-party providers to access financial data with consumer consent. Soon, the Colombian government included Open Finance in its National Development Plan–a roadmap for the next four years[6].

In February 2024, the **Superintendency of Finance** issued External Circular 004, outlining the technological, security, and data protection standards required for entities participating in Open Finance. This regulation mandates that financial institutions provide third-party payment initiators access to customer data, further streamlining payments and fostering competition.

However, Colombia faces challenges in standardizing operations, navigating regulatory complexities, and ensuring the market's readiness for these changes. Addressing these issues will be key to successfully implementing Open Finance in Colombia.

Mexico 🇲🇽

The Fintech Law, passed in 2018, was a pioneering step for Open Finance in Mexico. Financial institutions must create APIs (Application Programming Interfaces) that facilitate data sharing. This law aims to enhance transparency and competition in the financial sector by allowing consumers to share their financial data with third-party providers, enabling access to a wider array of financial products and services. Despite the initial progress, the implementation of Open Finance has faced significant hurdles. As of 2023, secondary regulations for standardizing data sharing via APIs have not been fully established.

A legal challenge has been filed against the **Bank of Mexico (Banxico)** and the **Comisión Nacional Bancaria y de Valores (CNBV)** for their delays in issuing these essential guidelines, which are critical for operationalizing Open Finance effectively[7].

As the regulatory landscape evolves and stakeholders work collaboratively to address existing barriers, Mexico is well-positioned to harness the benefits of Open Finance.

South Africa 🇿🇦

South Africa is actively developing its Open Finance ecosystem, building on the foundations laid by Open Banking initiatives. **The Financial Sector Conduct Authority (FSCA)** has taken significant steps towards establishing an Open Finance regime. In March 2024, the FSCA published policy recommendations for creating a framework that facilitates secure and standardized exchanges of financial data among banks, fintechs, and other third-party providers.

The FSCA's 2023 draft position paper outlines a roadmap for implementing Open Finance, emphasizing the need for bilateral data sharing before transitioning to a mandatory model. This approach aims to simplify the process for financial institutions and ensure consumer protection while promoting innovation in financial services.

The success of Open Finance in South Africa hinges on collaboration between various stakeholders, including banks, fintech, and regulators[8]. The FSCA works with the National Treasury and other financial sector regulators to better understand the Open Finance landscape and develop appropriate governance standards.

Thailand 🇹🇭

In October 2024, the **Bank of Thailand (BOT)** introduced the **"Your Data"** initiative, which allows individuals and small and medium-sized enterprises (SMEs) to share their personal data with financial institutions. This initiative is designed to improve access to financial services by enabling a seamless data flow among financial organizations, thereby facilitating better risk assessments and credit evaluations.

The Open Banking data initiative is scheduled to become operational in 2026. This timeline allows financial institutions to prepare to adapt to the new data-sharing framework while ensuring compliance with existing regulations, particularly the Personal Data Protection Act[9].

The framework will support diverse objectives such as financial inclusion, more accurate risk assessments, and economic growth through improved access to tailored financial products. The success of Open Finance will depend on addressing data security concerns, raising awareness, and ensuring robust data protection.

Egypt 🇪🇬

The Central Bank of Egypt (CBE) is leading efforts to establish a formal regulatory framework for Open Banking, which will govern secure data sharing between banks, fintech companies, and third-party providers.

This framework aligns with Egypt's broader National Digital Transformation Strategy, which promotes financial inclusion and improves access to digital payment systems.

As part of its Open Banking strategy, the CBE launched InstaPay, an app designed to facilitate real-time payments and transfers. This initiative is crucial to integrating digital payment solutions into the financial ecosystem and enhancing user experience.

Egypt's **Data Protection Law,** enacted in 2020, ensures that all data sharing complies with international privacy standards[10]. This law safeguards personal information during data exchanges, which is vital for building consumer trust in the Open Finance system. With ongoing regulatory developments and increasing participation from traditional banks and fintechs, Egypt is poised to become a key player in the Middle Eastern fintech landscape.

Kenya 🇰🇪

In the 2021-2025 Vision and Strategy document, the **Central Bank of Kenya (CBK)** has emphasized the importance of Open Banking. This regulatory-driven approach aims to benchmark against global best practices from countries like the UK and South Africa, focusing on secure data sharing to transform consumer access to financial products[11].

Parallely, the **Open Finance Initiative (OFI)**–a collaboration between the

Financial Sector Deepening (FSD) Kenya, the Kenya Bankers Association (KBA), and the Association of Fintechs in Kenya (AFIK)–has been launched to promote innovation and competition. OFI focuses on enabling secure data-sharing practices across financial service providers. This initiative is crucial for developing new business models and shaping policies governing Kenya's Open Banking future.

While the regulatory framework for Open Banking is still under development, the CBK is actively engaging with stakeholders to establish guidelines for secure data sharing that align with the **Data Protection Act of 2019**. This act ensures consumer privacy while promoting innovation within the financial sector.

Morocco 🇲🇦

Morocco's government launched the **Maroc Digital 2020** initiative to accelerate economic growth through digital transformation. This initiative has laid the groundwork for enhancing digital financial services, although cash transactions still dominate the economy, posing challenges for broader digital adoption[12].

Through its **National Financial Inclusion Strategy (NFIS)**, **Bank Al-Maghrib (BAM),** the primary regulatory body overseeing banking operations in Morocco, has proactively promoted financial inclusion and set ambitious targets to enhance access to financial services.

With a burgeoning fintech sector and initiatives like the Open Finance African Group aiming to promote collaboration among banks, fintech, and regulators across Africa, there is significant potential for formulating and rolling out Open Finance in the country. However, the existing regulations primarily address digital payments and electronic money without tailored guidelines for data sharing with third-party providers or API usage, which are essential for Open Banking.

Nigeria 🇳🇬

Nigeria became the first African country to implement an Open Banking Framework, with the **Central Bank of Nigeria (CBN)** releasing regulatory guidelines in February 2021. In early 2023, operational guidelines were finalized and implemented, marking a significant milestone for the Nigerian financial sector. Although the framework is established, there have been delays in operationalizing certain aspects, such as standardizing APIs necessary for effective data sharing[13].

Open Banking Nigeria, a consortium of fintech stakeholders, has advocated for and shaped the Open Banking Framework. This initiative has focused on creating standards for data sharing and ensuring that the interests of both banks and fintechs are represented in regulatory discussions.

Nigeria's approach has been largely grassroots, unlike many countries where government mandates drive

Open Banking. The private sector has played a crucial role in pushing for Open Banking reforms, emphasizing collaboration among banks, fintechs, and regulators to foster innovation without heavy-handed regulation.

Pakistan 🇵🇰

In 2019, the **State Bank of Pakistan (SBP)** introduced the **Open Banking Framework,** which provides standards for banks to share customer-permitted data with third-party service providers safely. The bank strongly emphasizes creating and using standardized APIs for safe and uniform data transmission between banks and approved third parties. The regulator has also released guidelines for banks and other financial institutions to have strong cybersecurity safeguards for data security. It has also built a regulatory sandbox to promote innovation in the financial industry, particularly via Open Banking[14].

Parallely, the jurisdiction promotes digital financial services to increase access to credit under the National Financial Inclusion Strategy (NFIS). In early 2023, the SBP issued no-objection certificates (NOCs) for five digital banks, including UAE-based Mashreq Bank and local e-money institution Easypaisa.

The ongoing regulatory initiatives by the SBP and private sector stakeholders are expected to continue creating a ripe opportunity for the launch and uptake of Open Finance in the jurisdiction.

Peru 🇵🇪

In January 2023, Peru enacted a **Fintech Law** to introduce an Open Banking system allowing the exchange of customer information between various financial service providers. This law mandates data sharing among credit institutions, broker-dealers, asset managers, and insurance companies.

The Superintendency of Banking, Insurance, and Private Pension Fund Administrators (SBS), Peru's regulatory body, is leading efforts to establish a framework that encourages secure data sharing among financial institutions[15]. In 2022, a bill was presented to promote Open Banking and declare it a national interest. The SBS recommended expanding the bill to include an Open Finance model that covers all systems under its supervision.
The regulator continues to address key data security and interoperability challenges by engaging stakeholders and refining regulations. The Peruvian Banking Association (ASBANC) and other state agencies are actively considering the potential benefits of implementing Open Banking.

Philippines 🇵🇭

In 2021, the **Bangko Sentral ng Pilipinas (BSP)** convened an **Open Finance Oversight Committee Transition Group (OFOC TG)** consisting of representatives from financial institutions and fintech companies to develop policies, standards, and guidelines for implementing Open Finance practices in the country.

In June 2023, the regulator launched the **Open Finance PH Pilot,** collaborating with international organizations such as the International Finance Corporation (IFC) and the World Bank[16]. The pilot allows financial institutions to voluntarily participate in developing a system that enables customers to control their financial data and access a wider range of financial products and services.

The pilot aligns with the regulator's Revised **Open Finance Roadmap (2023-2027),** which outlines a roadmap for consent-driven data portability and interoperability among financial institutions.
Through sustained collaboration between regulators, industry, and other global stakeholders, the Philippines is on a promising path toward Open Finance.

Rwanda 🇷🇼

Rwanda has a fertile environment for Open Finance to germinate and prosper. Implementing an ID verification API has been a game changer for financial services and is helping to position Rwanda for the rollout of Open Finance[17]. At the same time, constitutional principles, policy objectives, and regulatory frameworks support the formulation and implementation of Open Finance in thecountry[18].

Constitutional articles have recognized consent, laying the foundation for Open Finance. Similarly, policy initiatives have aligned with Open Finance enablers, such as fintech, innovation, data revolution, and financial inclusion.

At the same time, regulatory initiatives across data protection and cybersecurity require minor changes to fully support Open Finance.
However, implementation requires coordinated efforts among policymakers and regulators due to its cross-sectoral nature.

While exploring partnerships with international organizations to enhance its Open Finance framework, the **National Bank of Rwanda (BNR)** continues to engage with stakeholders to refine regulations and address key data security and interoperability challenges.

Senegal 🇸🇳

In early 2022, Senegal launched a holistic **National Financial Inclusion Strategy (NFIS)** to increase financial inclusion rates to 65% among adults and 90% for micro, small, and medium-sized enterprises (MSMEs) by 2026.

This strategy addresses barriers to credit, savings, and insurance products while emphasizing the importance of digital financial services.

The country has experienced significant growth in real-time payments and mobile banking, reaching unbanked populations. As a result, the proportion of adults with access to formal financial services has increased from 15% in 2014 to 56% in 2021.

At the same time, the country hosts an emerging fintech sector, becoming a vital player in enhancing financial inclusion. The government aims to strengthen this trend by establishing a fully operational fintech association to facilitate data sharing and collaboration among industry players[19].

With these developments, the country is briskly moving towards implementing an Open Finance regime to fulfill its financial inclusion and innovation policy objectives.

Uganda 🇺🇬

Uganda has seen substantial growth in mobile money services, with millions of subscribers using these platforms for transactions.

This growth provides a foundation for potential Open Finance initiatives, but integrating Open Banking principles is still a work in progress.

The Bank of Uganda (BoU) is developing a regulatory framework encouraging Open Finance practices. However, the concept of open APIs is still emerging, and only a limited number of players in the industry recognize its potential. The BoU has engaged with stakeholders to promote discussions about interoperability and the benefits of Open Banking.

The **United Nations Capital Development Fund (UNCDF)** has emphasized the critical role of open APIs in Uganda to usher in more financial inclusion and innovation. The UNCDF has been at the forefront of advocating for educating stakeholders about their benefits through organized workshops. It is pushing for digital financial service providers to open their APIs to third parties to enhance innovation and customer experiences[20].

Zambia 🇿🇲

Zambia is taking important steps towards establishing an Open Finance ecosystem. The **Bank of Zambia (BoZ)** is making significant efforts, in collaboration with multiple stakeholders, especially Cenfri, to explore the feasibility of implementing an Open Finance framework.

In 2023, Cenfri and the BoZ started a study to assess how Open Finance can be implemented in a context-appropriate way, considering local market conditions and customer needs. The study is supposed to culminate in an implementation plan that will draw on lessons learned from similar initiatives in other African countries[21].

Zambia is also upgrading its legal and regulatory landscape to facilitate financial technology growth through the **National Payment Systems Act**, the **Electronic Communications**

Transactions Act, the **Data Protection Act**, and the **Cyber Security Act.**

With these ongoing initiatives across various stakeholders, the country is poised to develop a framework that addresses local needs while promoting secure data sharing among financial institutions.

Bangladesh 🇧🇩

Digital financial services in Bangladesh are witnessing unprecedented growth. **Mobile financial services (MFS)** and digital payment solutions have gained popularity nationwide.

The government also supports enhancing access to digital banking services through these channels. The recent rapid expansion of digital penetration among the country's 170-million populace, which includes 186 million mobile connections, 129 million Internet users, and 93 million smartphone users, could drive digital financial services[22].

Given these developments, one-third of Bangladesh's financial institutions actively explore or implement Open Banking solutions[23]. Bangladesh Bank, the country's central bank, is working on establishing a regulatory framework that supports Open Banking practices.

This framework is expected to support the rise of digital financial services in the country by catalyzing the development of user-centric financial products and services.

Gambia 🇬🇲

In 2023, the **Central Bank of The Gambia** launched its **National Financial Inclusion Strategy (NFIS)**, which aims to provide formal financial services to **70 percent** of adults by 2025.
The central bank has concentrated on implementing practical policies to realize the financial inclusion of small-scale farmers, who represent the backbone of the country's economy.

Additionally, the bank is strengthening and widening the Gambia National Switch, the national platform for digital financial services (DFS)[24], for P2P (peer-to-peer), G2P (government-to-peer), and P2G (power-to-gas) transactions. The country is also witnessing the rapid emergence of FinTech.

The Central Bank aims to further accelerate innovation by launching regulatory sandboxes.
Thus, while Open Finance in The Gambia is yet to be incepted, the evolving financial landscape has focused on leveraging technology to enhance the delivery of financial services, promising to enhance financial inclusion and innovation within the financial sector.

Ivory Coast (Cote d'Ivoire) 🇨🇮

Digital financial services (DFS) have positively impacted financial inclusion in the Ivory Coast. According to

GlobalFindex 2021, only **21%** of adults own an account at a financial institution, while **40%** of adults hold a mobile money account, up from 34% in 2017 and 24% in 2014.

To further strengthen this trend, the World Bank facilitated a workshop with multiple stakeholders in the jurisdiction to propose undertaking actions across four key areas: the legal and regulatory framework, access to finance, capacity building, and the organization of the Fintech ecosystem.

As an outcome, the **2022-2024 Roadmap to Improve Fintech in Cote d'Ivoire** was created, which the government plans to implement. The government, with the Agency for the Promotion of Financial Inclusion (APIF), has taken steps to improve the legal and regulatory framework to support fintech development[25].

With ongoing regulatory developments and stakeholder engagement, the country is poised to transform its financial services landscape. Thus, it promises to be a ripe ground for the rollout of Open Finance in the near future.

Kazakhstan

Kazakhstan is advancing its Open Finance framework with significant initiatives led by the **National Bank of the Republic of Kazakhstan (NBK)** and the **National Payment Corporation**. In late 2023, the NBK, the primary regulator anchoring the country's Open Banking strategy, launched an Open Banking pilot program. The pilot program witnessed participation from 130 customers across the country's top five banks.

All the banks recognized the convenience and user-centric approach of Open Banking. At the same time, although most customers reported their expectations to be met, everyone wanted enhanced functionality. Thus, the pilot has emphasized the customer readiness for Open Banking in the country.

At the same time, it has created a foundation for actively developing the country's financial market[26]. As a result, the NBK approved a comprehensive roadmap for developing Open Banking from 2023 to 2025. This plan includes expanding account aggregation services and enhancing collaboration among market participants.

Sierra Leone

Despite having 14 commercial banks, 17 community banks, 50 microfinance institutions (MFIs), five deposit-taking institutions, three Mobile Money Operators, and 59 Financial Services Associations (FSAs), only **12.4%** of adults in Sierra Leone have a bank account. Again, the total percentage of persons with access to formal financial services, including mobile money, is **19.8%**[27]. **The National Financial Inclusion Strategy (NFIS)** aims to address these issues by making financial services accessible and affordable to all citizens. Supported by a $12 million World Bank program, Sierra Leone launched a key component of its Open Finance strategy–a **National Payment Switch**, in 2023. The switch interconnects various financial institutions, enabling interoperability among banks, microfinance institutions, and mobile money operators.

Given this context, although the extent of financial exclusion makes Open Finance less likely, the rapid pace of developments on DFS keeps the landscape hopeful.

Tanzania 🇹🇿

Tanzania has concentrated on creating an inclusive environment through policies and infrastructure that support connectivity, digital IDs, and affordable mobile financial services. A **Financial Services Registry (FSR)** that maps service access points across the country has helped to target underserved populations effectively.

At the same time, the Tanzania Instant Payments System (TIPS) has promoted interoperability between banks and non-banks to facilitate real-time payments among various DFS providers. These infrastructure initiatives have enhanced access to digital financial services in the country[29].

According to the World Bank Global Findex 2021, Tanzania has seen a substantial increase in financial inclusion, with the proportion of adults with access to financial services rising from 17% in 2011 to **52%**. Despite this progress, approximately **48%** of adults remain excluded from formal financial services, highlighting ongoing challenges.

These infrastructure and policy initiatives in the jurisdiction create a habitable space for Open Finance to take root and prosper!

EU (European Union) 🇪🇺

The Payment Services Directive 2 (PSD2), which gave rise to the Open Banking paradigm, provided third-party providers (TPPs) access to payment accounts, leading to the creation of Account Information Service Providers (AISPs) and Payment Initiation Service Providers (PISPs) in the region.

However, according to the Commission, Open Banking was only used by **5%** of customers in 2021. Thus, the commission has published **Payment Services Directive 3 (PSD3)** to overcome some of the shortcomings that prevented Open Banking from taking off in the EU.

At the same time, the commission has proposed the **Financial Data Access Regulation (FiDA) in 2023**. The regulation aims to establish a comprehensive framework for customer data access across various financial services if enacted. The FiDA covers various financial data types, including mortgage agreements, investment products, and pension rights. Thus, these developments advance the Open Finance framework in the region. Although the proposal is currently being negotiated[30], this marks a firm step from the EU toward Open Finance.

UAE 🇦🇪

The Central Bank of the UAE (CBUAE) drives the **Open Finance initiative in the UAE**. In 2024, the CBUAE introduced the Open Finance Regulation as part of its **Financial Infrastructure Transformation Program.**

According to the regulation, all licensed financial institutions (LFIs) under CBUAE supervision are mandated to participate and comply with guidelines for data sharing and service provision. The regulation will be implemented in phases, starting with banks and insurance companies.

Within the framework, the bank has also launched a Trust Framework, an API Hub, and Common Infrastructural Services to facilitate secure and efficient cross-sectoral data sharing and transaction initiation.

The potential of Open Finance in the UAE is vast. As regulatory frameworks mature and technology evolves, stakeholders must prioritize security and consumer education to realize this potential fully. With strategic implementation, the UAE could emerge as a global leader in Open Finance innovation.

Saudi Arabia 🇸🇦

According to **Vision 2030**, Saudi Arabia aims to diversify its economy and establish the kingdom as a global fintech hub. To realize this vision, the Saudi Central Bank (SAMA) has been at the forefront of significant developments in regulations and technology.

Open Banking and Open Finance are major focus areas for the jurisdiction. The SAMA initially issued its Open Banking framework in late 2022, focusing on account information services and payment initiation services. The central bank issued regulatory guidelines and technical standards to align with international best practices on Open Banking.

The regulator has also taken decisive steps to promote financial technology through initiatives such as a **regulatory sandbox** that allows fintech startups to test their innovations in a controlled environment. This initiative is crucial for fostering collaboration between traditional banks and new entrants in the financial sector.

These developments offer exciting avenues for the kingdom to modernize its financial ecosystem. As these initiatives unfold, they will likely redefine the future of financial services in Saudi Arabia and potentially set a benchmark for other nations in the region.

Oman 🇴🇲

In July 2024, the **Central Bank of Oman (CBO)** released a consultation paper on a draft Open Banking regulatory framework that touches upon data standards and governance, consent management, data security, cybersecurity, and technical specifications.

At the same time, Oman's Ministry of Transport, Communications, and Information Technology issued the **Personal Data Protection Law (PDPL)**, which came into force in early 2024.

The CBO has recognized the importance of promoting and harnessing technology in the financial services industry. Thus, in October 2020, the central bank launched the Fintech Regulatory Sandbox framework and opened applications for various fintechs.

The technological landscape that enables the successful rollout of Open Finance in Oman has rapidly evolved in the past two years. The central bank published reference API specifications to catalyze the development and management of Open Banking APIs in Oman. Similarly, the bank also released security specifications to guide data and information security.

Recently, the regulator published the Technology Framework, which provides an "overview of the technology architecture of Open Banking and underlying systems." Thus, Oman is rapidly progressing towards a fully successful Open Banking rollout. This implementation will serve as a stepping stone for the jurisdiction to develop an Open Finance regime in the country.

Bahrain 🇧🇭

In 2018, the Central Bank of Bahrain (CBB) introduced regulations that mandated retail banks to share data through standardized APIs. In 2020, the central bank established the **Bahrain Open Banking Framework,** which laid out the technical specifications and guidelines for its implementation.

This Open Banking framework has laid the foundation for the country to transition into a successful Open Finance regime beyond banking across pensions, insurance, and investment data.

Last year, the regulator expanded the scope of the framework and mandated that all licensed banks provide APIs for corporate account access. This allowed third-party providers to offer advanced financial management tools and personalized credit solutions for businesses.

The Bahrain market has also witnessed the establishment of **FinHub 973**, a digital lab that facilitates collaboration between banks and tech startups for fintech innovation. Thus, with an established solid regulatory framework and an emphasis on innovation through industry collaboration, Bahrain offers a ripe opportunity for Open Finance programs to take root and flourish.

Kuwait

Kuwait is inching towards an Open Finance regulatory framework through constant efforts from the Central Bank of Kuwait (CBK). The central bank has convened an **Open Banking Working Group** with specialists from Kuwaiti banks.

This group is tasked with developing a comprehensive **Open Banking Regulatory Framework** and defining application programming interface (API) specifications to implement Open Banking services in the jurisdiction. CBK has also emphasized the importance of fintech for enhancing financial services.

The regulator has conducted studies to assess the need
for an Open Banking framework and launched a sandbox initiative to test innovative financial products in a regulatory environment. In August 2022, the CBK approved testing a pioneering Open Banking product within this sandbox.

As these initiatives progress, they hold the potential to redefine the future of financial services in Kuwait, aligning with broader national goals for economic growth and technological advancement.

Israel

Introducing the **Financial Information Service Law** in Israel in 2021 marks a significant step towards Open Finance. According to this law, all large financial institutions must share customer data with authorized third parties.

Open Banking platforms are emerging in the Israeli market. This initiative aims to create an API marketplace that facilitates collaboration between banks and fintech companies, enabling them to develop innovative financial products and services.

Additionally, collaborations are becoming increasingly common. For instance, FICO has partnered with Open-Finance.ai to leverage Open Banking data for improved credit assessment processes, enhancing efficiency and expanding access to financial services.

With strong regulatory support and a vibrant fintech ecosystem, Israel's Open Finance landscape presents an exciting opportunity for the market and the region.

Jordan 🇯🇴

With strong regulatory support from the central bank and an emphasis on innovation, Jordan is poised to enhance user experience, drive economic growth, and promote financial inclusion.

In November 2022, the **CBJ (Central Bank of Jordan)** issued comprehensive instructions governing Open Finance services. This regulation requires banks and payment service providers to grant third-party providers (TPPs) access to customer data via application

programming interfaces (APIs). Similarly, the Jordan Open Finance Standards, launched in February 2024, aims to standardize APIs across the financial sector.

Open Finance is viewed as a crucial driver for financial inclusion in Jordan. The CBJ's regulations are expected to empower consumers by giving them greater control over their financial data, enabling access to a wider array of services, including insurance, mortgages, and utility payments.

As these initiatives unfold, they hold significant potential for reshaping how financial services are delivered in Jordan and establishing it as a key player in the regional fintech ecosystem.

Australia 🇦🇺

Australia's **Consumer Data Right (CDR)** is a pivotal initiative to enhance consumer control over personal data. After successfully implementing CDR in the banking sector, the Australian government has identified Open Finance as the next priority area.

This expansion aims to include additional financial products beyond banking, such as general insurance, superannuation, and non-bank lending services.

The CDR is not limited to banking; it has also been applied in the energy sector and is expected to extend into other industries. This holistic approach aims to create a unified data-sharing ecosystem across various sectors.

The CDR has established itself to be a step towards Open Finance. As it evolves and expands into new sectors, the framework holds significant potential for reshaping how Australians interact with financial products and services.

Hong Kong 🇭🇰

The evolving landscape of Open Finance implementation in Hong Kong is primarily driven by the **Hong Kong Monetary Authority (HKMA)**.

In 2018, HKMA launched the phased implementation of an **Open API**

Framework to facilitate data sharing between banks and third-party service providers. Due to the lack of API standardization, the adoption and uptake of Open Banking were slow in Hong Kong. At the same time, the banks were hesitant to share data with third-party fintechs[32].

Thus, the regulator launched an Interbank Account Data Sharing Initiative (IADS). The Commercial Data Interchange (CDI) is a platform that centralizes customers from enterprises as data providers.

Data consumers–other banks–can only access the data upon the customers' consent.
Additionally, the country has a vibrant fintech ecosystem, prospering under a supportive regulator and government that nurtures innovation in financial services.

The **HKMA's FinTech 2025** strategy outlines plans to digitize banking operations fully. Thus, with an advanced financial services industry and targeted efforts from the regulator, Open Finance in Hong Kong could prosper.

Canada 🇨🇦

The Financial **Consumer Agency of Canada (FCAC)** oversees, administers, and enforces Canada's **Consumer-Driven Banking Framework**, which implements Open Banking and is poised to later evolve into Open Finance. The jurisdiction is witnessing significantly increasing collaboration between fintechs and traditional banks to explore data-sharing initiatives for improved financial services provision[33]. Real-Time Rail (RTR) aims to modernize Canada's payment systems and complement Open Banking by enabling real-time transactions and enhancing the capabilities of third-party providers. Thus, regulatory initiatives, digital infrastructure, and industry collaborations are driving the evolution of Open Finance in Canada.

New Zealand 🇳🇿

The New Zealand government has established a **Consumer Data Right (CDR)** framework to facilitate Open Banking by allowing consumers to share their financial data securely with third-party providers. The Aotearoa New Zealand Open Banking Ecosystem Map was released in late 2024. It highlights that **58%** of industry participants are third-party providers. The report emphasizes the role of smaller players in driving early adoption.

The four largest banks in the region are set to adopt Open Banking standards through the v2.1 Payment Initiation API standard and the v2.1 Account Information API standard by November 2024. This rollout will cover over **90%** of consumer bank accounts in the country. The Commerce Commission in New Zealand has recommended a unified approach to operationalizing Open Banking by mid-2026, emphasizing the need for clear timelines and regulatory support.

The future of Open Finance in New Zealand looks bright as regulatory frameworks solidify and technology continues to evolve. Collaboration between banks and fintechs is expected to lead to innovative solutions that enhance consumer experiences while fostering a competitive marketplace[34].

Turkey 🇹🇷

The **Banking Regulation and Supervision Agency (BRSA)** has introduced **"Regulation on the Operating Principles of Digital Banks and Banking as a Service"** to formalize neobanks and digital-only banking in the country.

At the same time, the Turkish regulator has been proactive in supporting digital banking and financial technology initiatives.

As a result, digital banking has witnessed a notable increase in mobile banking usage. For instance, active mobile banking users in Turkey grew from 7.7 million in 2019 to over **13 million** by the end of 2022.

At the same time, there have been key developments in data protection. The Law on Payment Services and Electronic Money Institutions supports innovation by licensing fintech for payment services.

Turkey's Personal Data Protection Law aligns with GDPR principles, fostering a regulated environment for data sharing. These measures, combined with a robust fintech ecosystem, make Turkey a promising market for Open Finance.

Japan 🇯🇵

The **Financial Services Agency (FSA)** has encouraged collaboration between financial institutions and fintech companies through a 2017 amendment to the Banking Act. This amendment introduced open APIs for banks to establish secure third-party data access systems by 2020.

While participation in Open Banking is not mandatory, many leading banks and fintech firms are experimenting with APIs to create partnerships and enhance their service offerings.

The Open Banking landscape has also spurred the growth of fintech companies that leverage shared data to offer tailored financial products, such as digital payments, personal finance management tools, and peer-to-peer lending platforms.

As the sector matures, Japan's success in Open Finance will depend on increasing consumer awareness, ensuring strong data privacy practices, and fostering continued partnerships between banks and fintech companies.

Taiwan 🇹🇼

The **Financial Supervisory Commission (FSC)** has played a pivotal role in promoting Open Finance in Taiwan. The FSC has guidelines encouraging banks to voluntarily open their APIs to third-party service providers (TSPs).

As a result, fintech companies have leveraged shared data to develop innovative financial solutions such as personal finance management tools and digital payment platforms.

Major banks, including CTBC Bank and Taipei Fubon Bank, have collaborated with fintech companies to expand service offerings and improve user experiences through open APIs, aligning with global best practices.

The growth potential in Taiwan's Open Finance is significant, with particular promise in areas like financial inclusion, personalized banking, and digital financial literacy.

Despite the progress, challenges remain, especially around consumer awareness and adoption. Cultural preferences for traditional banking and privacy concerns may slow the widespread adoption of Open Finance.

To address this, the FSC and industry players are focusing on building consumer trust through education on data rights and secure data-sharing practices.

Malaysia 🇲🇾

Open Finance developments in Malaysia stem primarily from the central bank, **Bank Negara Malaysia (BNM),** spearheading financial sector innovation through initiatives like the **Financial Technology Regulatory Sandbox l**aunched in 2016 and subsequent digital banking licensing guidelines.

The regulator introduced an **open API framework** in 2019, encouraging banks to adopt standardized APIs to facilitate secure data sharing.

While participation is still largely voluntary, major banks such as Maybank and CIMB have launched APIs to support fintech innovation. In 2022, BNM awarded the first digital banking licenses, allowing digital-first institutions to innovate financial services through data-driven, customer-centric offerings.

Malaysia's proactive regulatory approach and its focus on industry partnerships set a promising foundation for Open Finance. With high mobile penetration, Open Finance is well-positioned to reach rural and low-income segments through accessible, mobile-friendly platforms.

However, challenges such as ensuring data privacy, consumer education, and refining the regulatory framework remain critical to Malaysia's Open Finance success.

Indonesia 🇮🇩

Indonesia is progressing in Open Finance, backed by a strong push from its central bank, **Bank Indonesia (BI),** and the **Financial Services Authority (OJK).**

The **National Standard for Open API Payment (SNAP),** launched in 2020, allows payment service providers to securely share data and services, marking an initial step toward a broader Open Finance framework. **QRIS**, an interoperable QR code standard for digital payments, enables cross-platform transactions across various financial service providers, marking significant development that supports finance in the country.

With high smartphone penetration, Open Finance could allow millions of Indonesians, including those in rural areas, to access financial services digitally.

However, challenges remain, including more robust data protection laws and consumer education around data privacy and financial management.

Switzerland 🇨🇭

Unlike the EU's PSD2 directive, Switzerland has opted for a market-driven approach to Open Finance. The **Swiss Bankers Association (SBA)** has actively encouraged financial institutions to adopt open APIs and foster collaboration with fintechs.

This approach has led to gradual integration, allowing banks and fintechs to develop data-sharing solutions at their own pace, focusing on innovation that meets high data privacy standards.

Efforts to develop API standards for seamless integration and secure data exchange have been led by industry groups, notably **OpenWealth**, which focuses on wealth management API standards. The **Swiss Fintech Innovations (SFTI)** group has also been a key player, working on establishing guidelines for interoperability to enhance collaboration between traditional banks and fintech firms.

Open Finance holds significant potential to enhance Switzerland's position as a financial hub, particularly in wealth management and fintech innovation. However, challenges include balancing openness with Switzerland's stringent data protection laws and encouraging financial institutions to participate without regulatory mandates.

Singapore 🇸🇬

The **Monetary Authority of Singapore (MAS)** has spearheaded the movement by developing frameworks and initiatives to encourage data sharing while ensuring robust consumer protection. MAS's progressive stance is complemented by market-driven collaboration and government-backed digital infrastructure, positioning Singapore as a hub for financial innovation in the region.

MAS launched the **API Exchange (APIX),** a platform that enables financial institutions and fintechs across Asia to collaborate and test Open Finance solutions in a secure sandbox environment. In 2020, Singapore unveiled the **SGFinDex**– a public digital infrastructure that enables individuals to consolidate their financial information across banks and government agencies.

Built on SingPass, Singapore's national digital identity system, SGFinDex allows users to access a comprehensive view of their financial holdings, enhancing financial planning and literacy.

With continued support from MAS and strong public-private collaboration, Singapore is well-positioned to realize the benefits of Open Finance and potentially set a global benchmark in the sector.

UK 🇬🇧

Driven by the **Financial Conduct Authority (FCA)** and the **Competition and Markets Authority (CMA),** Open Banking laid the foundation for Open Finance by enabling consumers to securely share their bank data with third-party providers through standardized APIs.

The UK's **Open Banking Implementation Entity (OBIE)** was established to oversee the rollout of Open Banking.

As of 2023, it has reached significant milestones, with over 7 million users and hundreds of third-party providers leveraging Open Banking APIs.

In 2021, the FCA released a feedback statement to gather industry insights on moving towards an Open Finance model where consumers could access and share data across all financial products.

The UK government is exploring broader **"smart data"** initiatives beyond Open Finance, including utility and telecom data-sharing models. These align with Open Finance and seek to empower consumers to have control over their data across various sectors.

With the infrastructure and regulatory experience from Open Banking, the UK is well-placed to lead in Open Finance, potentially setting a benchmark for other countries in developing expansive, inclusive, and innovative financial ecosystems.

United States 🇺🇸

The United States Open Banking and Open Finance approach has been an archetypical market-driven journey supported by the **Financial Data Exchange (FDX)** to establish standards for secure data sharing and promote interoperability among financial institutions and fintech companies.

The FDX API has emerged as the de facto standard for North America, facilitatingthe seamless and secure exchange of financial data[35].

The Consumer Financial Protection Bureau (CFPB) has amended the Dodd-Frank Act to further strengthen this trend. It has finalized rules to implement **Section 1033** to enhance customer rights regarding financial data access and sharing.

These developments will eliminate unsecured screen scraping to access user financial data. These rules mark a significant shift towards more secure and standardized access mechanisms, making the financial ecosystem safer and more robust.

Thus, the regulation is poised to tangibly impact how the interplay between traditional financial institutions like banks and fintechs unfolds in the Open Finance context.

The future of Open Finance in the USA holds potential for remarkable innovation across customer-centric financial services such as credit, payments, wealth management, and others.

However, success depends on overcoming challenges such as regulatory clarity and developing secure, interoperable systems.

Brazil 🇧🇷

Open Finance in Brazil, initially launched as Open Banking, is a transformative initiative led by the Central Bank of Brazil (BCB). Under regulatory leadership, Brazil has

emerged as one of the leaders of Open Finance in Latin America and worldwide. The phased approach to implementing Open Finance started in 2021 and has proved fruitful.

The phases started with credit and personal data sharing and gradually included other financial products, such as investment and insurance information.

As of 2024, nearly **800** financial institutions, including banks and fintechs, participate in Brazil's Open Finance ecosystem. It has witnessed significant adoption, with over **58 million**[36] consents granted by users to share their financial information across participating institutions[36].

Parallely, **Pix**–the real-time payments system, has transformed the Brazilian landscape by reducing reliance on cash and traditional payment methods like boletos (payment slips).

While Open Finance provides a robust infrastructure for data sharing, an integration with Pix could boost its growth.

Brazil has emerged as one of the global leaders in implementing finance.

Its approach is peculiar and grounded in **Digital Public Infrastructure (DPI)** principles.

In Brazil, **granular consent** mechanisms allow users to specify what information can be shared and for what purpose, with the flexibility to revoke consent at any time. This ensures that users have complete visibility and control over how their financial data is accessed and utilized.

The Open Finance ecosystem connects diverse financial sectors through standardized APIs, including banking, insurance, and pensions, fostering seamless communication between institutions.

The architecture has prioritized decentralization to mitigate risks and ensure robust data security. In Brazil, data remains at its source and is shared only with user consent, avoiding centralized repositories and the vulnerabilities they entail.

This federated architecture and a comprehensive approach provide scalability to the implementation. At the same time, Brazil's model encompasses various financial services that are adaptable to future use cases. Collaboration between the public and private sectors has been pivotal in Brazil.

The Central Bank has established standards and oversees compliance, while private institutions innovate to create consumer-facing solutions.

The Brazilian approach exemplifies a techno-legal Digital Public Infrastructure (DPI) implementation roadmap. By adhering to shared principles and adapting them to local contexts, Brazil has created a global benchmark for Open Finance, proving that innovation and inclusion coexist in pursuit of economic empowerment.

Qatar

In 2022, **Qatar National Bank (QNB)** launched its **Open Banking Platform,** allowing customers and partners to access its APIs. At a market level, financial institutions in the country are exploring avenues for implementing Open Banking through collaborations with fintech companies to create new services and products for their customers.

To further strengthen steps in these directions, the Fintech Sector Strategy Summary released by the **Qatar Central Bank (QCB)** laid out plans to build an Open Banking architecture to transform the financial services industry.

As a key architecture component, the centralbank has focused on regulatory guidelines for the authorization and supervision of third-party providers, secure customer data sharing, and customer consent[37]. This framework is set to be implemented by **2026.**

Looking ahead, Qatar is positioning itself as a key player in the region's Open Finance landscape by leveraging its established financial infrastructure and regulatory frameworks.

The combination of favorable regulations and government backing offers significant opportunities for further growth in Open Finance within the country.

South Korea

The **Financial Services Commission (FSC)** in South Korea has been a proactive regulator that fosters Open Banking and Open Finance implementations in the jurisdiction.

The World Bank has highlighted the South Korean Open Banking and Open Finance model as a potential blueprint for other countries aiming to implement similar frameworks[38].

Regulatorily standardized APIs have expanded account-to-account payments and bank data sharing in South Korea. By April 2021, there were about **76.6 million** subscriptions to Open Banking services.

The **MyData** initiative extends this concept beyond banking to include various financial products such as loans, insurance, and investments.

Launched in **2021**, MyData allows consumers to authorize licensed companies to access their financial data across various institutions, giving users control over personal financial data while enhancing financial planning tools.

As of early 2022, registered users of Open Finance had surged to approximately **54.8 million,** demonstrating rapid adoption.

China 🇨🇳

The **People's Bank of China (PBOC)** has released a **Fintech Development Plan for 2022-2025**, which outlines an approach to balance innovation and regulation in the jurisdiction[39].

Accordingly, China has passed the Personal Information Protection Law (PIPL) and Data Security Law (DSL) in 2021.

These laws provide a legal foundation for handling personal financial data sharing and iterate data security, control, and agency in data sharing within the financial sector.

These regulatory developments create a favorable environment for implementing Open Finance-led data sharing and data management practices in the country.

Although no significant regulatory movement is pushing for Open Banking and Open Finance[40], there have been several market-led initiatives. Notably, companies like Tencent and Alibaba, through their platforms WeChat and AliPay, have pioneered the development of super apps packed with a wide range of digital services.

Section 3

Practical Insights

Practical Insights

During the research for this report, we interacted with several experts from around the world.

In this section, we have captured guest articles and insights from these interactions to enrich the report with their practical insights.

Unlocking Financial Access through Open Finance

Pawan Bakhshi, PhD, India Country Lead, Inclusive Financial Services, Bill & Melinda Gates Foundation. (Views expressed here are personal)

How Open Finance Can Expand Financial Inclusion in Africa, the Middle East, South East Asia, and Latin America

Financial inclusion is essential for economic empowerment and poverty reduction, particularly in developing and emerging markets. As technological innovations reshape the financial landscape, the concept of open finance has emerged as a promising pathway to bridge the financial inclusion gap. Open Finance has transformative potential in expanding financial access across regions such as Africa, the Middle East, South-East Asia, and Latin America. This article outlines Pawan Bakhshi's vision for how open finance could catalyze a new era of financial inclusion.

What is Open Finance?

Open finance extends the principles of open banking by enabling secure sharing of financial data across various financial service providers with user consent. This data-sharing model fosters competition, innovation, and the development of tailored financial products that cater to the specific needs of different demographics. By utilizing digital identities, APIs, and data analytics, open finance can democratize access to credit, savings, insurance, and other essential financial services.

Why Focus on Financial Inclusion?

Financial inclusion is more than just access to a bank account; it is about enabling individuals and businesses to fully participate in the economy and benefit from the digital revolution. For regions with historically low financial inclusion, Open Finance presents an opportunity to leapfrog traditional barriers and build inclusive systems that offer tailored solutions to marginalized communities. Financial inclusion is a key lever for alleviating poverty and fostering economic growth.

Challenges in Financial Access Across Regions

- ***Africa**: Despite notable progress with mobile money platforms like M-Pesa in Kenya, significant challenges remain, especially in rural and underserved areas where access to formal financial institutions and telecom coverage is limited.*

- ***Middle East:** While the region has seen an increase in fintech innovation, access is still hindered by regulatory fragmentation and varying levels of economic development.*

- ***South-East Asia:** With diverse economies and populations, financial inclusion varies widely. While urban centers often have multiple financial service options, rural areas can lag behind.*

- ***Latin America:** High informality and economic inequality contribute to financial exclusion. Although the region has seen the rise of digital financial services, many still rely on informal solutions due to mistrust or lack of knowledge about formal financial products.*

- ***Gender:** In many developing countries, women are disproportionately excluded from financial services due to social, cultural, and economic barriers. Women face challenges in obtaining loans, opening accounts, or receiving equal pay, all of which affect their financial inclusion.*

How Open Finance Could Drive Inclusion

1. ***Bridging Infrastructure Gaps with Digital Solutions-** Open finance can help overcome traditional infrastructure barriers by leveraging mobile technology and digital IDs. For example, mobile-first financial tools can connect people in remote regions to formal financial services without the need for physical branches.*

2. ***Lowering Costs and Improving Accessibility-** Open finance enables a competitive landscape where more players can offer services, leading to lower fees and more user-centric products. This is particularly significant for low-income individuals who may be deterred by high banking costs.*

3. ***Supporting MSMEs and Entrepreneurs-** Small businesses are crucial to economic growth but often struggle to access credit due to insufficient credit histories. Open finance can change this by allowing MSMEs to share alternative data, such as utility payments and transaction histories, to build creditworthiness and unlock funding.*

4. ***Empowering Women and Marginalized Groups-** In many regions, women and marginalized groups face additional challenges accessing financial services due to social and cultural factors. Open finance, supported by targeted*

outreach and digital education initiatives, can offer tailored financial solutions that cater to these groups' specific needs.

5. ***Fostering Innovation and New Fit-for-Purpose products-*** *Data sharing between financial institutions, and consumers allows for the development of new products that cater to emerging needs, such as financial products for gig workers, impact investing, or climate risk insurance.*

Overcoming Challenges

- *While the potential is enormous, challenges remain. The digital divide, lack of financial literacy, and concerns about data security must be addressed for open finance to be successful. There need to be robust partnerships between the public and private sectors to create user-friendly and secure open finance ecosystems.*

- *Regulations that protect consumer data while fostering innovation are also vital to maintain trust and encourage widespread adoption. Gaining and maintaining consumer trust is critical. Many customers are still wary of how their data is used, particularly in countries where privacy laws are either less developed or poorly enforced.*

- *Consumers must give informed consent for their financial data to be shared, but many do not fully understand the implications of granting access to their data.*

- *This leads to a risk that consumers may unknowingly or unwillingly expose themselves to risks. The process of giving consent for data sharing can also be cumbersome, especially when customers need to authenticate their identity across multiple platforms. If this process is not user-friendly, consumers may avoid engaging with open finance services.*

- *On the supply side, many traditional financial institutions are reluctant to share data with competitors, fearing loss of market share or giving up proprietary customer insights. Overcoming this reluctance is a significant challenge. Open finance encourages collaboration among different players in the ecosystem (e.g., banks, fintechs, tech giants), but many institutions are still focused on maintaining their competitive edge. This can create friction in sharing data or integrating with new services. For established financial institutions, embracing open finance requires a significant cultural and operational shift. Many traditional banks may have legacy systems and business models that are not conducive to an open finance ecosystem.*

Looking Ahead

Scaling Open Finance solutions requires a multi-faceted approach:

- ***Investing in Infrastructure:*** *Governments and development organizations must continue to support the infrastructure needed to support digital ecosystems, such as mobile networks and internet access.*

- ***Policy and Regulation:*** *Effective policy frameworks that balance innovation with consumer protection are critical for building trust in open finance systems.*

- ***Communication and Awareness Initiatives:*** *Customer communication and awareness programs that teach users how to navigate digital financial services and data sharing ecosystems can boost adoption and ensure that these solutions reach their full potential.*

- ***Ethics and Governance:*** *Ethical use of AI and machine learning algorithms that will be used to offer personalized financial products and services must remove biases that can disadvantage certain groups, including women. Avoid discriminatory pricing practices.*

- ***Collaboration:*** *Regulators and industry stakeholders must collaborate and build effective Governance models to ensure that the ecosystem operates fairly, securely, and transparently, balancing innovation with consumer protection.*

Conclusion

Open finance represents a significant step forward in creating a more inclusive, equitable, and competitive financial ecosystem. By embracing technology, promoting collaborative partnerships, and advocating for robust policy environments, open finance can unlock a future where financial access is a reality for all, contributing to economic resilience and sustainable development.

This will improve access to financial services for underserved populations, reduce costs, foster innovation, and enable personalized financial products, open finance can help break down the barriers that have traditionally excluded certain groups from the financial system.

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Paving the Path to Open Finance in Africa:

Insights from Cenfri on Inclusion, Innovation, and Implementation Challenges

This article is a paraphrased summary of insights shared during an interview conducted by the report's authors with Cenfri representatives Jeremy Gray and Amina Khan. Cenfri is an independent, not-for-profit think-tank. They are recognized thought leaders on matters relating to financial sector development in emerging markets.

Defining Open Finance

Although there is no universally agreed-upon definition of Open Finance, our working definition frames it as the exchange of consumer financial data between financial service providers and third-party providers, predicated on customer consent.

We believe that "open" finance means that data sharing is accessible to all participants and not restricted to exclusive private partnerships between select financial entities or third parties.

Open Finance should promote a fair and transparent market, fostering inclusion, competition, and equitable access.

In the African context, where mobile money accounts have surpassed bank accounts in penetration, Open Finance—extending beyond the banking sector—is essential for driving innovation, bridging existing disparities, and promoting financial inclusion.

Progress Across African Countries

Africa's progress toward finance is uneven, with varying levels of progress across the continent. Nigeria has been proactive in policy development, with the Central Bank of Nigeria issuing a Regulatory Framework for Open Banking in early 2021 and Operational Guidelines in March 2023. However, practical implementation remains in the early stages.

Similarly, South Africa has initiated industry discussions and published position papers, but formal regulations and concrete frameworks are still in place. Namibia and Rwanda have also progressed, with Namibia working on developing API standards and Rwanda focusing on developing the building blocks for finance in line with its roadmap for implementation. Zambia, Ghana, and Kenya have all identified finance as a strategic priority and are at different stages of exploring feasibility and early frameworks.

Implementation Challenges in African Countries

African countries are primarily characterized by low bank account adoption and smartphone penetration. Digital ID and verification systems are critical infrastructure gaps in many African countries. These are challenges to finance implementation and more pressing priorities in many markets. The *application of data protection principles is a further challenge across much of the continent. While GDPR-style data protection regulation now exists in most African jurisdictions, the meaningful adoption of the core principles and effective enforcement is often nascent.*

The blend of mobile-first financial systems and lower smartphone penetration may have unique implications for African Open Finance models. For one, consent verification must be developed using channels other than smartphone apps to limit exclusion. Furthermore, consumer research conducted has indicated that payment initiation is a low-priority use case, due to the value provided by widespread mobile money and increasingly available fast payment systems. Context-appropriate implementation is crucial for the success of Open Finance in Africa.

Potential Roadmap for the Continent

There is immense potential for Open Finance to transform the financial landscape of the continent. However, to achieve this vision, there is a critical need for deliberate and coordinated strengthening across various dimensions, such as regulations, technology infrastructure, and the private industry. Some of them are listed below:

- ***Strengthening Regulatory Frameworks:** There is an imminent need to orchestrate user-centric data protection regimes that strengthen users' agency, control, and consent regarding their data without diluting privacy and protection while also ensuring inclusion. At the same time, fostering interoperability across payments will also fast-track market readiness for Open Banking and Open Finance.*
- ***Designing inclusive approaches** that may not always be technology first. Many countries lack an established digital ID, making robust consent verification more complex. Effective ID systems may, therefore, be a more pressing priority in many jurisdictions. Even so, the lack of widespread smartphone and internet access means that open and data-sharing approaches on the continent must take into account these on ground realities and be designed in such a way as to ensure that exclusion is not amplified, even if it means less efficient technological systems that allow for effective online and offline functionality.*
- ***Fostering Stakeholder Collaboration:** Establishing ground-up market organizations of fintech and financial institutions that involve regulators can help build momentum. We believe such collaborations also lay the groundwork for co-creating Open Finance frameworks and solutions to operationalize them.*

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Open Finance: Revolutionizing Global Financial Services by Perfios

This article highlights insights shared by VR Govindarajan, Director, Perfios, a global leader in Open Finance. Govindarajan explores how Open Finance is revolutionizing financial services globally, with. The discussion delves into the transformative impact of consent-driven data sharing, the evolution of the Account Aggregator framework, and the innovative use cases driving financial inclusion and economic growth.

*Open Finance has become a global phenomenon, transforming the financial industry with innovative data-sharing and access approaches. Over **40 countries** are now engaged in Open Banking initiatives, with **India leading the charge.** While many geographies are moving towards **Open Banking** by incorporating banking data to cater to the finance industry, India has progressed further with Open Finance, including investments and more than 20 additional data types. The **convergence of internet penetration, smartphones, fintech innovation, and Open Banking is set to revolutionize financial services** in the coming years.*

*At the heart of Open Banking lies a simple yet powerful principle: **data sharing between consumers and third-party financial service providers, enabled by explicit consent.** This regulator-driven approach has resulted in significant adoption, growth, and scale. By placing consumers at the center, Open Banking fosters innovation, promotes competition, drives financial inclusion, and enhances the overall economic well-being of citizens.*

While Open Banking holds immense promise, addressing data privacy, security, and regulatory compliance challenges is crucial to ensuring its long-term success.

***As data becomes an increasingly valuable asset, safeguarding it and enabling its secure movement at incredible velocity is essential.** When treated like money, data creates substantial value for the data principal or data owner.*

*Consent-driven, real-time data movement is already transforming financial services, enabling better outcomes for everyone. The Open Banking revolution has spurred a **global Personal Finance Management (PFM) 2.0 movement,** with more fintechs and banks leveraging PFM to understand customers better and provide personalized services. This marks a significant shift in the financial industry.*

*India's Open Finance ecosystem, led by the Account Aggregator (AA) framework, has been live since 2021. Over the past three years, the AA ecosystem has grown significantly, with more than **600 financial institutions** participating. **Sahamati** has been **pivotal** in driving **adoption** and innovation, positioning the AA framework for **tremendous success**.*

Perfios, *a pioneer in Open Finance in India and beyond, empowers over* ***200 financial institutions globally,*** *enabling them to function as* ***data consumers and providers.*** *Its gateway supports over a dozen* ***use cases in the BFSI industry*** *and operates at scale, managing over* ***10 million consents, 100 million data fetches,*** *and* ***a billion monthly transactions.***

Perfios's footprint spans ***India, UAE, KSA, Bahrain, Singapore,*** *and other* ***GCC and SEA countries.*** *Its successful use cases include income verification, credit underwriting, credit monitoring, loan and insurance collections, hyper-personalization, personal and business finance management, digital identity, and fraud detection, all delivered in real-time for financial institutions.*

The rise of ***fintech, technological advancements, Open Banking, data privacy regulations, and AI collectively drive greater financial inclusion*** *and* ***economic growth.*** *Perfios is honored to contribute to this transformation by collaborating with* ***regulators, financial institutions, Sahamati, and all ecosystem evangelists.***

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Conclusion

The **Impact Potential Score (IPS)** measures the acceptability and economic development potential of Open Finance.

At the same time, **Compounded Annual Growth Rate (CAGR)** calculations project future user growth assuming momentum of policy and market initiatives. Together, these indicators capture the intricate balance required for effective implementation.

Countries with low IPS and low CAGRs, in particular, present unique opportunities as innovation hubs, offering valuable insights that can shape global best practices.

Our analysis of 48 countries highlights a diverse landscape in Open Finance adoption. Developed markets stand out with advanced financial infrastructure and widespread usage of sophisticated financial products while emerging markets showcase significant growth potential.

In developed markets, the primary drivers will likely be enhanced customer experiences and improved personal finance management. In contrast, adopting Open Finance in emerging markets is expected to be propelled by improved access to credit.

Success stories like India's Account Aggregator framework and the US's free market approach provide blueprints for other regions, demonstrating that different strategies can foster growth and innovation.

By 2030, Open Finance frameworks and networks might evolve significantly. They could empower consumers to share their financial data with non-financial sectors, such as travel and entertainment. This would enable hyper-personalized services that greatly enhance customer experiences.

At the same time, consumers would retain full control over their data. The influence of Open Finance is likely to extend across various sectors, driving widespread economic transformation, advancing financial inclusion, and delivering seamless, enriched customer experiences on a larger scale.

By 2030, an interoperable global Open Finance network could transform cross-border information flows, unlocking immense value for businesses and consumers. Seamless cross-border data portability will fuel the rise of new industries, with consumer-consented financial data sharing emerging as a key driver of innovation worldwide.

Section 4

Appendix

Appendix

A *Methodological Overview:* *Evaluating Open Finance Potential Across 46 Countries*

The study used key insights and data analysis to assess how prepared 46 countries are to adopt Open Finance. Since Open Finance is still new and data is limited, the study combined traditional statistics with advanced machine learning techniques to create an index score representing each country's potential.
Here's how it worked:

1. **Key Insights and Data Analysis:** Key insights were gathered and combined with comprehensive data analysis to explore and understand the various aspects of Open Finance's potential.

2. **Breaking Down the Data:** The study started with **Principal Component Analysis (PCA),** which condensed the critical parameters into 13 key components and further into a few to make the information easier to understand.

3. **Creating a Score:** Using another method, **Partial Least Squares Structural Equation Modeling (PLS-SEM),** the study calculated a hidden "potential score" for each country. This score was then adjusted into a single index, using TOPSIS (Technique for Order of Preference by Similarity to Ideal Solution), which ranks each country by comparing it to the ideal scenario.

4. **Grouping Similar Countries:** Finally, countries were grouped into clusters using **K-Means clustering** based on their scores, identifying groups with similar levels of Open Finance potential.

This approach allowed the study to make sense of limited data and provide a clear picture of where each country stands in terms of Open Finance readiness.

ASSUMPTIONS:

1. Plausibility between Drivers and dimensions or components
2. There is no multicollinearity between Drivers and dimensions, but not with each observable item.
3. The connection between Drivers and components is reflective.
4. Derived Open Finance should not exceed OPUBP M Total Population and Banking population.
5. Many variable weights are considered based on DME opinion and also statistical outcomes.
6. The whole analysis assumes that the current macroeconomics and political situation of all countries will remain constant for another half a decade.

B.1 Baseline Estimations Methodology (2024)

To estimate the baseline Open Finance user base for 2024 across 46 countries, a multi-step statistical framework was employed:

1. Data Normalization:

The dataset was normalized to align all variables (e.g., strata, lifestyle, digital inclusion, etc.) uniformly, ensuring comparability across countries. Variables used in the analysis included:

- **B1:** Mobile Money Account (% of Banked Population)
- **B2:** Borrowed from a Financial Institution (% Age 15+)
- **B3:** Per Capita Income
- **B4:** Per Capita Expenditure on Food
- **B5:** Per Capita Expenditure on Housing
- **B6:** Per Capita Expenditure on Transport
- **B7:** Per Capita Expenditure on Digital Media (Age 15+)

2. Baseline Data and Equation Formulation

Baseline Open Finance user numbers for 2024 were available for five representative countries.

Five equations were formulated using the normalized data for these countries, capturing the relationship between the dependent variable (Open Finance adoption rate) and the seven parameters (B1 to B7).

For example, the equation for **Brazil** is expressed as:
Y=0.42B1+0.51B2+0.0965B3+0.1692B4 +0.1164B5+0.0917B6+0.0472B7+0.219

The regression model produced specific values for B1 to B7 as follows:
B1=0.155503, B2=0.0025,
B3=0.001489, B4=0.234726,
B5=0.00089, B6=0.01258, B7=0.00315

Extrapolation to Remaining Countries

The derived weights (B1 to B7) were applied to the normalized data for the remaining 46 countries.

By inputing their respective parameter values into the regression model, baseline Open Finance user numbers for 2024 were extrapolated, ensuring consistency across all countries.

3. Statistical Techniques:

- Least Squares Method: Approximating solutions for underdetermined systems by minimizing residuals.

- Non-Negative Least Squares (NNLS): Incorporated to enforce practical and realistic non-negative constraints.

- Optimization for Residuals: Solved as an optimization problem to minimize squared residuals while adhering to constraints.

4. Cross-Validation:

The results were validated through statistical consistency checks and cross-referenced against historical benchmarks from the five representative countries.

These checks ensured the robustness of the regression-derived weights and their alignment with theoretical and real-world adoption trends.

This methodology enabled robust extrapolations for the remaining countries based on similar socio-economic and technological parameters, ensuring high accuracy in baseline user estimation.

B.2 *Projections (2025-2030)*

The user base projections for Open Finance adoption from 2025 to 2030 were developed using a structured and data-driven approach, aligning regulatory and economic characteristics with category-specific growth potential.

1. Category Creation and Growth Rate Calculation

Countries were categorized based on socio-economic and regulatory characteristics to reflect their unique market dynamics. The categorization process considered the following five key drivers:

- **Credit Access:** Availability and ease of accessing credit for individuals and businesses.
- **Digital Engagement:** The degree of user interaction with digital platforms and services.
- **Lifestyle:** Spending patterns and habits indicative of economic mobility and digital affinity.
- **Strata:** Socio-economic classification reflecting income levels and market maturity.
- **Mobile Usage and Spend:** Penetration of mobile

Based on these drivers, four country categories were defined:

- **Emerging Digital Finance Hubs:** High-growth economies with advanced digital infrastructure and regulatory support.
- **Developing Markets with Growth Potential:** Economies with moderate infrastructure but significant room for scaling Open Finance.
- **Nascent Markets with Growth Opportunities:** Early-stage markets with untapped potential due to emerging regulatory frameworks.
- **Stable Markets with Steady Growth:** Driven by mature economic and technological factors.

2. Deriving the CAGRs

The growth rates for each category were calculated using the following steps:

- **Average YOY Growth Values:** For each of the five drivers, average year-on-year (YOY) growth values were computed across countries within each category to establish a reference point. This was achieved through **secondary research** on historical data trends and supported by **analytics-driven insights,** ensuring an accurate and data-backed foundation for the projections.

- **Integration with TOPSIS-Based Impact Potentiality Score:** The aggregated average YOY growth values were then multiplied by the TOPSIS-Based Impact Potentiality Score, which accounted for the alignment of each driver with ideal growth scenarios.
- **Final CAGR Calculation:** The derived values from the TOPSIS integration were used to calculate the category-specific CAGRs.

By combining these calculations, the following CAGRs were established:

- **Emerging Digital Finance Hubs:** ~12.7%
- **Developing Markets with Growth Potential:** ~7.0%
- **Nascent Markets with Growth Opportunities:** ~1.8%
- **Stable Markets with Steady Growth:** ~10.0%

3. Projection Formula

The growth rates for each category were calculated using the following steps:
The projections were calculated using the formula:
Projected Users = Baseline Users (2024) x (1 + Growth Rate)^{Years}

This formula was applied consistently across all categories, using baseline data for 2024 as the starting point and adjusting for category-specific growth rates.

4. Output

The approach ensures reliable projections for Open Finance adoption across diverse markets, emphasizing growth potential in high-performing categories while identifying barriers in nascent markets. By incorporating regulatory and economic categorizations, the methodology aligns projections with real-world conditions, highlighting opportunities for targeted interventions and growth strategies through 2030.

C

This supplement provides additional data and projections that underpin the analysis presented in the Global Open Finance Adoption Report 2024-2030. It is divided into two key sections:

Section 1:

TOPSIS-Based Impact Potential Scores:

This section presents the calculated Impact Potential Scores for countries categorized as Upper-Middle Income (UMI) and Lower-Middle Income (LMI) countries. These scores were derived using the TOPSIS (Technique for Order Preference by Similarity to

Ideal Solution) methodology, which evaluates each country's Open Finance readiness based on critical parameters. These parameters were further categorized under five key drivers:

Lifestyle:

1. Total Population
2. Adult Population Share (age 15+)
3. Total Adult Population (age 15+)
4. Per Capita Income ($)
5. Share of Population with Annual Income in USD >5k
6. Population with Annual Income in USD >5k
7. Share of Population with Annual Income in USD >15k
8. Population with Annual Income in USD >15k
9. Per Capita Expenditure on Food
10. % Share of Per Capita Expenditure on Food as % of Per Capita Income
11. Per Capita Expenditure on Housing
12. Per Capita Expenditure on Transport

Strata:

1. Banked Population Share
2. Number of People with Bank Accounts
3. Open Banking Users as a % of the Banking Population
4. Open Banking Users
5. Open Finance Users as a % of Open Banking Users
6. Open Finance Users
7. Share of Roman Alphabet Users
8. Number of Roman Alphabet Users (15+)

Mobile Usage and Spending:

1. Mobile Money Account (% age 15+)
2. Borrowed Any Money Using a Mobile Money Account (% age 15+)
3. Borrowed Any Money Using a Mobile Money Account (% of Banked Population)
4. Use of Mobile Phone or Internet for Payments (% with a Financial Institution Account, age 15+)

Credit Access:

1. Borrowed from a Financial Institution (% age 15+)
2. Borrowed Any Money from a Formal Financial Institution or Using a Mobile Money Account (% age 15+)
3. Digital Media Market
4. Per Capita Expenditure on Digital Media (15+)

Digital Engagement:

1. Time Spent Per User Online (minutes)
2. Social Media Usage (minutes)
3. Streaming Usage (minutes)
4. Screen Time (minutes)

These parameters were consolidated into the five drivers to simplify and standardize the analysis while maintaining the granularity of individual data points.

This categorization provides a comprehensive framework for evaluating countries' readiness for Open Finance adoption.

Section 2:

User Projections for Open Finance (2025-2030):

This section outlines detailed year-on-year projections for Open Finance user growth across selected countries. These estimates provide a forward-looking perspective on the expansion of Open Finance ecosystems, emphasizing countries' projected user base growth trajectories. The projections are designed to aid stakeholders in identifying high-potential markets and planning strategies to align with future growth trends.

By integrating these metrics and projections, this analysis helps readers visualize the vast scope and scale of the Open Finance opportunity, offering a comprehensive understanding of the factors driving its global adoption and scalability.

TOPSIS- Impact Potential Score Table:

Country Category	Country	Impact Potential Score
Emerging Digital Finance Hubs	Mexico	0.619
	Argentina	0.588
	Brazil	0.582
	Thailand	0.571
	Chile	0.554
	South Africa	0.522
	Colombia	0.483
	India	0.399
	Indonesia	0.459
Developing Markets with Scaling Potential	Philippines	0.492
	Peru	0.489
	Egypt	0.441
	Kenya	0.400
	Uganda	0.385
	Pakistan	0.381
	Rwanda	0.366
	Nigeria	0.354
	Morocco	0.342
	Senegal	0.325
	Bangladesh	0.312
	Zambia	0.276

Country Category	Country	Impact Potential Score
Nascent Markets with Growth Opportunities	Kazakhstan	0.459
	Tanzania	0.357
	Ivory Coast (Coted'Ivoire)	0.223
	Sierra Leone	0.196
	Gambia	0.164
Stable Markets with Steady Growth	UAE	0.752
	US	0.736
	Saudi Arabia	0.694
	Taiwan	0.648
	Singapore	0.646
	EU	0.644
	Canada	0.643
	Israel	0.641
	UK	0.641
	Switzerland	0.639
	Hong Kong	0.623
	Australia	0.620
	New Zealand	0.604
	Malaysia	0.598
	Japan	0.562
	Bahrain	0.551
	Turkey	0.536
	Kuwait	0.507
	Oman	0.502
	Jordan	0.355

Projections 2025-2030 Table:

Country Category	Country	2024 Estimation	Open Finance Users Projections [In Millions]					
			2025	2026	2027	2028	2029	2030
Emerging Digital Finance Hubs	Brazil*	32.400	57.726	73.944	85.452	94.378	101.670	107.836
	India*	90.000	228.629	309.722	367.259	411.888	448.352	479.182
	Argentina	5.432	6.158	6.982	7.916	8.974	10.174	11.535
	Chile	1.887	2.125	2.393	2.695	3.035	3.418	3.850
	Colombia	2.604	2.890	3.208	3.560	3.951	4.386	4.867
	Mexico	12.135	13.844	15.794	18.018	20.555	23.449	26.751
	South Africa	3.884	4.345	4.861	5.438	6.084	6.807	7.615
	Thailand	8.475	9.577	10.822	12.228	13.818	15.614	17.644
	Indonesia	14.405	15.515	16.711	17.999	19.386	20.881	22.490
Developing Markets with Scaling Potential	Bangladesh	3.831	4.051	4.285	4.531	4.792	5.068	5.359
	Egypt	2.196	2.374	2.567	2.776	3.002	3.246	3.510
	Kenya	5.421	5.821	6.251	6.712	7.208	7.740	8.311
	Morocco	0.706	0.751	0.798	0.848	0.902	0.958	1.019
	Nigeria	6.575	7.004	7.462	7.949	8.468	9.021	9.611
	Pakistan	3.465	3.709	3.970	4.249	4.547	4.867	5.209
	Peru	1.351	1.473	1.606	1.750	1.908	2.081	2.268
	Philippines	5.024	5.480	5.977	6.520	7.112	7.758	8.462
	Rwanda	0.838	0.894	0.955	1.019	1.088	1.161	1.240
	Senegal	1.125	1.193	1.264	1.340	1.420	1.505	1.595
	Uganda	2.269	2.429	2.602	2.786	2.984	3.195	3.422
	Zambia	0.578	0.608	0.639	0.671	0.705	0.741	0.779
Nascent Markets with Growth Opportunities	Gambia	0.010	0.010	0.010	0.010	0.011	0.011	0.011
	Ivory Coast (Cote d'Ivoire)	1.023	1.038	1.053	1.068	1.084	1.099	1.115
	Kazakhstan	2.066	2.127	2.190	2.256	2.323	2.392	2.463
	Sierra Leone	0.074	0.075	0.076	0.077	0.078	0.079	0.080
	Tanzania	3.552	3.635	3.719	3.805	3.893	3.983	4.075

Country Category	Country	2024 Estimation	Open Finance Users Projections [In Millions]					
			2025	2026	2027	2028	2029	2030
Stable Markets with Steady Growth	EU	88.774	98.372	109.008	120.793	133.852	148.324	164.359
	UAE	1.786	2.012	2.266	2.553	2.875	3.238	3.647
	Saudi Arabia	4.494	5.017	5.602	6.255	6.985	7.799	8.708
	Oman	0.301	0.326	0.354	0.383	0.416	0.451	0.489
	Bahrain	0.130	0.142	0.155	0.170	0.185	0.202	0.221
	Kuwait	0.317	0.344	0.373	0.405	0.439	0.477	0.517
	Israel	1.897	2.101	2.328	2.579	2.856	3.164	3.505
	Jordan	0.500	0.530	0.562	0.595	0.631	0.668	0.708
	Australia	5.690	6.283	6.937	7.659	8.457	9.337	10.310
	Hong Kong	2.217	2.450	2.706	2.989	3.302	3.648	4.030
	Canada	8.105	8.980	9.949	11.023	12.213	13.532	14.993
	New Zealand	0.917	1.010	1.112	1.225	1.349	1.486	1.637
	Turkey	6.910	7.533	8.211	8.950	9.756	10.635	11.592
	Japan	28.611	31.312	34.267	37.502	41.042	44.916	49.156
	Taiwan	3.352	3.717	4.122	4.571	5.069	5.621	6.233
	Malaysia	4.589	5.050	5.558	6.116	6.730	7.407	8.151
	Switzerland	2.163	2.395	2.652	2.937	3.252	3.601	3.988
	Singapore	0.150	0.169	0.189	0.213	0.239	0.269	0.302
	UK	10.000	11.085	12.287	13.620	15.097	16.735	18.550
	US*	76.000	90.958	108.860	130.285	155.926	186.615	223.343

Note: * - The 2024 Open Finance user numbers were available for these countries.

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