

Digital banking to promote financial inclusion and development in APEC Economies

Research Study

July 2026

Disclaimer

This report is a working draft and remains subject to further review, validation, stakeholder consultation, and editorial revision prior to final publication. The analysis presented is based primarily on secondary research and publicly available information obtained from sources considered reliable at the time of preparation.

The indexes, classifications, groupings, and analytical frameworks included in this study have been developed solely as research tools to support analysis, identify broad trends and patterns, and facilitate discussion of digital banking developments across APEC economies. They are simplified analytical representations and are not intended to constitute rankings, benchmarks, ratings, league tables, performance scorecards, comparative assessments, or value judgments regarding any economy, institution, policy framework, market participant, or level of development.

The study recognizes that APEC economies have diverse economic structures, policy priorities, institutional arrangements, market characteristics, and development pathways. Differences in results should therefore be interpreted within the specific context of each economy and should not be viewed as measures of relative performance, success, or policy effectiveness.

Data availability, definitions, methodologies, and reporting practices may vary across economies. Consequently, results should be interpreted in light of the study's methodology, assumptions, data limitations, and analytical scope.

The primary objective of this research is to contribute to policy dialogue, knowledge sharing, and the identification of opportunities, experiences, and practices that may support the sustainable development of digital banking, financial inclusion, innovation, and economic growth across APEC economies. The findings are intended exclusively to inform discussion and encourage mutual learning among economies.

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Executive Summary

Financial inclusion is essential to achieve sustainable and inclusive economic growth and human development.

The APEC Economic Policy Report 2024 already highlighted the importance of financial inclusion as an engine for economic growth and risk mitigation.¹ It also noted that while APEC economies have improved significantly in financial inclusion challenges persist, so more can be done. Digital financial services can play a key role in enabling and scaling financial inclusion. Digital finance has the potential not only to expand access but also to improve the usage and quality of financial services, contributing to more inclusive and resilient economic systems.

This report focuses on digital banking as a key component of the broader digital finance landscape and explores its evolution across APEC economies. By analyzing patterns of activity and the role of key enabling factors, it aims to provide insights to support policymakers in designing strategies that harness the benefits of digital finance while addressing its associated challenges.

Digital banking is expanding rapidly across APEC economies, but its evolution remains uneven

While some markets have developed highly dynamic digital banking ecosystems, others lag due to structural, technological, or policy constraints. These disparities highlight that digital transformation alone does not guarantee inclusion—its impact depends on how effectively ecosystems are developed and leveraged.

Licensed digital-only banks are growing, but scale remains limited

While digital banking is expanding, digital-only banks remain small relative to traditional institutions in most APEC economies. At the same time, innovation is also driven by a broader fintech ecosystem—including digital wallets, platforms, and non-bank providers.

Venture capital funds and activity have been mostly concentrated on non-banking actors, reflecting their role in transforming customer interaction, shaping new business models and leveraging data-driven services. This suggests that digital banking development should be understood as part of a wider ecosystem rather than a standalone vertical.

¹ APEC, Economic Policy Report 2024.

Digital payments are foundational for digital banking ecosystems

Digital payments infrastructure is the entry point for digital banking development. Adoption of real-time payments, digital wallets, and mobile platforms typically precedes broader banking innovation, enabling customer onboarding, transaction data and trust-building that creates the basis for more advanced financial services. Economies with strong digital payments adoption tend to exhibit more dynamic digital banking activity.

Digital banking development does not follow a single path

While higher income levels are generally associated with stronger activity, the relationship is not deterministic. In several cases, middle-income economies exhibit activity levels comparable to more advanced peers, reflecting the importance of country-specific enabling factors.

This demonstrates that digital banking can scale under diverse conditions when supported by the right combination of policies, market dynamics, and innovation capacity. In practice, economies combine different strengths—such as large domestic markets, strong startup ecosystems, or targeted policy interventions—to drive digital banking development.

Enabling conditions matter, but no single factor is sufficient

To understand these dynamics, the report introduces two composite measures: a Digital Banking Activity Index and a Digital Banking Enablers Index. The results show a strong but non-linear relationship between the two.

Digital banking activity is closely linked to enabling conditions such as digital readiness, innovation ecosystems, financial market development and the policy and regulatory environment. Evidence shows that progress depends on the interaction of these multiple pillars rather than on any single driver.

In some economies, strengths in innovation or market size compensate for infrastructure gaps; in others, strong fundamentals have yet to translate into dynamic market outcomes. This reinforces the need for holistic development strategies.

Policy and regulations must balance innovation, inclusion, and risks

From a policy perspective, the findings point to the need for coordinated, multi-dimensional strategies. Strengthening digital infrastructure, promoting competition and innovation, and deepening financial markets are all critical to fostering digital banking ecosystems.

At the same time, policymakers face increasingly complex trade-offs. Digital banking can enhance inclusion and efficiency, but also introduces new risks related to cybersecurity, data protection, financial stability, and market concentration. Evidence shows that trust, particularly around security and privacy, remains a key barrier to adoption.

Effective policy frameworks must therefore balance innovation with safeguards, ensuring proportional regulation, a level playing field, and sustained trust in the financial system.

Unlocking the full potential of digital banking requires context-specific strategies

Looking ahead, digital banking will play an increasingly central role in financial systems across APEC economies. However, its development will remain heterogeneous, shaped by differences in economic structure, institutional capacity, and policy choices.

Maximizing its impact on financial inclusion and development requires tailored, context-specific approaches that reflect each economy's starting point and priorities. By combining strong enabling conditions with coherent policy frameworks, APEC economies can leverage digital banking to expand access, strengthen resilience, and support inclusive growth.

1. Introduction: Digital Financial Services and Development

Financial inclusion is essential to achieve sustainable and inclusive economic growth and human development.

The APEC Economic Policy Report 2024 already highlighted the importance of financial inclusion as an engine for economic growth and risk mitigation.² This relationship has been studied extensively and corroborated with decades of data and empirical evidence all around the world.

Financial inclusion broadly refers to the process of enabling individuals and businesses, particularly marginalized groups with untapped economic potential, access to and effective use of formal financial services like savings, credit, payment instruments and insurance. It also considers the quality of the products and services available, how well these services meet the customers' needs, and that these are delivered in a responsible and sustainable manner, ensuring the customers' awareness and understanding of the financial products and how they can improve their overall financial wellbeing.

In short, improved access and use of financial products and services help households' smooth consumption, grow their savings and wealth, and protect against unforeseen events which may affect their quality of life. It also promotes entrepreneurial activity, innovation and investment, which creates opportunities for productive employment, ultimately leading to economic growth, poverty reduction and lower inequality.

In addition, financial inclusion plays a critical role for macroeconomic stability by enhancing risk diversification and reducing reliance on informal financial markets, and by improving the effectiveness of monetary policy transmission. In this way economies can better withstand shocks and foster social cohesion.³ However, as stated in the recent Financial Access Survey report from the IMF, *"it is essential to recognize that increased financial access may also increase financial risks, particularly if it leads to rapid credit growth or the expansion of relatively unregulated sectors within the financial system."*

APEC economies have improved in financial inclusion, but more can be done

Financial access and use have experienced a significant surge in recent years, associated with the growth of digital financial products. According to the latest data from the IMF in its Financial Access Survey report, the remarkable increase in financial access and use is

² APEC, Economic Policy Report 2024.

³ IMF, Financial Access Survey Report 2025.

evident across several key areas, showing a positive relationship with the Human Development Index (HDI).⁴

Financial inclusion in APEC economies has improved significantly, even in the EMDE economies with higher gaps. Access to financial accounts exceeds 84% on average in APEC economies, 10 percentage points increase in 10 years.⁵ However, this average mask some significant differences between and within economies. While high-income economies in APEC present wide access to financial accounts, other economies in the region still have work to do so to reduce the financial inclusion gap.⁶ Therefore, more can be done to ensure that these services are accessible to all people. From incentivizing financial sector competition and innovation to promoting financial literacy and reasonable accommodation practices, structural reform can play an important role in expanding equitable access to quality financial services for all people.

Digital financial services can play a key role in enabling and scale financial inclusion

The emergence of digital financial services (DFS) has marked a significant shift in how financial inclusion can be achieved. By leveraging mobile connectivity, data, and digital platforms, DFS reduce transaction costs, overcome geographic constraints, and enable more efficient delivery of financial products. This is particularly relevant for underserved populations, including low-income households, rural communities, and micro, small, and medium-sized enterprises (MSMEs), for whom traditional financial channels may be too costly or inaccessible. The APEC Economic Policy Report 2024 already highlighted that digital finance has the potential not only to expand access but also to improve the usage and quality of financial services, contributing to more inclusive and resilient economic systems.⁷

At the same time, the rise of digital finance is reshaping the structure and functioning of the financial sector. Technological innovation is lowering barriers to entry in some segments, enabling new providers—such as fintech startups and large technology platforms—to compete alongside or partner with incumbent financial institutions. This has led to the unbundling of traditional banking services and the emergence of new, specialized business models, often built around payments, lending, or data-driven services. While these developments can enhance competition, efficiency, and innovation, they also introduce new dynamics in market structure, including the potential for concentration driven by economies of scale, network effects, and the strategic use of data. As a result,

⁴ IMF, Financial Access Survey Report 2025.

⁵ World Bank, Findex database 2025.

⁶ Based on data from the World Bank Findex database 2025, Indonesia, Mexico, Peru, the Philippines have still more than 40% of the adult population without access to a financial account.

⁷ APEC Economic Policy Report 2024.

the digital transformation of finance is not only expanding financial services but also redefining how they are produced, distributed, and used.

Realizing the potential of Digital Financial Services requires bridging the digital divide

The extent to which DFS can deliver on their promise for financial inclusion depends on the ability of economies to address persistent gaps in digital inclusion. Although access to financial accounts and digital payments has increased significantly across APEC economies, disparities remain in access to reliable connectivity, digital devices, and the skills required to use them effectively. These gaps are often correlated with income, gender, geography, and education, creating a “digital divide” that can limit both adoption and meaningful usage of digital financial services. In addition, concerns related to trust, data privacy, and consumer protection may further constrain uptake among vulnerable populations. Bridging these divides requires coordinated efforts that go beyond infrastructure, including investments in digital and financial literacy, accessible product design, and inclusive policy frameworks that ensure all users can benefit from digital innovation.

Digital transformation also challenges policymakers and financial regulators to balance innovation with safeguarding competition, financial stability and integrity, consumer protection and data privacy

The rapid evolution of digital financial services also presents complex challenges for policymakers and regulators. While DFS can advance key policy objectives—such as financial inclusion, efficiency, and innovation—they may also give rise to new risks related to financial stability, market integrity, cybersecurity, and data governance. The increasing diversity of market participants and the blurring of boundaries between financial and non-financial activities complicate traditional regulatory approaches, raising important questions about the scope of regulation, the need for cross-sector coordination, and how to maintain a level playing field. Policymakers must therefore continuously balance the benefits of innovation and competition with the need to safeguard trust, resilience, and consumer protection, adapting regulatory and supervisory frameworks as the digital transformation of finance evolves.

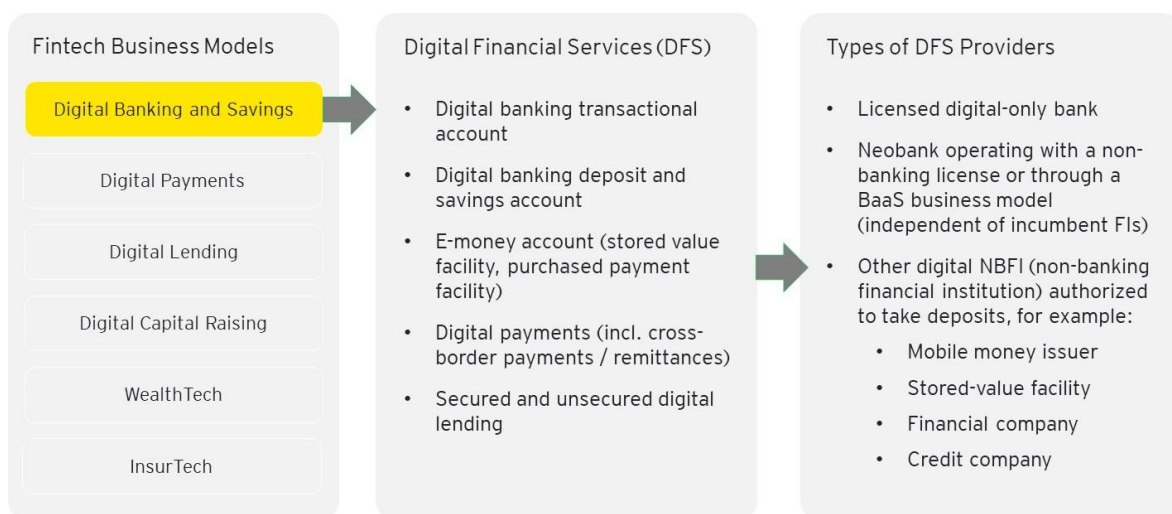
About the Report

Against this backdrop, understanding how digital financial services develop and scale across economies—and the conditions that enable or constrain this process—becomes critical. This report focuses on digital banking as a key component of the broader digital finance landscape and explores its evolution across APEC economies. By analyzing patterns of activity and the role of key enabling factors, it aims to provide insights to support policymakers in designing strategies that harness the benefits of digital finance while addressing its associated challenges.

The purpose of this report is to identify opportunities, experiences, and leading practices across APEC economies that can help scale digital banking services in a safe and sustainable way, supporting both financial inclusion and economic development. This study looks at digital banking not only as a technological evolution of financial services, but as a policy-relevant lever to expand access, improve efficiency, foster competition, and support inclusive and sustainable economic growth.

Defining the scope for digital banking services is not straightforward. It can include business models covering the complete set of products and services traditionally offered by banking institutions as long as they are delivered through digital channels; or it can also include specialized or niche business models focused on some products or services (e.g., savings, payments, lending). These business models can be operated by fintech companies or by incumbent financial institutions.

Figure 1.1 | Digital banking services in-scope for the study



For this study, the focus is specifically on deposit-taking digital banking business models provided by licensed digital banks, neobanks (no banking license) or other digital non-bank financial institutions authorized to take deposits from the public (Figure 1.1).⁸

The study aim is two-fold, to measure digital banking activity across APEC economies and to explore the factors that potentially enable digital banking services development and may help explain the substantial variation across the economies.

To structure the analysis, the study introduces two multidimensional indexes:

- A **Digital Banking Activity Index** that measures the level and relevance of the digital banking sector in each APEC economy.
- A **Digital Banking Enablers Index** that captures the maturity of a series of enabling factors that provide the conditions for digital banking to emerge and scale.

Together, these two indexes provide a structured way to analyze and identify relations between the existence and maturity of certain enablers and their potential influence on the level of digital banking activity in the economy.

The report is structured as follows:

Following this introduction, the second chapter reviews key digital banking activity trends in APEC economies. It introduces the digital banking activity index, presents and analysis its results and closes with key messages from the activity point of view.

The third chapter introduces the digital banking enablers index, describes its structure and components. It reviews the overall results and key relations with digital banking activity in APEC economies. Then it presents insights based on the maturity level in each of its four component dimensions.

The final chapter presents a series of policy-relevant recommendations for consideration to foster the development of the digital banking sector in APEC economies.

⁸ Digital financial services based on distributed ledger technology such as crypto-assets, stablecoins, central bank digital currencies, Decentralized Finance (DeFi), and tokenized assets are beyond the scope of this study.

2. Digital Banking Activity in APEC

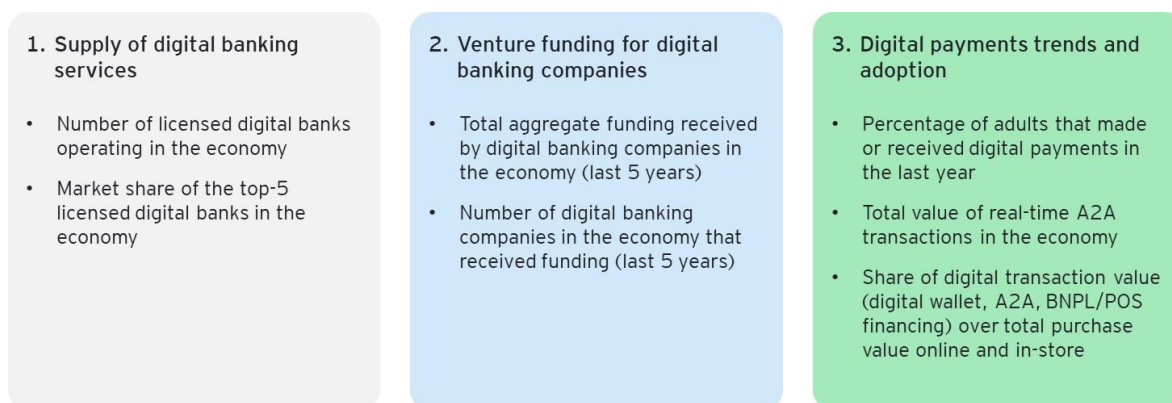
Digital banking has expanded rapidly in APEC economies, transforming how financial services are delivered. The widespread use of smartphones enables users—particularly those under-served—to access faster, more affordable, secure, and convenient financial services. For incumbent institutions and new entrants alike, digital models significantly reduce costs compared to branch-based banking. Digital financial services support remote, contactless, and cashless transactions, while big tech firms have entered the sector by leveraging platform ecosystems and alternative customer data through advanced analytics. These developments have expanded financial inclusion and intensified competition, though their ultimate competitive effects remain uncertain.

However, this overall growth in digital banking services masks cross-country heterogeneity. APEC economies are at varying stages of digital banking development and adoption, reflecting differences in economic structure, technology infrastructure, regulatory frameworks, and consumer behavior.

The Digital Banking Activity Index

To document broad patterns of digital banking activity across APEC economies, the Digital Banking Activity Index captures three key dimensions of digital banking development, reflecting both supply- and demand-side forces (Figure 2.1).

Figure 2.1 | Components of the Digital Banking Activity Index

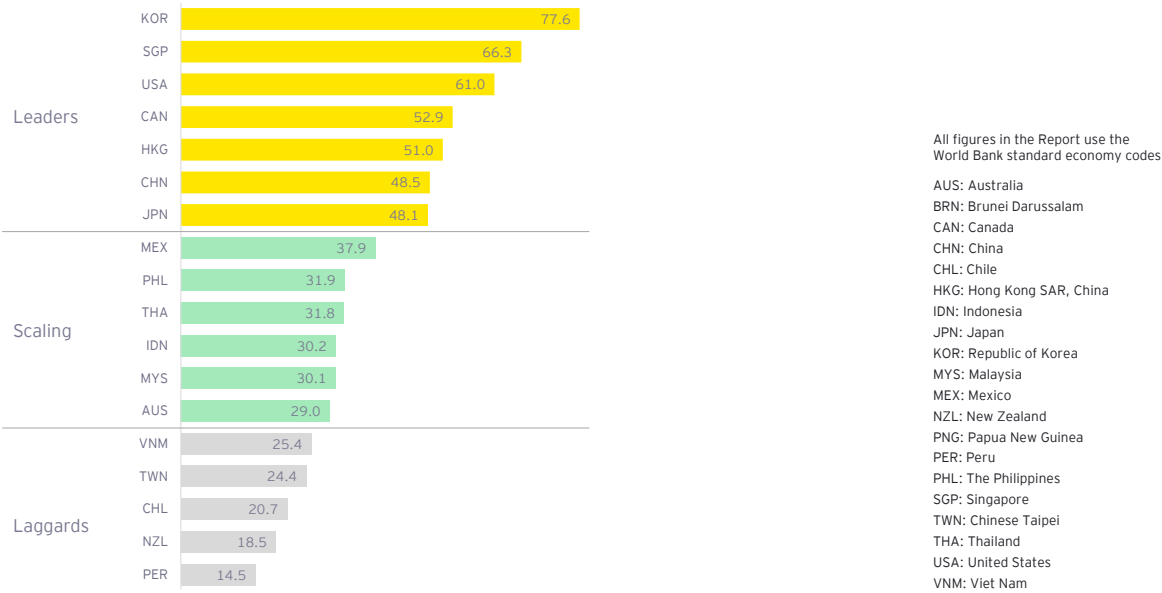


Supply of digital banking services: This first pillar of the Activity Index aims to capture the scope of digital banking providers authorized to operate in the economy and the relevance of the sector in the overall local banking industry.

Venture funding for digital banking companies: this dimension measures the number of new companies with digital banking business models getting venture funding and the amount raised for their growth.

Digital payments trends and adoption: this dimension measures digital payments activity in each APEC economy, specifically considering A2A real-time payments and digital wallet payments used for online or in-store purchases.

Figure 2.2 | Digital Banking Activity Index

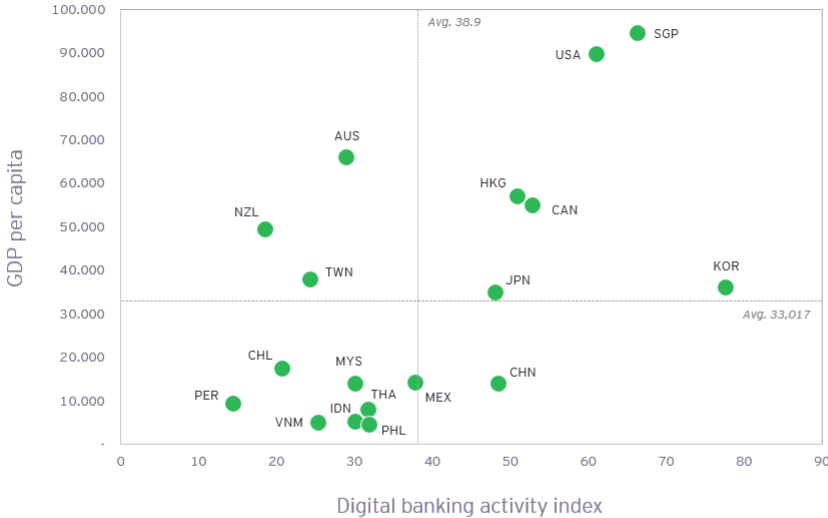


Source: Report's team analysis; index methodology and data sources can be found in Annex 1 - Methodology and Sources.

Overall, the Activity index shows the Republic of Korea with the highest digital banking activity level within APEC economies, followed by Singapore and the United States to complete the top three with scores above 60 (Figure 2.2). After this top group, a second cluster with scores between 40 and 60; this group includes Canada, Hong Kong China, China and Japan. Between the economies with below average activity scores, there is also significant variation. For example, Mexico has a score almost at the average for APEC, then

there is a group of ASEAN economies with similar scores around 30 (Philippines, Thailand, Indonesia and Malaysia), and then activity levels decrease below that score.

Figure 2.3 | Digital Banking Activity Index and GDP per capita



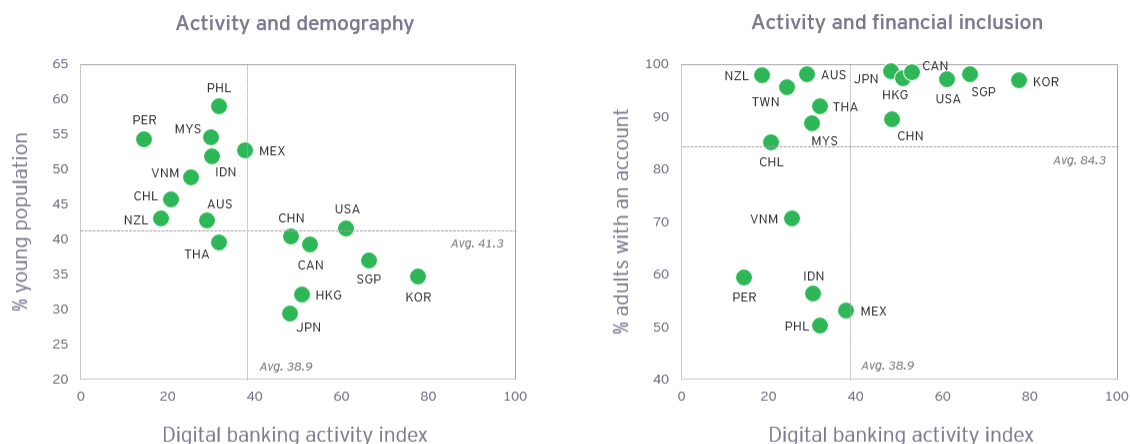
Source: Report's team analysis; index methodology and data sources can be found in Annex 1 - Methodology and Sources. GDP per capita based on IMF World Economic Outlook database 2025, GDP in US\$ at current prices.

To expand the analysis, Figure 2.3 plots the activity index scores against income per capita for each economy. There seems to be a positive relation between digital banking activity and national incomes, but it is not strong. The data shows significant variance in activity levels between economies with similar incomes.

Between the economies with above average activity levels, two upper middle-income economies stand out - China and Mexico. And on the other hand, high-income economies like Australia, New Zealand, Chinese Taipei and Chile, present significantly lower activity levels in digital banking compared with peers in terms of income. Finally, lower middle-income economies like the Philippines, Indonesia and Viet Nam, present activity levels which are comparable—and in some cases higher—than other upper middle income or even high-income economies.

This initial analysis points to an important insight about digital banking development in APEC, which indicates that, although higher incomes in the economy tend to enable higher activity, it is not a sufficient factor. Furthermore, even in contexts with relatively lower incomes per capita, digital banking activity can still develop and materialize its impact as a financial inclusion driver and economic development enabler.

Figure 2.4 | Digital Banking Activity Index, demographics and financial inclusion



Notes: % Young population defined as population between 15 and 39 years old as reported UN DESA World Population Prospects database. % of adults with an account defined as the percentage of respondents to the World Bank Findex survey who report having an account (by themselves or together with someone else) at a bank or similar financial institution.
 Source: Report's team analysis, based on data from UN DESA World Population Prospects database and World Bank Findex database 2025.

To further examine the relation between digital banking development and key socioeconomic conditions, Figure 2.4 plots the results of the Activity index against two relevant indicators for each APEC economy, the percentage of young adult population (between 15 and 39 years), and the level of financial inclusion measured by the proportion of adults with access to a financial account.

First, the relation between activity level and the proportion of young adults' population presents a negative slope. Together with the relation between activity and income per capita, this seems to indicate that, although younger adults could be expected to be early adopters of digital financial services, the income level in the economy still has (on average) a stronger influence of digital banking development.

Second, in terms of the potential influence of financial inclusion on digital banking activity, the relation presents varying patterns. In general, economies with below average levels of financial inclusion show lower levels of digital banking activity. This suggests that, at least in these economies, financial access still represents an obstacle to adoption, and therefore the sector's development. However, between the economies with higher levels of financial inclusion there are significant differences in digital banking activity, which indicates that having widespread access to formal financial services does not, on its own, enable digital banking to expand.

The following sections explore in detail the trends in each of the component dimensions of the Activity index to identify patterns in the evolution of digital banking within APEC economies.

Supply of digital banking services in APEC

This first pillar of the Activity Index focuses on the authorized providers of digital banking services operating in each APEC economy. As described previously, it specifically aims to analyze the relevance of licensed digital banks in the economy. To measure this, the pillar is composed of two indicators:

- **Number of licensed digital banks operating in the economy, scaled by population size (per 100.000 adults).** This indicator only considers digital banks with an individual banking license granted by the local regulator - be it a digital-only bank license or a standard banking license. The digital bank can be an independent corporation or an affiliate company part of a Banking or Financial group, but to qualify it must have a separate banking license.
- **Market share of top 5 digital banking players.** Besides the number of licensed digital banks, to understand their impact on the economy it is important to also analyze their relevance in the market. To this end, this first pillar is complemented with a second indicator that measures the average market share in total assets, loans and deposits of the top five licensed digital banks operating in the economy as a percentage of the total banking sector.⁹

It is important to make two considerations in relation to this first pillar. First, although most of traditional banks in APEC have introduced digital banking services - as part of their distribution model or as a specific value proposition with different branding. In some economies these offerings have achieved leading positions in the digital segment¹⁰, these offerings are not included in the indicator so to focus exclusively on new players in the market.

Furthermore, in most APEC economies there is an increasing number of authorized neobanks and digital wallets offering digital banking services but without a banking license, operating as e-money issuers or stored-value facilities (e.g., Wise, Airwallex, and many more in each APEC economy), using a different license that allows them to take deposits (e.g. Plata, Klar in Mexico), or using a Banking-as-a-Service business model partnering with

⁹ In some economies there are less than five licensed digital-only banks, e.g., Korea, Chinese Taipei, Chile). In these cases, the indicator includes less than five companies.

¹⁰ For example, Digibank from DBS in Singapore and other ASEAN economies, Ubank, UpBank, ME Bank in Australia, Wibee, Liiv, Hana 1Q in the Republic of Korea, Marcus by Goldman Sachs in the United States, or Simplii by CIBC in Canada.

incumbent banks (e.g., Chime in the United States). Some of these players are scaling significantly, even becoming market leaders in the sector. This indicator does not include them; it only focuses on licensed digital banks. These companies are covered (as a proxy) in the venture funding indicator.

As of the end of 2025, there is a total of 110 licensed digital-only banks operating in APEC economies (Figure 2.5). Most of these banks (73%) have been founded during the last 10 years, and many started operations or where granted their banking license from 2020 onwards (47%), which reflects the dynamism of the sector and a significant development. However, some of the leading digital banks in APEC have been in operations for longer, like Rakuten Bank (2000) and Sony Bank (2001) in Japan, WeBank (2014) and MYBank (2015) in China, Kakao Bank in the Republic of Korea (2016).

Figure 2.5 | Licensed digital banks and “density” (per 100.000 adults)

Economies (by Activity Index position)	Digital Banks (licensed)	Density (per 100.000 adults)	Share of Deposits (% Top-5)
Rep. of Korea	3	0,007	5,29
Singapore	5	0,096	<0,00
United States	15	0,005	1,23
Canada	9	0,027	3,71
Hong Kong, China	8	0,119	0,35
China	8	0,001	0,48
Japan	10	0,009	2,84
Mexico	9	0,009	2,11
The Philippines	6	0,007	0,63
Thailand	-	-	-
Indonesia	14	0,007	0,81
Malaysia	5	0,018	0,12
Australia	4	0,018	0,33
Viet Nam	6	0,008	N/A
Chinese Taipei	3	0,015	<0,00
Chile	1	0,006	0,08
New Zealand	-	-	-
Peru	-	-	-

*Notes: Digital Banks does not include neobanks, e-money issuers and digital wallets. Density defined by the number of licensed digital banks per 100.000 adults in the economy.
Source: Report's team analysis, based on data from S&P Capital IQ, World Bank, companies Financial Statements (2024/2025).*

Indonesia, United States and Japan present the highest number of licensed digital-only banks operating in their economies, followed closely by Canada, Hong Kong China, China and Mexico. In this group, Indonesia and Mexico are noteworthy, being the only middle-income economies with a relatively high number of digital-only banks. In these cases, both countries having big populations and higher financial inclusion gaps could make their markets attractive for new entrants.

The Republic of Korea and Singapore have fewer digital-only banks in relation to other high-income economies; however, particularly in Korea these banks have gained significant market share in their respective markets. Also, other high-income economies like Chile, and specially Australia, have relatively few licensed digital banks compared with their level of development. Only three economies in APEC do not yet have licensed digital-only banks operating in their economies: Thailand, Peru and New Zealand.¹¹

When analyzed in relation to total adult populations in APEC economies, density is higher in small and high-income countries like Singapore and Hong Kong, China, compared with China or the United States. However, differences in density within the rest of the economies are not clearly correlated with population size or income level. This reinforces the relevance of other enabling factors in the digital banking sector development paths.

Licensed digital banks still have low market shares in most economies (Figure 2.5). Even the most successful digital-only banks in APEC in terms of performance are still relatively small compared to banking leaders in each economy. Only 8 digital-only banks in APEC have surpassed a 1% share in assets or deposits in their corresponding banking markets. In this group, established digital leaders like Kakao Bank from the Republic of Korea has a 2,6% share in deposits, Rakuten Bank in Japan with just over 1,2% share in deposits, or Tangerine in Canada with 0,5% in assets and 1,4% share in deposits.

As of December 2025, digital-only banks in the Republic of Korea show the highest local market share between APEC economies. Its 3 digital-only banks have reached a 5,3% share in total deposits and 3,6% in total assets. Canada and Japan follow with their top digital-only players consolidating around 3% share in total deposits. Within the middle-income countries, Mexico stands out with a dynamic digital banking sector, where its main players have surpassed as a group 2% share in deposits and 1,5% in total assets.¹²

This pattern of relatively low market shares can be attributed to multiple reasons, for example that most of the digital banks in the region are still “young” companies, or that they focus on niche segments. Also, the total market size and local competitive dynamics matter, as well as customer behaviors and preferences. On the other hand, this indicates that there is still significant growth potential for the sector in every APEC economy.

¹¹ In Thailand the Bank of Thailand has recently approved three licenses for new digital-only banks and expecting to start operations in 2026 and in New Zealand there are some neobanks in the process of applying for banking licenses.

¹² The recent banking license approval of Nubank Mexico impacts significantly, representing alone 0,8% in assets and 1,2% in deposits.

Venture funding trends in the digital banking sector

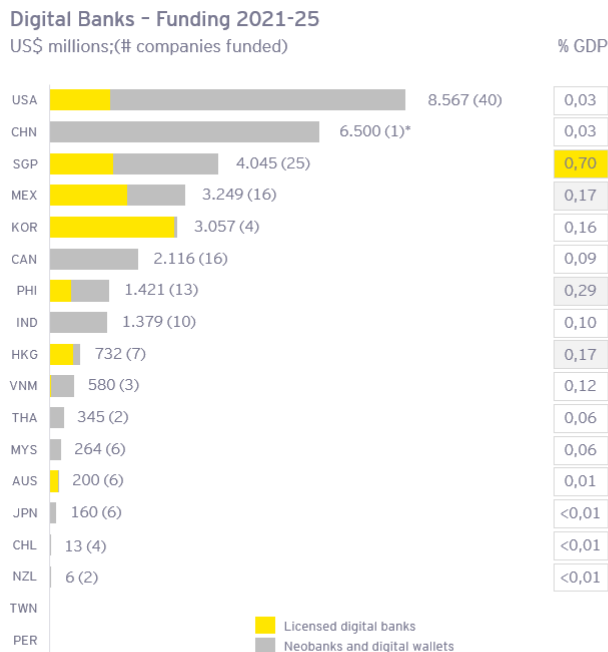
This pillar of the digital banking activity index focuses on the creation and growth of new companies offering digital banking services. This pillar covers both companies with a banking license and those that operate under different licenses, like neobanks and digital wallets that are authorized to take deposits from the public.

It considers financing received by digital banking companies through venture capital (VC), private equity (PE) or corporate equity investments, debt financing rounds provided by traditional financial institutions or specialized venture financing providers, and grants. These types of venture funding are particularly important for young, innovative, high-tech companies, including those in the financial sector. This financing component of fintech activity thus essentially captures the extent to which, in a given economy, there is a vibrant financial market adequately supporting the emergence of digital banking companies. It thus proxies for the supply side of digital banking development.

Since the goal with this index is to capture the overall level of digital banking activity, the indicator aggregates investment flows over the 2021-2025 period to obtain the stock of investments into digital banking firms and control for the volatility in yearly fund flows. In particular, the aggregate value for this pillar is constructed with the following indicators:

- Total aggregate funding received by digital banking companies in the economy for the corresponding period and scaled as a percentage of GDP (end of 2025 in us\$ at current prices).
- Total aggregate funding received by digital banking companies in the economy as a percentage of total funding received by all digital banking companies in APEC economies for the period.
- Number of digital banking companies in the economy that received funding as a percentage of total companies in APEC economies that received funding.

Figure 2.6 | Funding for digital banking companies



Source: Report's team analysis, based on data from Crunchbase (Includes equity and debt funding rounds) and IMF World Economic Outlook database 2025 (GDP in US\$ current prices).

Funding for digital banking companies exceeded US\$ 32,7 billion between 2021-2025, 14.5% of total funding in Fintech, with 164 companies receiving funds (Figure 2.6). Total investment is almost 50% less than in the previous 5-year period, when total funding reached US\$ 61,5 billion. This trend can be linked to market cycles, for example, the pre-pandemic years, and even during the pandemic, were an exceptional period for venture capital funding in general and for Fintech in particular. Also, between 2015 and 2020 several late-stage big funding rounds and IPOs in key markets increased total funding values. However, the number of companies being funded is higher (125 companies between 2016 and 2020), which indicates increasing dynamism with more new entrants in the sector receiving initial rounds of investment.

United States leads with 26% of total funding in APEC in digital banking sector, followed by China and Singapore. Together they represent 58% of total in APEC in the period 2021-2025. This is consistent with both the size and level of development of these financial markets, and the maturity of their innovation and startup ecosystems. Particularly, Singapore acts as a regional fintech innovation and investment hub in APAC, with companies opting to incorporate and raise funds in Singapore but operating regionally or mainly in other markets in the region.

Mexico stands out with almost 10% of total funding for digital banking players in APEC, a similar share to the Republic of Korea and higher than Canada which are leading markets in digital-only banks.¹³

Overall, funding in the analyzed period has been mostly directed to companies operating as neobanks (no banking license) or digital wallets, representing almost 72% of total funds. Funding for licensed digital banks has been mostly concentrated on less companies and bigger deal sizes, which is expected for scale-ups in the banking sector due to capital requirements, IT and operational capabilities.

This is clear in the big ecosystems like the United States and Singapore where 83% and 62% of fund respectively were raised by non-licensed digital banking players. Companies like Chime, Brex, Current in the United States, or Airwallex, Grab Financial, Kredivo Group in Singapore led with significant funding rounds in the period. However, in the same period, leading digital banks like SOFI and Varo Bank in the United States, or Anext Bank, MariBank and GXS Bank in Singapore raised received significant funding rounds. In China, funding was driven almost entirely by Ant Group with a US\$ 6.5 billion round of debt financing.

This trend is also clear in other economies like Canada, the Philippines, Indonesia, Viet Nam and Thailand, with big funding rounds by non-licensed digital banking players like Wealthsimple and KOSHO Financial in Canada, Mynt and Salmon in the Philippines, Gojek, DANA, Akulaku Group in Indonesia, VNLIFE and Momo in Viet Nam, Ascend Money in Thailand.

Mexico, Republic of Korea, Hong Kong China and Australia were the only economies in APEC where most or all the funding was raised by licensed digital banks. Leading companies like KBank and Toss Bank in Korea, WeLab Bank, Ant Bank, PingAn OneConnect Bank and Airstar Bank in Hong Kong, Plata, Covalto Bank, Kapital Bank in Mexico, Judo Bank in Australia, all raised significant funds over the period.

When analyzed in relation to total economic activity, fund flows for digital banking companies in Singapore shows the highest ratio to GDP (0.7%). With this lens, economies like the Philippines, Viet Nam and Indonesia show an increasing dynamism of their fintech startup ecosystems, with relatively high ratios of fund flows to GDP, comparable with other developed economies like Canada, Hong Kong China and Republic of Korea.

¹³ Several top players in these economies were established and raised most of funding in earlier periods; some of them even did IPOs like SoFi Bank.

Digital payments trends

Digital payments have grown exponentially across APEC economies driven by the implementation of real-time retail payment systems and digital wallets adoption. The third pillar of the digital banking activity index captures the usage of digital payments. Innovations in payments systems have been at the forefront of the rise of digital financial services, typically emerging and developing earlier than fintech innovations in other financial services.

Digital payments are a foundational driver for digital banking development, acting as key customer acquisition lever and transactional volume. This in turn enables building customer deposits, which lowers funding costs, facilitating the introduction of competitive credit products, which is essential to drive profitability. Furthermore, payments and transactional data can be leveraged for personalized value-added services, optimized risk-modelling, and additional revenue generating uses. Leading Big-Tech companies have demonstrated how much value can be generated from these data assets.

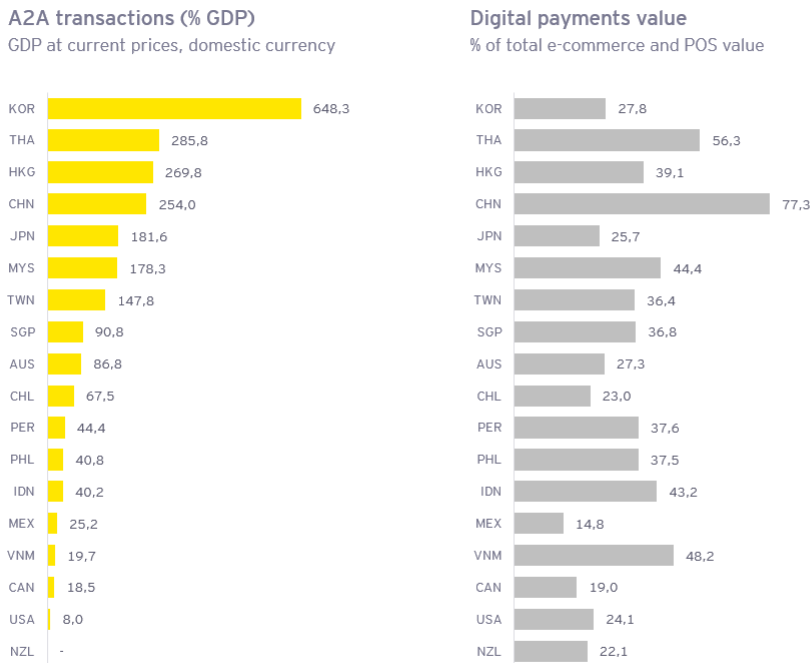
This pillar is constructed with three indicators that measure digital payments activity in each APEC economy:

- Percentage of adults that made or received digital payments in the last year.
- Total value of real-time A2A transactions in the economy as a percentage of GDP (local currency in current prices).
- Share of digital transaction value (digital wallet, A2A, BNPL/POS financing) over total transactional value in e-commerce and POS purchases in the economy.

Almost all APEC economies have in place real-time A2A payment systems. More mature systems like in Republic of Korea, China, Hong Kong China and Japan, lead in transaction value (Figure 2.7). However, economies with newer Fast-Payment systems (e.g., Indonesia, Malaysia, Philippines, Thailand, Peru) have seen their transactional volume increase exponentially, although they still lag in total transaction value, but are rapidly catching up as user adoption continues to increase and are used for higher value transactions.

The United States and Canada represent special cases with private real-time payment systems still dominant (or still the only alternative)—RTP and Zelle in US and Interact e-Transfers in Canada. In 2023 the Federal Reserve in the US launched the FedNow instant payments service, which has seen a significant growth in transactional volume, but it still lags private services. Canada expects to launch its national real-time payments systems in 2026.

Figure 2.7 | Digital Payments



Source: Report's team analysis, based on data from national payment statistics APEC economies; Worldpay Global Payments Report 2025 (digital payments: digital wallets, A2A, BNPL/POS financing)

China leads in digital payments in e-commerce and POS with more than 77% of purchase value done with digital payment and 73% with a digital wallet (Figure 2.7). This is mainly driven by the generalized adoption of digital wallets like AliPay and WeChat Pay. Other economies in ASEAN follow—Thailand (56%), Viet Nam (48%), Malaysia (44%)—but in these economies (as in other developing economies in APEC) digital payments are more distributed between digital wallets and A2A payments enabled by standard QR code frameworks linked to national fast-payment system.

In contrast, in most developed economies in APEC, the use of credit cards (and debit cards) is still prevalent, both as direct payment instruments or embedded in a digital wallet. However, with an increasing adoption of real-time payments, standardized QR codes and BNPL services could change this trend.

Finally, although the use of cash for everyday retail payments has decreased almost everywhere, in some APEC economies cash-based transactions still have a significant share. For example, in Mexico, Philippines, Indonesia, cash transactions represent more than 30% in total value, which can be linked to gaps in financial and digital inclusion. In Japan, where approximately 35% of retail payments are cash-based, the explanation can be rooted in demographic composition and customer preferences of older generations.

Key messages

The Digital Banking Activity Index highlights that the expansion of digital banking across APEC is broad-based but uneven, reflecting distinct national pathways shaped by income levels, market structures, regulatory choices, and digital readiness. While higher per-capita income is positively associated with stronger digital banking activity across all pillars, the index demonstrates that income alone is insufficient to explain outcomes. Several economies outperform (or underperform) what their level of economic development would predict, underscoring the importance of each country's enablers and constraints.

Digital banking development progresses in layers. Across APEC, digital payments adoption typically emerges first, supported by real-time payment infrastructure, national QR standards, and widespread smartphone penetration. This payments layer acts as a foundation for digital banking by enabling customer acquisition, deposit mobilization, and data generation. More advanced forms of digital banking—such as licensed digital banks with meaningful balance-sheet presence—tend to follow only once payments usage is sufficiently deep and trusted.

The supply of licensed digital banks remains limited relative to their perceived impact, and their market shares are still small in most economies. Even in advanced markets, licensed digital banks rarely exceed a few percentage points of deposits or assets. This reflects both the relatively early stage of most institutions and the structural realities of banking, including regulatory capital requirements, customer trust dynamics, and incumbents' continued dominance. Nonetheless, selected cases—such as the Republic of Korea, Japan, Canada and Mexico—illustrate that digital-only banks can reach scale when supportive regulation, competitive landscape, and clear consumer value propositions align.

Venture funding reveals a broader and more dynamic ecosystem than bank licensing alone. Most investments between 2021 and 2025 flowed to non-licensed neobanks and digital wallets, highlighting that much of the innovation in digital financial services occurs outside the perimeter of traditional banking regulation. These players often act as complements or challengers to banks, accelerating payments adoption, financial inclusion, and competitive pressure. At the same time, economies where funding is concentrated in licensed digital banks tend to exhibit clearer regulatory pathways and stronger investor confidence in full-service digital banking models.

The index results underscore significant heterogeneity among middle-income APEC economies. Countries such as Indonesia, Mexico, Viet Nam, and the Philippines display strong activity despite lower income levels, driven by large populations, unmet financial

needs, and rapid adoption of digital payments. These experiences suggest that digital banking can leapfrog traditional models when market demand is high and enabling infrastructure is in place, even if overall income levels are moderate.

Finally, these findings carry important implications for policymakers and regulators. The evidence suggests that fostering digital banking activity requires a holistic policy approach. And as digital banking ecosystems expand, the challenge will shift from enabling entry to ensuring sustainable competition, resilience, and trust.

Overall, the Digital Banking Activity Index confirms that digital banking is no longer peripheral to financial systems in APEC—but also that its evolution will remain diverse, shaped by national choices and institutional contexts rather than a single, uniform trajectory.

3. Enablers for Digital Banking Development

The expansion of digital banking across APEC is broad-based but uneven, as reflected in the Activity Index introduced earlier. Economies are at varying stages of digital banking development and adoption. Income levels, demographic characteristics, or financial inclusion indicators alone are insufficient to explain these diverse development pathways, underscoring the importance of economy-specific enablers and constraints. As a result, the evolution of digital banking is likely to remain heterogeneous, driven by national choices and institutional contexts rather than converging toward a single, uniform trajectory.

This section explores several economic, technological and policy factors that potentially enable the development of digital banking services and may help explain the substantial variation across economies in APEC. Why do some economies exhibit greater activity than others? In which dimensions are these economies different? Identifying these enabling factors can help not only understand the current patterns but also assess policy alternatives and choices to foster digital banking development adapted to each economies' characteristics and local policy objectives.

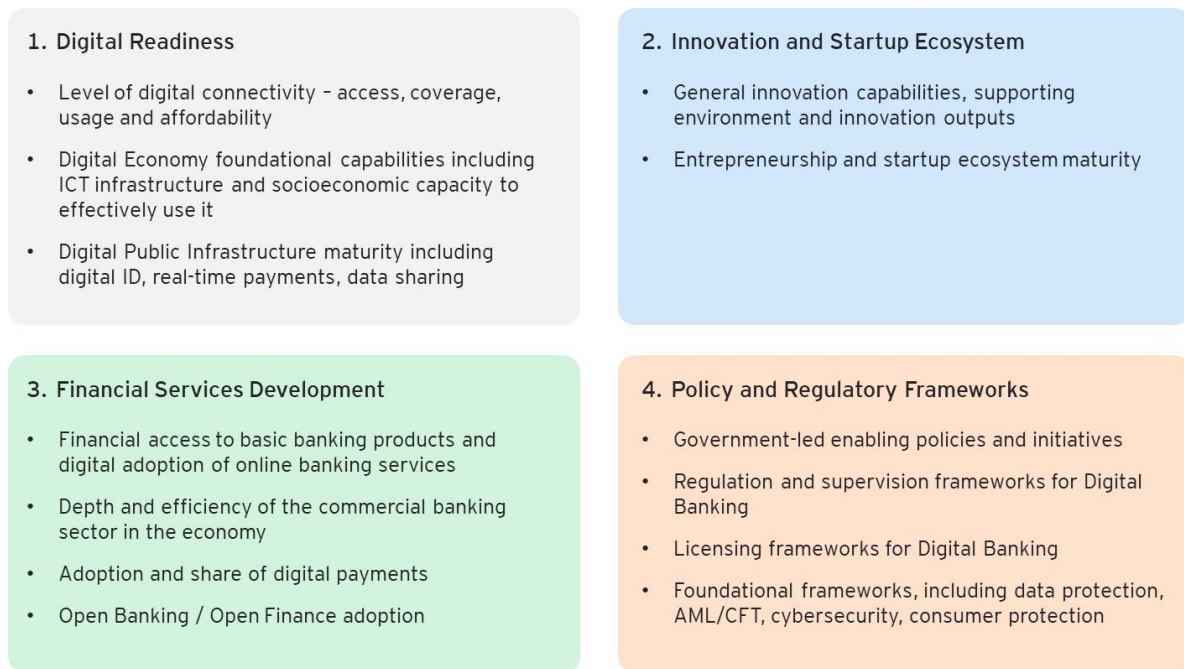
The Digital Banking Enablers Index

The Digital Banking Enablers Index is structured with four dimensions that capture key enabling factors for digital banking development, including the economies' digital readiness, their innovation ecosystem, the overall financial services market development and the policy and regulatory environment.

These dimensions were selected based on a wide research of industry reports and academic papers focused on the exploration of factors that enable the evolution of digital financial services.¹⁴ Most of these reports and papers are focused on fintech development more broadly; however, their key definitions and insights can be adapted to analyze the role and impact of these enablers for digital banking as a sub-set of fintech product and services.

¹⁴ A list of the main industry reports and academic papers reviewed can be found in the References appendix.

Figure 3.1 | Components of the Digital Banking Enablers' Index



Digital readiness: this dimension captures core elements like the level of **digital connectivity** in the economies, including access, use and affordability, and the state of the underlying **technology infrastructure**, including digital public infrastructures, that enable a digital economy.

Innovation and startup ecosystem: this dimension measures the economies' general innovation capabilities and innovation outcomes, together with the maturity level of the local entrepreneurship and startup ecosystem.

Financial services development: this dimension captures financial depth, efficiency, competition and inclusion in the economy and distinguishes specifically between the banking and payments sectors, while the role and maturity of the capital market sector is already covered in the innovation and startup ecosystem dimension.

Policy and regulatory frameworks: this dimension covers the existence of government policies to support the sector's development, sector-specific regulation and supervision (for example, regulations related to licensing, e-money) and relevant foundational frameworks like data protection, anti-money laundering, cybersecurity and consumer protection.

Figure 3.2 | Digital Banking Enablers' Index

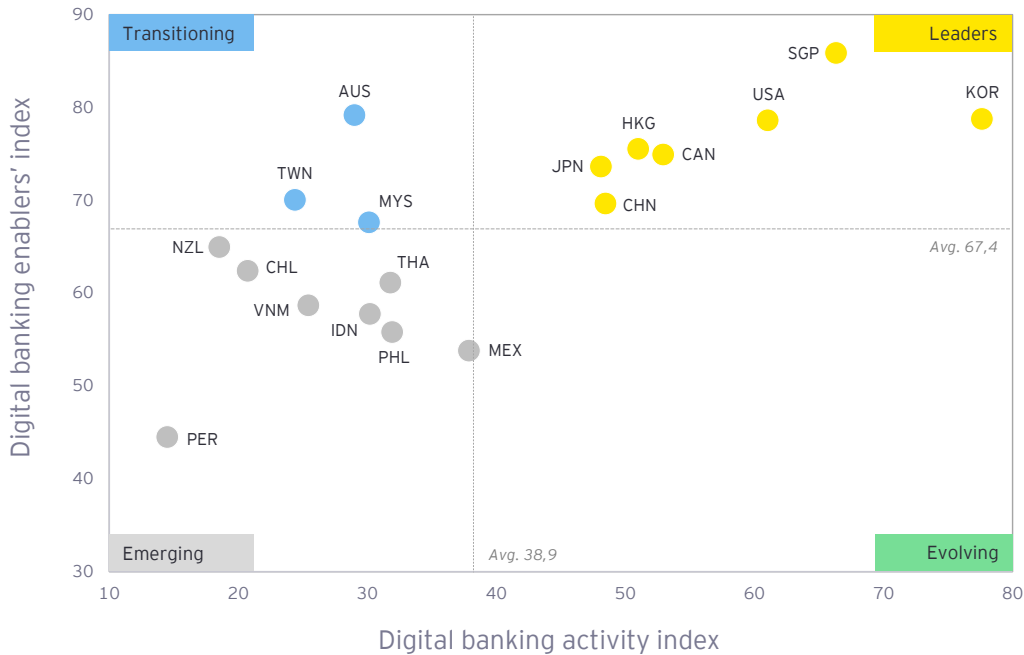


Source: Report's team analysis; index methodology and data sources can be found in Annex 1 - Methodology and Sources. GDP per capita based on IMF World Economic Outlook database 2025, GDP in US\$ at current prices.

Across APEC economies, two clear patterns emerge in Figure 3.2. First, there is a significant positive relation between the level of development of digital banking enablers and income per capita, although it is not perfect. High-income economies present higher scores in the index, with Singapore, Australia, Republic of Korea and the United States at the top. Only Chile and New Zealand present scores slightly below the average.

Within the middle-income economies, China and Malaysia have levels of enablers' development comparable with the high-income group. While all other middle-income economies present scores below the average for APEC, although there are still mid-range scores indicating that overall, as will be described in the following sections, these economies have already started to converge in relevant capabilities and foundational frameworks for digital banking development.

Figure 3.3 | Digital Banking Enablers' and Digital Banking Activity



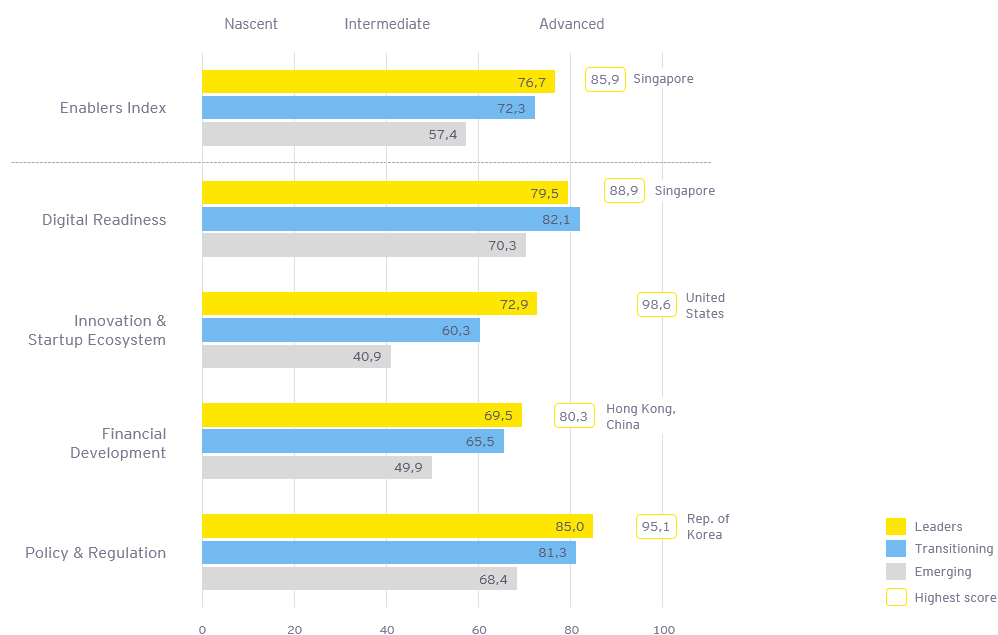
Source: Report's team analysis; index methodology and data sources can be found in Annex 1 - Methodology and Sources. GDP per capita based on IMF World Economic Outlook database 2025, GDP in US\$ at current prices.

The second clear pattern is that higher levels of digital banking activity are generally associated with more developed enablers, although again, the relationship is not perfect. Economies classified as “Leaders” in Figure 3.3 tend to show strong alignment between enablers and activity, with above-average scores in the enablers index, consistent with higher activity levels, although with notable variations between them.

The analysis also highlights important exceptions. Economies in the “Transitioning” group in Figure 3.3, including Australia, Chinese Taipei and Malaysia, advanced levels of development in their enablers have not translated into equally high digital banking activity levels, suggesting the important influence of other factor like, for example, market structure, incumbent dynamics, and competitive conditions besides having foundational conditions in place.

Between the economies in the “Emerging” group there is also significant variations, both in terms of enablers maturity level and the corresponding activity levels. All these economies show significant improvements in their enablers (in some cases even high maturity levels comparable with economies in the “Leaders” group), but overall, still have a significant gap compared to the leaders in APEC. On the other hand, in an economy like Mexico, a large market and a vibrant fintech ecosystem can compensate for gaps in specific enablers, achieving relatively high activity despite structural challenges.

Figure 3.4 | Digital Banking Enablers' Index - component scores by group (average)



Source: Report's team analysis; index methodology and data sources can be found in Annex 1 - Methodology and Sources. Average scores per groups defined by the combination of scores in the digital banking activity index and enablers' index (Figure 3.3)

On a closer look at the maturity level by dimension in the enablers' index, there are mostly consistent patterns between the different groups as shown in Figure 3.4. Economies in the Leaders and Transitioning groups present similar average scores in all dimensions except in their innovation and startup ecosystem maturity (10 points difference), which in the Leaders group significantly influenced by the relevance of the ecosystem in the United States. On the other side, economies in the Emerging group present a consistent gap with the economies in the Leaders and Transitioning groups across all dimensions.

Digital readiness has improved significantly across APEC, with economies in the Emerging and Imbalanced groups converging in terms of digital connectivity and digital infrastructure (see section on Digital Readiness). Yet differences remain in institutional quality and business environment conditions, which continue to shape investment decisions and scaling potential.

Innovation and startup ecosystem capabilities show wider divergence. Economies in the Leaders group have strong innovation ecosystems which provide better conditions for entrepreneurs and investors, facilitating the establishment and growth of new ventures. While the economies in the Emerging group have still have less mature ecosystems,

constraining experimentation and growth in the sector. Mexico is an exception, with above average development of its innovation ecosystems, which could explain in part a higher level of digital banking activity compared with economies in the Emerging group.

Financial market development also differs significantly between groups, mainly explained by differences in financial access and banking market depth (loans and deposits to GDP). Moreover, this is compensated in part by the dynamism in digital payments shown in economies within the Emerging group. However, in terms of digital banking potential, these gaps in financial development often represent larger addressable market opportunities, although these depend on the ecosystem's ability to support safe, competitive, and sustainable expansion.

Public policies to foster fintech and digital banking are prevalent across APEC economies, but their results in terms of actual market activity remain mixed. Regulatory frameworks are gradually converging toward risk-based and technology-neutral approaches, and while specific digital bank licenses can help, they are not, on their own, a decisive factor. Finally, foundational frameworks show relatively high levels of development across groups; data protection, cybersecurity, AML/CFT, and consumer protection frameworks have evolved significantly across APEC. These elements are essential not only for stability and trust, but also for enabling responsible innovation.

These initial insights highlight that, by themselves, each block of enablers is not enough to foster digital banking activity. For example, being able to fully leverage digital and financial infrastructures to enable digital banking activity depends on a wider range of policy actions and socioeconomic characteristics. Overall, these dimensions interact, co-evolve, and may reinforce each other to foster (or impede) digital banking development and adoption.

The following sections explore in detail specific characteristics in each of the component dimensions of the Enablers' index to identify patterns in their maturity, development path and their potential influence in the evolution of digital banking within APEC economies.

Digital readiness

Connectivity drives innovation, strengthens economies and serves people, businesses and institutions around the world.¹⁵ Digital banking innovations and adoption are highly dependent on widespread access to internet and mobile phone ownership, which in turn depends on the availability and access to high-quality, reliable, efficient, and affordable digital technology infrastructure.

On the supply side, access to the latest technologies and digital infrastructure enables new financial service delivery mechanisms that can potentially help reach unserved customers and reduce overall transaction costs. It can also help reduce the costs associated with collecting and processing information which is essential for the provision of financial products and services.

In addition to foundational digital technologies, Digital Public Infrastructures (DPI) – such as digital identity, real-time payments, and consent-based data sharing – are also reshaping how financial services are designed, delivered, and regulated. These frameworks have the potential to enhance operational efficiency, reduce costs, and improve the accessibility and scalability of financial services. The existence and level of development of DPI play a critical role in improving access to digital financial services, particularly for underserved populations; therefore, how these systems are implemented and governed is important to maximize their impact on the ecosystem.¹⁶

More broadly, it is also important for digital banking development—as for every other sector in the Digital Economy—to consider the overall digital readiness in the economy. To consider not only the maturity and strength of the technological ecosystem, but also the capacity in each economy to take advantage and make optimal use of the installed technology, which is influenced by the local socioeconomic context.¹⁷

To measure the level of Digital Readiness across APEC economies, this first pillar of the Enablers index includes three components¹⁸:

Digital connectivity, which measures the level of *universal and meaningful connectivity* as defined by the International Telecommunication Union (ITU), covering internet and mobile access, network coverage, internet traffic and broadband affordability.

¹⁵ ITU, Global Connectivity Report 2025.

¹⁶ Cambridge Centre for Alternative Finance (2025), Digital Public Infrastructure and Digital Financial Services: Convergence, Landscape and Regulatory Considerations.

¹⁷ IDCA, Global Digital Economy Report 2025.

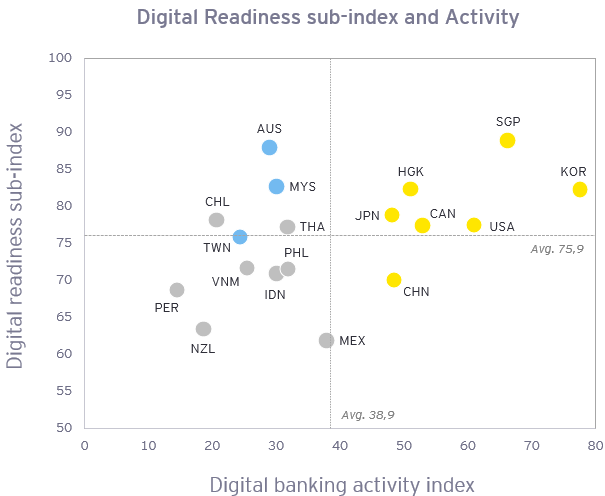
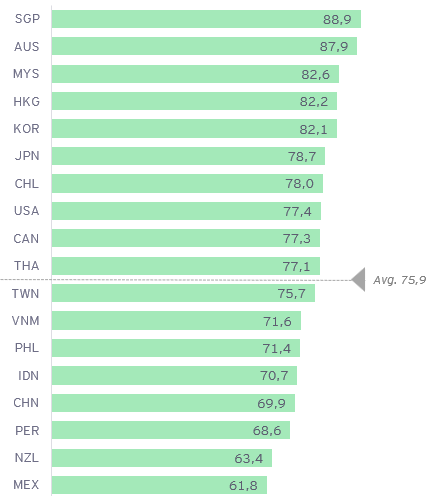
¹⁸ See the Methodology and Sources appendix for a detail description of the specific indicators, data sources and calculations.

Digital Economy foundational capabilities, capturing the strength of the digital infrastructure and related foundational technologies, together with the socioeconomic ability to take optimal advantage of its installed infrastructure.

Digital Public Infrastructure maturity, which assesses the existence and key characteristics of the main DPI systems in each APEC economy: digital identity, real-time payments, and consent-based data sharing.

Digital readiness presents relatively high levels of development across all APEC economies. Although there is an important gap with Singapore and Australia at the top of the list, economies with lower scores still have reached well above average levels in digital capabilities. There has been significant convergence between economies, mainly driven by fast improvements in digital connectivity and the introduction of digital public infrastructures in middle-income economies in APEC.

Figure 3.5 | Digital Readiness Pillar sub-index



Source: Report's team analysis; index methodology and data sources can be found in Annex 1 - Methodology and Sources. Color codes for each economy based on groups defined by the combination of scores in the digital banking activity index and enablers' index (Figure 3.3).

The relation with digital banking activity levels is positive but weak. Economies show mixed combinations between digital readiness and the activity index. However, some patterns can be identified, for example, that six out of the seven economies in the Leaders group also

rank in the top ten in digital readiness (Figure 3.5). Furthermore, all economies in the top-right quadrant (above average digital readiness and activity level) are in the Leaders group, indicating that a high digital readiness is required for digital banking activity to develop.

However, this is not a sufficient condition. For example, Malaysia and Thailand have achieved levels of development in digital capabilities which are comparable with economies in the Leaders group, but they both still presents a significant gap in digital banking activity. On the other hand, Australia and Chile—both high-income economies—, also have high levels of digital readiness, but this has not translated into higher digital banking activity levels. As expressed throughout the report, digital banking activity depends on a context-specific combination of factors in each economy.

Furthermore, particularly in terms of digital readiness, most economies in the Emerging group have made significant progress in strengthening their digital capabilities starting in recent years. This may help explain why digital banking development remains limited, as the adoption and scaling of digital financial services, starting with digital payments, tend to follow with a lag once foundational digital capabilities are established as users, providers, and ecosystems adjust.

Digital connectivity across APEC economies has already reached above-average levels, averaging a 90.7% score in the ITU ICT Development Index (IDI), which measures access, coverage, use and affordability of mobile and internet services. Internet access (mobile and fixed), mobile phone ownership and network coverage have all improved across APEC, almost reaching or surpassing 90% average scores in the region; internet services affordability has also improved, driven by significant decreases in mobile data and voice basket price (measured as % of GNI per capita).¹⁹

Particularly, the fastest improvements in almost every indicator of digital connectivity can be seen in China and other economies in the Emerging group. This trend is enabling a fast convergence in digital foundational capabilities between APEC economies, which in turn can enable further digital banking development in the region.

Digital public infrastructures (DPI) have also evolved significantly across APEC economies. Currently, almost all economies have implemented key DPIs although still with differences in scope, maturity and adoption.

Digital ID frameworks enable key use cases for digital banking as for example, electronic KYC (eKYC), electronic authentication and signatures, entity and data registries. All economies in APEC have implemented some kind of digital ID system, but with some differences in scope of available or authorized use cases, governance structure (for example, in Canada and United States there are several provincial or state digital ID frameworks), available use channels, for example specific mobile applications or internet certificates.

¹⁹ Data from ITU, ICT Development Index 2025 (IDI) database.

Real-Time payments infrastructures represent a key driver for digital financial services adoption. Nearly all APEC economies have already implemented real-time payment systems, and those which do not have them already are in the process of implementing them (e.g., Canada, New Zealand). Some economies have mature real-time payments systems like South Korea, Japan and Chile; while other economies have introduced their fast-payments systems more recently—most new systems implemented since 2014—, and experienced exponential growth in volumes, for example BI-Fast in Indonesia, PromptPay in Thailand, InstaPay in the Philippines or NAPAS Fastfund 247 in Viet Nam. The availability of interoperable real-time payments systems as a backbone, the extent of payment types and instruments supported, and usability features like standard QR codes, aliases and overlay services, accelerate adoption of digital payments, which in turn enable access to additional digital financial products and services.

Finally, consent-based data-sharing frameworks and interoperable data exchange API standards, have also expanded throughout APEC economies. In some cases, integrated with the implementation of Open Banking, Open Finance or Open Data frameworks. These infrastructures still vary in scope of services and current applications for financial services. For example, Singapore implemented APEX Cloud and the Singapore Financial Data Exchange (SGFinDex) as a specific framework for Open Finance. Australia has implemented the Consumer Data Rights framework which has a cross-sectoral scope. Other economies have implemented systems mostly focused on eGovernment services, and specific frameworks for Open Banking / Open Finance.

Overall, the evidence confirms that digital readiness is a necessary—though not sufficient—condition for the development of digital banking. Strong connectivity, robust digital infrastructure, and the rollout of digital public infrastructures provide the foundational rails on which digital financial services can operate and scale. Economies that combine high levels of digital readiness with strong digital banking activity illustrate how these capabilities can translate into tangible market outcomes when complemented by conducive policy, competitive dynamics, and financial sector development.

At the same time, the experience across APEC underscores that the impact of digital readiness materializes gradually. In several emerging economies, rapid improvements in connectivity and DPI have not yet fully translated into higher levels of digital banking activity, reflecting the presence of adoption lags as users, providers, and ecosystems adjust. This suggests that while continued investment in digital capabilities remains essential, unlocking their full potential for digital banking will depend on the interaction with other enabling factors, reinforcing the importance of a holistic and context-specific approach to policy design.

Innovation and startup ecosystem

Digital banking development is closely linked to the broader innovation capabilities of an economy and the maturity of its startup ecosystem. As already highlighted, digital banking growth depends not only on demand factors, financial markets characteristics, policy and regulatory frameworks, but also on the capacity to create, scale, and sustain innovation-driven firms in the economy. Therefore, innovation capabilities and entrepreneurial ecosystems represent critical enabling factors.

Innovation ecosystems drive digital banking development through multiple channels. Economies with strong innovation capabilities tend to exhibit higher levels of technological readiness, skilled human capital, and research and development activity. These factors support the creation of new digital financial solutions and facilitate the adoption of emerging technologies, such as advanced data analytics, AI and cloud computing, which are central to modern banking models.

At the same time, the depth and vibrancy of the startup ecosystem play a key role in translating these capabilities into market outcomes. Developed ecosystems facilitate access to early-stage financing, specialized talent, mentorship networks, and supportive regulatory environments, all of which are essential for fintech and digital banking startups to emerge and scale.

However, as with other enabling dimensions, the relationship is not linear. Economies with relatively strong innovation capabilities may not always translate these into higher digital banking activity, particularly where structural constraints—such as limited access to capital, regulatory uncertainty, or fragmented markets—limit firm growth. Conversely, some economies with more modest innovation capabilities may still foster dynamic digital banking sectors by leveraging targeted policies, regional integration, or niche market opportunities.

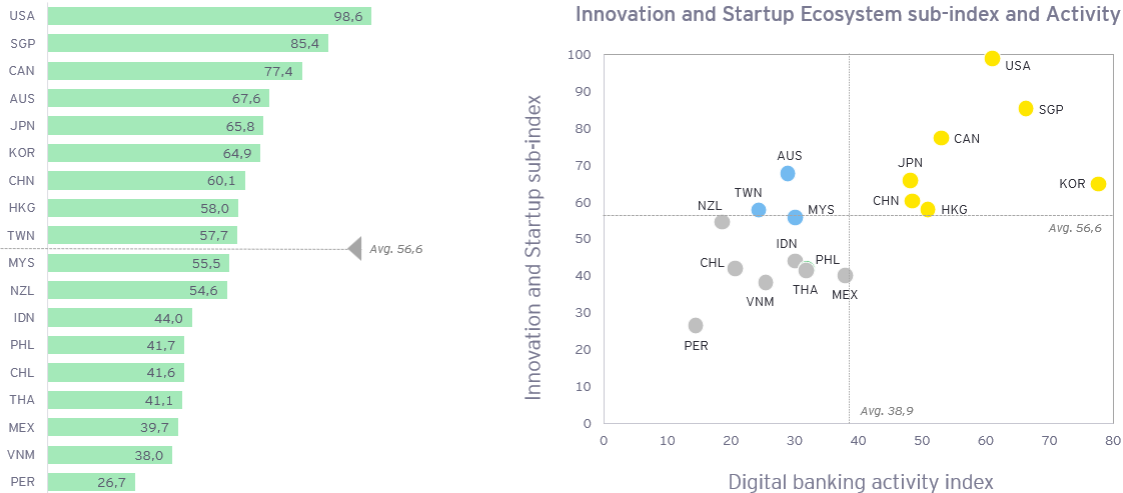
These dynamics suggest that innovation capabilities and startup ecosystem maturity influence both the supply of digital banking solutions and the pace at which new models can scale. Importantly, they also shape the degree of competition and experimentation within the financial sector, which in turn affects the trajectory of digital banking adoption.

To measure the innovation and startup ecosystem maturity across APEC economies, this second pillar of the Enablers index includes two components:

General innovation capabilities and outputs, measured by a combination of leading indexes like the WIPO Global Innovation Index, CEOWorld Most Innovative Countries in the World index and the StartupBlink Innovators Business Environment Index.

Entrepreneurship and startup ecosystem maturity, measured by a combination of leading indexes like the StartupBlink Global Startup Ecosystem Index, CEOWorld World’s Most Startup-Friendly Countries and World’s Most Entrepreneurial Countries.

Figure 3.6 | Innovation and Startup Ecosystem Pillar sub-index



Source: Report’s team analysis; index methodology and data sources can be found in Annex 1 - Methodology and Sources. Color codes for each economy based on groups defined by the combination of scores in the digital banking activity index and enablers’ index (Figure 3.3).

Innovation capabilities and startup ecosystems maturity present significant differences between APEC economies, and these correlate with differences in national incomes (Figure 3.6). High-income economies lead in this dimension with mature innovation ecosystems, higher innovation outputs (e.g., patents, intangible assets, successful startups), and developed startup ecosystems considering their activity level, the impact and success of the activity in the ecosystem and supportive conditions for startup growth. The United States tops the list with significant margin, followed by other innovation hubs in APEC like Singapore, Canada, Australia. However, some other high-income economies like Chile and New Zealand still lag in these dimensions.

The relation of this pillar with digital banking activity levels shows a positive pattern (Figure 3.6), with all seven economies in the Leaders group also presenting above average scores in their innovation and startup ecosystem maturity levels. This supports the conceptual intuition that these capabilities play a key role in fostering digital banking development.

However, as with other dimensions, high maturity levels in innovation capabilities do not ensure high levels in digital banking activity. Australia with high scores in these capabilities, lags other economies in the Leaders group in terms of the activity index. This illustrates the fact that there are other factors that can be at play, for example that innovation ecosystems are more focused on other industries, or that the activity in the provision of digital banking products and services is led by incumbent banks with successful value propositions in the local market (e.g., Up Bank, Ubank in Australia).

As expected, the performance between innovation capabilities in general and the startup ecosystem maturity is tightly correlated, but not perfect. Most of the economies in APEC with high maturity levels in their innovation capabilities, like the United States, Singapore, Republic of Korea, Japan, Canada and China, also have mature startup ecosystems.

Policy support for innovation ecosystems development has been effective in some APEC economies which have transformed into regional or global hubs, like for example Singapore, Hong Kong China and the Republic of Korea.

Other economies in APEC have made gains in their innovation and startup ecosystems, but there is still a significant gap with the economies in the Leaders group, both in terms of enabling conditions for entrepreneurs, investors and facilitators (institutional, infrastructure, investment climate), and innovation outputs. Particularly, there is a consistent gap in almost all APEC economies between their innovation capabilities and startup ecosystem maturity. Chinese Taipei is a clear example, with top level innovation capabilities but a relatively underdeveloped startup ecosystem. This can indicate that innovation capabilities and ideas cannot be fully translated into new ventures due to underdeveloped support and funding for startups, or that some of new innovative companies are funded and incubated in more developed regional hubs.

The findings in this pillar highlight the important role of innovation capabilities and startup ecosystem maturity as enablers of digital banking development, particularly in supporting the emergence of new business models and fostering competition. Economies that combine high levels of innovation performance with vibrant entrepreneurial environments tend to exhibit more dynamic digital banking activity, as these conditions facilitate the creation, funding, and scaling of fintech and digital banking providers. At the same time, the presence of leading innovation hubs within APEC highlights the role of targeted policies and supportive ecosystems in accelerating these dynamics.

However, this dimension also underscores that translating innovation potential into digital banking outcomes is not automatic. Gaps between innovation capabilities and startup ecosystem maturity in several economies point to bottlenecks in financing, market access, or regulatory support that limit the scaling of new firms. As a result, while strengthening innovation systems remains essential, unlocking their full impact on digital banking requires complementary measures that enable startups to grow and compete effectively, reinforcing once again the importance of a holistic and context-specific approach across enabling factors.

Financial market development

Digital banking development and adoption are highly dependent on the baseline conditions of the financial system in which it operates. The structure, depth, competitive intensity and inclusiveness of an economy's financial sector—including both banking and payments—shape the opportunities and constraints for digital banking providers, while also influencing how quickly consumers and firms adopt these services.²⁰

The relationship between financial development and digital banking is not unidirectional. On the one hand, more developed financial systems—characterized by broad access, deep intermediation, and efficient service provision—may reduce the scope for disruption. In such environments, the financial needs of households and businesses are more likely to be already met through established channels, limiting the immediate value proposition for new digital players. Incumbent institutions in these markets also tend to have greater resources and capabilities to deploy their own digital solutions, further raising the competitive bar for new players.

On the other hand, more advanced financial systems can also act as powerful enabler for digital banking. Greater financial depth and access typically go hand in hand with stronger infrastructure, more reliable payment systems, higher levels of trust, and more sophisticated users—all of which are critical for scaling digital financial services. At the same time, competitive pressures in more developed markets may incentivize incumbents to innovate and adopt digital technologies, accelerating overall digitalization within the financial sector.

Conversely, in less developed financial systems, gaps in access, limited product offerings, and inefficiencies may create strong demand for alternative solutions, opening space for digital banking models to expand rapidly. However, these opportunities are often accompanied by constraints, including weaker infrastructure, lower levels of financial and digital literacy, and regulatory or institutional barriers that can limit the ability of digital providers to scale sustainably.

The combined influence of these factors highlights that financial development does not deterministically lead to a single outcome: rather, it interacts with policy choices, digital readiness, and market dynamics to produce diverse digital banking pathways.

To measure financial market development across APEC economies, this third pillar of the Enablers index includes the following components:

Financial access, measured by the percentage of adults in with financial accounts debit card, and the percentage of individuals accessing online banking services.

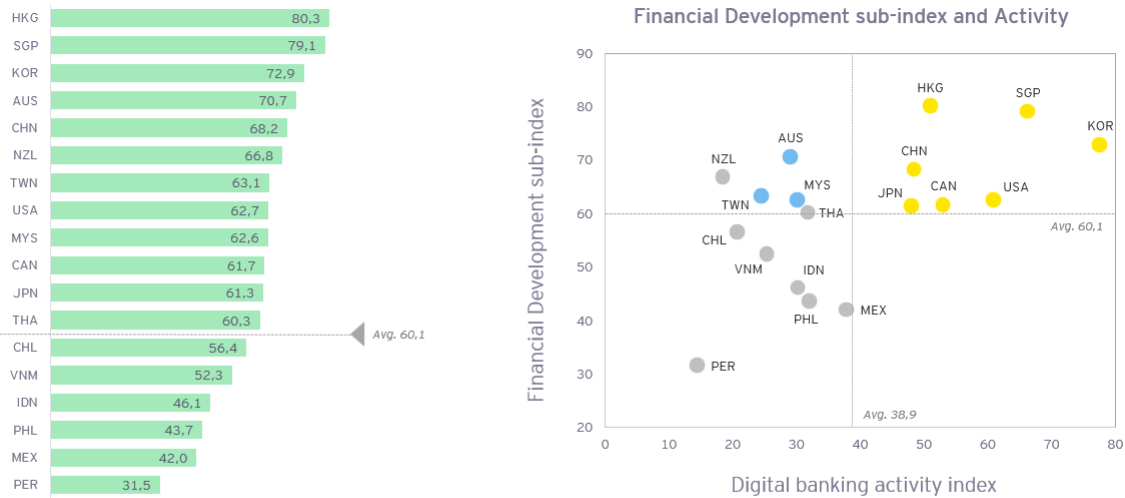
²⁰ World Bank, Global Patterns of Fintech Activity and Enabling Factors; Fintech and the Future of Finance Flagship Technical Note, 2023

Banking depth and efficiency, measured by the total outstanding loans and deposits to GDP in the commercial banking sector, and the level of concentration in the sector.

Adoption and share of digital payments, measured by a combination of indicators on the value of instant account-to-account transactions, usage of digital payments and the value of non-cash payments and digital payments in e-commerce and POS.

Open Banking / Open Finance adoption, measured by a compound indicator including the number of live data types in open banking frameworks, allowed functions (AISP / PISP), active API aggregators and overall maturity indexes.

Figure 3.7 | Financial Market Development Pillar sub-index



Source: Report's team analysis; index methodology and data sources can be found in Annex 1 - Methodology and Sources. Color codes for each economy based on groups defined by the combination of scores in the digital banking activity index and enablers' index (Figure 3.3).

Financial development, measured by this specific index, presents some noteworthy patterns between APEC economies (Figure 3.7). First, as expected, the most developed and dynamic international financial centers in the world, particularly those in Asia-Pacific like Hong Kong China, Singapore and Republic of Korea, present the highest scores in the index. Also, the correlation between the index and incomes per capita is relatively strong considering the importance of the financial system for economic growth and development.

The relation between the financial development index and digital banking activity presents a positive slope, however this correlation is not as strong as with income levels. For example, within the economies in the Emerging group, Mexico has relatively high digital

banking activity levels while showing below average financial development scores. This supports the hypothesis that less developed financial markets represent attractive business opportunities for new digital entrants and higher customer propensity to adopt new and innovative value propositions (assuming minimum baseline conditions are met, like for example, digital infrastructure, digital and financial literacy, legal frameworks for consumer protection).

In contrast, other economies with relatively high financial development scores (comparable with the Leaders Group) like Australia, New Zealand, Chinese Taipei, Malaysia, Thailand and Chile, show below average digital banking activity levels. This can be attributed to multiple factors, but characteristics in market structure and competitive dynamics of their financial sectors, for example market concentration and innovations from big incumbent banks, and customer preferences, probably play an important role presenting higher barriers to entry for new digital players.

Furthermore, economies in the Emerging group still present significant constraints (although improving) that can limit the ability of digital providers to scale sustainably, for example weaker digital infrastructure or digital connectivity gaps, lower levels of financial and digital literacy in the population, regulatory or institutional barriers for new digital players and business models.

In terms of financial access, there is still a clear gap between high-income economies and some middle-income economies like Indonesia, Mexico, Peru and the Philippines where the percentage of adults with an account has improved consistently but is still below 60%. Interestingly, digital financial adoption is high in almost all economies, independent of their current income per capita level. This suggests that from the demand-side perspective, customer preference for digital interaction is strong which favors innovative digital banking propositions.

Commercial banking market depth also varies substantially between APEC economies. Most economies in the Leaders group show loans and deposits to GDP ratios above 100%, with Hong Kong China and Singapore leading with ratios around 200%. Some economies, both from the Leaders and Emerging groups, like Australia, Chile, Chinese Taipei, Viet Nam, New Zealand, Malaysia and Thailand, stand out with high banking depth ratios, comparable with those in the Leaders group, but below average digital banking activity levels. This could indicate strong competition from incumbents in the banking industry generating higher entry barriers for new digital players.

Concentration levels in the banking markets across APEC economies are moderate, with 52% of outstanding loans and 54% of deposits on average concentrated in the top three largest banks in the economy. No clear pattern can be observed in concentration levels between economies in the Leaders or Emerging groups based on digital banking activity. This could suggest that concentration in the banking industry on its own does not represent a defining obstacle for new digital-only banks to enter the market.

Digital payments play a central role for digital banking growth. Adoption of real-time payment systems and digital wallets has proven to be a key driver for customer acquisition, deposit mobilization, and the generation of transactional data that enables differentiated products and services from digital banking players.

Digital payments adoption shows a clear growth trend across APEC economies. On average, almost 80% of adults in the region made or received a digital payment over the year, although there are economies that still present gaps, like Indonesia, Peru, the Philippines and Mexico. The share of digital payments in online or in-store purchases has increased consistently through the years, currently representing almost 36% on average of the total value. China clearly leads in digital payments adoption, driven by the ubiquity of digital wallets like Alipay and WeChat Pay. Other economies in the Emerging group (mostly in Asia) are following this path, with Thailand, Viet Nam, Malaysia and Indonesia as clear examples. This trend can also be observed in high-income economies, however customer preference for debit and credit cards is still strong and is supported by a mature payment infrastructure and business models focused on these payment instruments.

Account-to-account instant payments have also increased significantly across APEC economies, and in some cases exponentially. However, total value of A2A real-time payments varies between economies. This can be explained by multiple factors. For example, the maturity of the real-time payments infrastructure matters; economies like Japan, Republic of Korea, China and Chile implemented their systems earlier and show high transactional values to GDP. Other economies like Australia, Chinese Taipei, Hong Kong China, Malaysia, Singapore and Thailand, implemented their systems more recently but already show high transactional values, demonstrating rapid adoption. Also in some economies, these systems have been initially mostly adopted for small value retail payments, lowering total processed value, although the impact on customer behavior has been impressive.

The last dimension in the Financial Development sub-index measures the maturity level of open banking and open finance ecosystems across APEC economies. The integration of data and financial services offered by multiples financial institutions and technology providers, based on open and standard frameworks, can be helpful to increase usage and improve quality of financial services delivery. It can also foster innovation and competition in the marketplace by enabling open access and collaboration between industry players, ultimately benefiting customers. On the other hand, the benefits of open banking and open finance will only be realized if the appropriate safeguards are in place to ensure consumer protection and privacy, cybersecurity and operational resilience.

Open banking and open finance framework and ecosystems are being increasingly adopted throughout APEC economies. However, governance approaches vary, with some economies opting for a regulation-driven frameworks and others a market-driven

approach, although in the latter the regulatory frameworks are being discussed or currently implemented (e.g., United States, Canada, China).

Independent of the governance approach, this sub-index captures the maturity level of the open banking and open finance ecosystems in terms of live data types and allowed functions (AISP, PISP), market penetration (users, API-based transactions, API aggregators), innovation and competition, governance and collaboration. Economies in the Leaders group show higher levels of maturity in general, with Singapore, Hong Kong China, Republic of Korea and the United States commanding the highest scores. Australia and New Zealand also present high scores, although this does not correlate with their level of digital banking activity, indicating that incumbent banks are leading the adoption.

Other economies like Chile and Mexico have passed legislation on Open Finance, however the implementation and market adoption has been slower or restricted to fewer use-cases. However, as the case of Mexico reveals, a lower maturity level of these ecosystems does not necessarily represent a barrier for new digital banking players entering the market.

The analysis in this section suggests that the level of financial development in the economy can play a dual role in shaping digital banking outcomes. On the one hand, more advanced financial markets provide the infrastructure, scale, and trust necessary to support digital innovation and adoption. But they may also raise barriers to entry and slow the emergence of new digital players where incumbent institutions dominate and effectively meet customer needs. On the other hand, less developed financial systems can offer fertile ground for digital banking expansion by addressing unmet demand, although structural constraints may limit the pace and sustainability of growth. These contrasting dynamics help explain the heterogeneous relationship observed between financial development and digital banking activity between APEC economies.

The evidence suggests that financial development is a critical, but not decisive, enabler of digital banking. Its impact depends on how it interacts with other factors, including digital readiness, innovation ecosystems, regulatory frameworks, and market structure. In particular, the central role of digital payments and the growing importance of open finance frameworks highlight how specific components of financial development can significantly influence digital banking trajectories. As a result, fostering digital banking development requires a holistic approach that not only strengthens financial systems broadly, but also promotes openness, competition, and innovation within them.

Policy and regulation

Digital banking development is closely linked to the policy and regulatory environment in which it operates. As digital financial services expand, bringing new products, business models, and market participants, legal and regulatory frameworks play a central role in shaping both opportunities for innovation and the management of emerging risks. A well-designed policy environment can support trust in the financial system, foster competition, and enable market entry and scaling of new digital banking players. At the same time, inappropriate or incomplete frameworks can constrain innovation, create uncertainty, or expose consumers and the broader financial system to new vulnerabilities.

The relationship between policy, regulation and digital banking development is inherently complex. On the one hand, enabling policies—such as national fintech strategies, innovation facilitators frameworks like regulatory sandboxes or innovation hubs, mechanisms for public-private collaboration and even direct public funding for innovation and development in the sector—can actively promote experimentation and lower barriers to entry for new providers. But on the other hand, regulatory frameworks must also define the perimeter within which digital banking activities operate, determining licensing requirements, permissible activities, and supervisory expectations. These frameworks shape how new technologies are adopted and how market participants interact, influencing the pace and direction of digital banking development across economies.

A key challenge for policymakers is to strike an appropriate balance between fostering innovation and safeguarding core policy objectives. Financial inclusion, innovation and competition, coupled with financial stability, integrity, consumer protection, and data privacy remain fundamental priorities, but the digital transformation of finance alters how associated risks emerge and propagate. New entrants, increasingly complex value chains, reliance on third-party technology providers, and the growing importance of data all introduce new dimensions to traditional financial risks. As a result, regulatory and supervisory approaches must evolve to remain proportionate and technologically neutral, ensuring a level playing field across incumbents and new entrants while maintaining resilience in the financial system.

In addition to sector-specific regulation, digital banking development also depends on broader foundational frameworks that underpin the digital economy. These include data protection and privacy laws, cybersecurity frameworks, anti-money laundering and counter-terrorism financing regimes, and consumer protection and market conduct rules. Together, these elements establish the trust and safeguards necessary for users and firms to engage with digital financial services. At the same time, overly restrictive or fragmented policies in these areas can limit innovation, inhibit data-driven business models, or create barriers to cross-sector collaboration.

Regulatory environments have evolved significantly recently, understanding the importance of fintech as a driver for financial inclusion and development. Globally, industry stakeholders' perceptions on the regulatory environment are mostly positive, with almost 70% of respondents in the latest report on the Future of Global Fintech²¹ viewing it as very supportive or supportive for fintech's ability to grow. Furthermore, as presented in this same study, *"62% of responding fintechs perceived the regulatory environment as adequate and appropriate for their activities (...). This trend was consistent across regions and verticals. However, there were notable disparities. Fintech respondents in MENA, APAC and Europe perceived their regulatory environment more positively than those in other regions (75%, 68% and 62%, respectively)."* Particularly, participants in the digital banking and savings sector have the lowest perception on the adequacy of regulatory environment 49% considering adequate and appropriate for their activities, while 33% view them as inadequate or even excessive and overly restrictive.²² This results indicates that there is still room for improvement for policymakers and regulators in finding the right balance of their regulatory frameworks to foster innovation and competition while safeguarding financial stability and market integrity.

Across APEC economies, the diversity of policy approaches reflects differing institutional settings, development priorities, and stages of digital transformation. There is no single model for enabling digital banking; rather, outcomes depend on how economies combine enabling policies, regulatory frameworks, and foundational safeguards. This section examines the evidence across APEC economies, focusing on key dimensions of the policy and regulatory environment to better understand how these factors support or constrain digital banking activity across the region.

²¹ World Economic Forum and Cambridge Centre for Alternative Finance, *The Future of Global Fintech: From Rapid Expansion to Sustainable Growth*, 2025.

²² World Economic Forum and Cambridge Centre for Alternative Finance, *The Future of Global Fintech: From Rapid Expansion to Sustainable Growth*, 2025.

This final pillar of the Enablers index includes the following components:

Enabling policies: this dimension reviews the existence, scope and specific characteristics of public policies oriented to promote and facilitate the development in the fintech sector in general and of digital banking in particular. Specifically, it considers national strategies to promote fintech, innovation facilitators like regulatory sandbox, fintech hubs or fintech offices, incubation or accelerator programs led or sponsored by the government, public funding frameworks and mechanisms, and cross-border collaboration agreements.

Regulations and supervision approach: this dimension reviews the specific legislation, regulatory frameworks and guidelines which apply to the fintech and digital banking sector. This considers both the existence of these instruments and their characteristics. For example, it covers the regulatory perimeters, regulatory and supervisory approach, licensing frameworks, agencies involved and coordination.

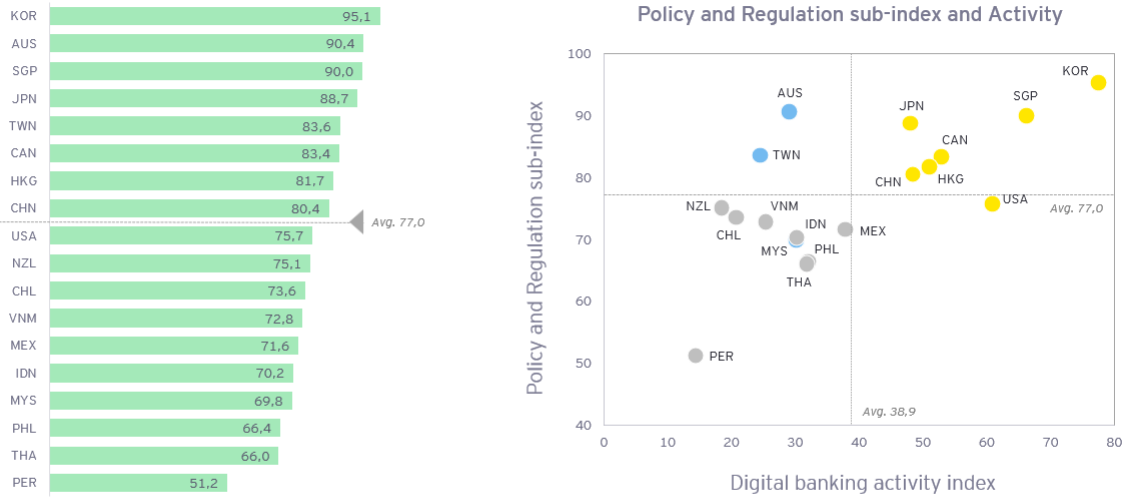
Foundational frameworks: this dimension reviews the existence and maturity of key policy frameworks and capabilities which are foundational to the digital economy and regulate all types of digital transactions including those relevant for digital banking. These include laws and provision on data privacy and protection, cybersecurity frameworks, AML/CFT and consumer protection and market conduct.

Assessing policies and regulations is complex; also, differences in government priorities and socioeconomic context between economies may influence policy preferences and their potential impact. The review of these dimensions is based on a qualitative assessment, mainly focused on the existence and key characteristics of specific instruments, and leveraging other reputable indexes whenever available. The scope of this study does not include a technical assessment of the different policies and frameworks; therefore, some relevant details could be under-represented. However, the general conclusions considering the objective of the Report should not be significantly affected.

Overall, scores in this dimension are relatively high across all APEC economies (Figure 3.8). Public policies to foster fintech and digital banking are prevalent. Although their scopes and approaches differ, regulatory and supervisory frameworks are converging, facilitating the operation of new digital-only business models and ensuring proportionality in regulatory requirements and supervision compliance.

Foundational frameworks have also evolved, however, as described later, there are still gaps, mainly in terms of the robustness of data protection frameworks, AML/CFT risk management and cybersecurity capabilities.

Figure 3.8 | Policy and Regulation Pillar sub-index



Source: Report's team analysis; index methodology and data sources can be found in Annex 1 - Methodology and Sources. Color codes for each economy based on groups defined by the combination of scores in the digital banking activity index and enablers' index (Figure 3.3).

Economies with the highest scores in this dimension are generally high-income economies, and particularly in the APAC region, with the Republic of Korea, Australia and Singapore at the top. Interestingly, other high-income economies like the United States, New Zealand and Chile, show below-average scores in this sub-index which could be explained by frameworks which are not specifically oriented or adapted for the digital banking sector development (compared with the approach in for example Republic of Korea, Singapore or Hong Kong, China), although these are not restrictive for digital banks.

The relation between the policy and regulation index and digital banking activity reveals a positive trend, although, as with all the previous enablers' pillars, this relation is not perfect. The results of these frameworks in terms of actual market activity remain mixed, which suggests that appropriate and supporting policies and regulatory frameworks are needed but are not enough to enable digital banking activity. Also, there is normally a time lag between implementing new policies and regulations until the market assimilates them, entrepreneurs, incumbents, tech companies and investors decide to move forward, and finally activity starts to increase.

Most economies in the Leaders group are also in the top quadrant in this dimension. Some special cases can be highlighted in this dimension. First, the United States ranks just out of the top quadrant, which indicates that even without having the most supporting policy and regulatory frameworks, digital banking activity is still vibrant. On the other hand, Australia and Chinese Taipei, with highly developed policy and regulations, these have not

enabled high digital banking activity levels, at least from new players independent of incumbent banks in these markets.

Within economies in the Emerging group, similar levels in policy and regulation development have produced slightly different levels in activity. This can potentially be explained by specific differences in the frameworks and time since their implementation.

Enabling Policies

Several APEC economies have implemented national strategies or roadmaps that focus specifically on the fintech sector or include fintech and digital banking as key drivers of an overarching modernization and transformation in the financial services industry. Leading examples of this approach are Australia, Hong Kong China, Japan, Singapore, and Chinese Taipei.

Other economies have implemented strategies focusing more broadly on digital transformation of the financial sector, promotion of digital financial inclusion and the growth of the digital economy. Examples of this approach are Bank Negara Malaysia's Financial Sector Blueprint 2022-2026, Bank Indonesia's Payment Systems Blueprint and Bank of Thailand's Financial Landscape for Digital and Sustainable Economy. Viet Nam has also recently introduced an ambitious plan to position the economy as a leader in fintech and the transformation of the banking industry.²³ Chile and Mexico have implemented legislation covering the fintech sector more broadly and including open banking and open finance frameworks.

Finally, economies in the Leaders group like the United States, Canada and the Republic of Korea, have not implemented specific fintech strategies, probably explained by the authority's decision for a market-driven approach and the already high development level of the sector.

In terms of innovation facilitators, most economies in APEC have implemented regulatory sandboxes to enable innovation in the sector within a controlled environment and with certain regulatory exemptions, although their scope differs in terms of the focus sectors or solutions. Some economies like Australia, Indonesia, Republic of Korea, Japan, Hong Kong China, Singapore and Chinese Taipei have also established fintech innovation hubs or fintech offices to support new ventures throughout the process. Additionally, in some economies the government have implemented or sponsors incubation or accelerator

²³ Some relevant initiatives taken recently in Viet Nam are the implementation of the Official Banking Strategy and the introduction of Directive 16/CT-TTG)

programs focused specifically on fintechs, for example, Cyberport in Hong Kong China, Seoul Fintech Lab in Korea or FSTI 3.0 in Singapore.²⁴

Another relevant enabling policy is the provision of direct public funding for new fintech companies. Most government-led funding in APEC economies is instrumented through cross-sector research and innovation grants, however there are some examples, like Singapore's Grants for Innovation offered by the Monetary Authority of Singapore focused specifically in the sector.²⁵ Another leading case is Hong Kong China, where the Hong Kong Monetary Authority sponsors venture funds through Cyberport.²⁶ Finally, other instruments used are tax incentives or exemptions for new innovative companies (e.g., Australia, Canada, Korea, Japan, Singapore), although these typically are cross-sectorial.

Finally, bilateral or multilateral cross-border collaboration agreements for fintech development are increasing. APEC economies in the ASEAN block, Australia and Hong Kong China have been more proactive with these types of agreements. APEC economies in the Americas have mostly developed regional collaboration agreements for fintech development, for example, the US-Mexico-Canada Agreement or agreements between the Pacific Alliance economies of Chile, Mexico and Peru. Finally, most economies in APEC are members in multilateral innovation platforms like for example, the Global Financial Innovation Network (GFIN) and Financial Stability Board (FSB).

Regulations and supervision approach

Regulatory frameworks across APEC economies are gradually converging to risk-based and technology-neutral approaches, which ensures proportionality in requirements and supervision compliance for digital banks, specifically for new players entering the market.

Digital banks are generally regulated and supervised by general banking laws, regulations and guidelines, although most of these have introduced specific provisions to consider particularities of digital-only providers. Examples of these provisions include differences in capital requirements or permitted shareholding structures, specific guidelines or requirements on cybersecurity, technology partners and outsourcing, third-party risk management, and customer service channels and processes (considering the digital-only nature of these providers).

²⁴ Cyberport (<https://www.cyberport.hk/en/>), Seoul Fintech Lab (<https://www.seoulz.com/>), FSTI 3.0 (https://www.mas.gov.sg/development/fintech/grants-for-innovation#_financial-sector-technology-and-innovation-sc)

²⁵ MAS, Grants for Innovation (<https://www.mas.gov.sg/development/fintech/grants-for-innovation>)

²⁶ Other economies have government-led venture funds, but these are cross-sectoral focusing on innovative technologies, for example the Cradle Seed Ventures in Malaysia, the SG Founder in Singapore or Startup Chile by Corfo in Chile.

Furthermore, regulators in most APEC economies have advanced foundational regulations and guidelines which apply for every type of regulated financial institution, but are key enablers for digital-only banks, like for example eKYC and electronic signature frameworks, domestic interoperability initiatives, open banking and open finance frameworks, and AI guidelines.

APEC economies, like Mexico and Chile, have taken a different approach, introducing an overarching FinTech law, combining specific regulations for different digital financial services and open finance frameworks into an integrated legislation.

The regulatory and supervisory governance models also present differences between APEC economies. In all economies digital-only banks are regulated by the same agencies as traditional banks, but some economies have concentrated these mandates in one or two agencies, which simplifies coordination and interaction with market participants. For example, Chile, Hong Kong China, Malaysia, Singapore, Thailand and Viet Nam have one central agency responsible for regulation and supervision. In almost all these economies, the role is performed by the Central Bank; Chile is an exception, where a specific financial market regulator (Comision para el Mercado Financiero) has the full mandate. In other economies like Australia, China, Indonesia, Japan, Republic of Korea, Mexico, New Zealand, Peru, Philippines and Chinese Taipei, the mandates are shared between the Central Banks and one or two supervisory agencies. On the other end, in the United States and Canada there are multiple responsible regulatory and supervisory agencies, which is linked with the federal governance structure in these economies, with both federal and state or province agencies with different mandates.

Spotlight: Licensing frameworks for digital bank

The rapid evolution in digital financial services in general and digital banking in particular requires fast and flexible licensing and authorization frameworks. Most regimes follow laws or regulations which bring new types of digital providers into the regulatory perimeter. However, APEC economies have implemented different approaches in terms of how to include digital-only banking providers in their licensing frameworks.

Some economies have implemented specific licensing frameworks for new digital-only banks or phased authorization approaches (applicable to any type of new bank), while other economies have not created a separate license category for digital banks and do not offer a phased approach, so new digital banks have to apply for a full banking license. Additionally, most economies have introduced and adapted specific licensing frameworks and regulations for e-money or stored-value facility providers, considering the increased use of this type of business model by new digital-only players.

Only 8 economies in APEC have specific licenses for digital-only banks (or internet-only banks), all are in Asia (Figure 3.9). China, the Republic of Korea and Malaysia have been

frontrunners in the introduction of these frameworks with the first digital-only bank licenses granted during 2014-2016. Hong Kong China, Singapore and Chinese Taipei followed this approach, granted their initial licenses in the 2019-2020 period. More recently, the Philippines and Thailand introduced their digital-only banking license frameworks.²⁷ Viet Nam represents a special case, where digital-only banks can only operate in partnership with a traditional bank with a full banking license (similar to a BaaS business model).

Figure 3.9 | Licensing frameworks

Economies (by Activity Index position)	Digital-only Bank license	Phased / Modular approach	SVF / e-money license	Other license
Rep. of Korea	■	■	■	
Singapore	■	■	■	
United States			■	□
Canada			■	
Hong Kong, China	■		■	
China	■		■	
Japan			■	
Mexico			■	□
The Philippines	■		■	
Thailand	■	■	■	
Indonesia			■	
Malaysia	■	■	■	
Australia		■	■	□
Viet Nam	□		■	
Chinese Taipei	■	■	■	
Chile			■	
New Zealand				
Peru		■	■	□

Source: Report's team analysis, based on public information from Central Banks and other Financial authorities in each APEC economy responsible for banking and financial institutions licensing and registration.

In all other economies in APEC digital-only banks must get a standard banking license with the regulator. Considering that some of the economies in the Leaders group in terms of activity like the United States, Japan and Canada apply this approach, the existence of digital-only banking licenses does not seem to be a defining condition for activity to grow. Even within the economies in the Emerging group, Mexico has relatively higher activity levels without having implemented a special licensing framework for this type of providers,

²⁷ Thailand introduced its virtual-bank license framework in 2025 and already granted the first three licenses, although these banks have not yet started operations (expected to do it in 2026).

and Indonesia has the second most digital-only banks in APEC without a specific licensing framework for digital-only banks. In most cases, the main argument for not implementing specific licenses is that traditional banks and digital banks are allowed to offer a similar range of products and services, they pose similar risks and so should be regulated the same way.

Another relevant instrument which is being increasingly used is a phased or modular authorization approach, which considers an initial stage (with a specified timeframe) for new providers with simplified regulatory requirements and restrictions on products or activity levels, before transitioning to a full license. Australia represents a leading case with its structured licensing pathway for banks (traditional or digital-only). The Republic of Korea, Singapore and Chinese Taipei, the Philippines and Thailand also apply this type of framework for new providers.

Furthermore, in some APEC economies digital banks can operate under other non-banking types of licenses which enable them to take deposits and operate banking services like for example in Mexico (Sofipo licenses), or State licenses in the United States. United States also stands out with a high adoption of BaaS models, which do not require a specific banking license for the fintech player since it essentially distributes financial products from other licensed banks.

Finally, all economies in APEC have instrumented specific licenses or registration requirements for Stored-Value Facilities or e-Money providers. Recently some regulators have started to review and adapt these frameworks considering the increasing adoption (most of neobanks operate under this category) and therefore higher risks for customers (e.g., solvency, liquidity, cybersecurity) and market stability. Most of these licenses are within the Payments system frameworks, but regulators are starting to consider including these business models within the regulatory perimeter of banking supervision.

The evidence from APEC economies suggests that the creation of a new licensing category for digital-only banking providers can be helpful but may not be necessary or sufficient to enable activity to grow. Furthermore, specific licensing framework for digital-only players could create uneven playing field issues and opportunities for regulatory arbitrage.²⁸ The innovative application of technology is not limited to digital banks, and it may not be a sufficient reason for creating a new licensing category. The regulatory approach towards digital banks should consider that traditional banks are also digitizing their operations and that the distinction between both types of banks will rapidly fade away over time. Therefore, the implementation or not of this type of framework should depend on specific local policy objectives and market context.

²⁸ CGAP, Digital Banks: How can they be regulated to deepen financial inclusion, 2021.

Foundational frameworks

Finally, some differences persist in the maturity levels of foundational safeguards, including data protection, cybersecurity, AML/CFT, and consumer protection. These elements are essential not only for stability and trust, but also for enabling responsible innovation.

Personal data protection legislation recognizes the need to safeguard personal data from misuse while allowing organizations to collect, access, and store the data for legitimate and reasonable purposes. Effective data protection frameworks can foster consumer trust, promote data sharing and innovation, and strengthen an economy's position as a trusted data hub for businesses.

All APEC economies have introduced legislation protecting personal data rights. Furthermore, some have world-class data privacy regimes, compliant with the European Union's (EU) General Data Protection Regulation (GDPR), allowing for personal data to flow between these jurisdictions, or introducing amendments influenced by GDPR. Economies such as Australia, China, Canada, Republic of Korea, Japan, Singapore and the United States have highly robust frameworks. Furthermore, while with almost all other economies in APEC also have robust frameworks.²⁹ From the point of view business personal data protection of specific business (as measured by the WEF Executive Officers Survey), Japan, New Zealand, Singapore and the United States lead with the highest scores, while the gaps with economies in the Emerging group are more significant.

Robust cybercrime and cybersecurity frameworks and capabilities are critical for safeguarding users and providers in the digital economy. These provide clarity on data security procedures, protect critical information infrastructures, define what constitutes illicit activity in cyberspace, and stipulate legal processes to enforce and investigate online crime, abuse, and other illegal actions.³⁰

Overall cybersecurity capabilities have improved across APEC, with almost all economies measuring well above the global average in the last available ITU Cybersecurity Index.³¹ While cybersecurity legislation has evolved there are still gaps in several key dimensions related to capability implementation. The largest differences can be observed in technical capabilities, capacity development and cooperation efforts. Organizations capabilities, including national strategies, implementation and governance frameworks have improved but there is still work to be done in some APEC economies. However, even economies with the largest gaps in cybersecurity capabilities (e.g., Brunei Darussalam, Chile, Mexico,

²⁹ DLA Piper, Data Protection Laws of the World (<https://www.dlapiperdataprotection.com/>)

³⁰ APEC, Fintech Scoping Study 2023.

³¹ ITU, Global Cybersecurity Index 5th Edition, 2024.

Papua New Guinea and Peru) present reasonable maturity levels demonstrating progress in this dimension.

In terms of **AML/CFT frameworks**, maturity levels vary across APEC, but most economies have achieved above global average levels. New Zealand leads in this dimension based on the Basel AML Index³² with a score in the 10th decile, reflecting the lowest risks for money laundering and related financial crimes. Australia, Brunei Darussalam and Chile, follow with scores in the 9th decile.

In contrast to other dimensions analyzed in the enabler index, in this case there is no clear relation between level of income per capita and AML/CFT risk level nor with the overall enablers' index score or digital banking activity score. Some economies in the Leaders group present average scores in this dimension, while other economies in the Emerging group show higher scores. This suggests that even in developed economies, with high levels of digital banking activity, AML/CFT risk still presents challenges for regulators. On the other hand, higher risks in this dimension do not restrict digital banking activity levels. However, this does not imply that frameworks are not important, on the contrary, strong AML/CFT frameworks are essential to manage risks and to enable the sustainable growth of digital banking. Their effectiveness depends on achieving the right balance between a sufficiently robust framework to preserve integrity and trust, yet sufficiently flexible to support inclusion, innovation, and new digital business models. In practice, economies that adopt risk-based, proportionate, and technology-enabled AML/CFT approaches tend to create more supportive environments for digital banking development.

Finally, a well-functioning financial system depends on a high degree of consumer trust. Unfair practices—such as misleading advertising, opaque pricing, or non-compliance with regulatory standards—can undermine confidence and limit the adoption of financial services. In digital banking, where interactions are remote and products may be complex, these risks can be less visible, making robust financial consumer protection and market conduct frameworks particularly important.

Such frameworks are therefore essential enablers of digital banking. By ensuring transparency, fair treatment, effective complaint and redress mechanisms, and secure handling of personal data, they help build user confidence and support adoption, especially among first-time and underserved customers. At the same time, clear market conduct rules promote fair competition and a level playing field across providers, reducing the risk of abusive practices and supporting the development of competitive and sustainable digital banking ecosystems.

³² Basel AML Index, 2025. This Index measures the risk of money laundering and related financial crimes in countries and jurisdictions around the world. It uses a composite methodology, with 17 indicators in five domains in line with key factors considered to contribute to a high risk. (<https://index.baselgovernance.org/>)

Finally, **consumer protection and market conduct frameworks** across APEC economies show relatively high maturity levels. Financial consumer protection is generally instrumented through cross-sector national laws and regulations (e.g., Chile's Consumer Protection Law (Law No. 19,496)) or specific regulations integrated into acts governing financial services (e.g., Japan's Payment Services Act (Act No. 59 of 2009), the Banking Act (Act No. 59 of 1981)). Furthermore, most economies have also introduced standalone policies and laws targeted specifically at financial consumer protection. For example, Chinese Taipei, Republic of Korea and the Philippines have adopted this approach which offers the authorities direct oversight to revise or expand the existing scope of regulations in response to the rapid growth of financial products and services offerings.

Also, all economies have some kind of deposit insurance framework which covers deposits held in licensed banks or other deposit taking financial institutions. Most of these are instrumented by an insurance claims scheme managed by an independent institution. Some economies have a different model, like Chile where the Central Bank provides the deposits guarantee or Perú where the financial institution supervisor manages a Deposit Insurance Fund.

The authority in charge of financial consumer protection differs across APEC economies. The responsibility is generally part of the central banks or consumer financial authority mandates, like for example in Singapore and Hong Kong China. Nevertheless, some economies have appointed a specific authority or agency to supervise consumer protection for financial services (e.g., Australia, Canada, Indonesia, Mexico, Thailand, United States) may be better equipped to respond to the innovation and challenges of digital financial services.

As part of the consumer protection framework, most economies have specific programs or reference guides to support customer's financial literacy (and digital financial literacy) development. Programs like Smart Consumers from the Hong Kong Monetary Authority or the dedicated mandates of the Consumer Financial Protection Bureau in the United States and the Financial Consumer Agency of Canada.

The evidence from APEC economies suggest that policies and regulatory frameworks are a critical enabler of digital banking, particularly in shaping the conditions for entry, innovation, and trust in the financial system. Economies that combine clear regulatory perimeters, proportionate and technology-neutral approaches, and active enabling policies to promote the sector tend to create more supportive environments for digital banking development. At the same time, the findings highlight that regulatory design alone does not determine outcomes. Similar levels of policy maturity can lead to very different levels of digital banking activity, reflecting the importance of broader ecosystem factors and market dynamics.

Overall, the results suggest that the effectiveness of policy frameworks depends not only on their existence, but on how they are implemented, coordinated, and adapted over time. The presence of time lags between regulatory changes and market responses, as well as persistent gaps in foundational safeguards, underline the need for continuous evolution in regulatory approaches. As digital banking ecosystems mature, policymakers will need to balance increasingly complex trade-offs between innovation, competition, and stability, reinforcing the importance of flexible, forward-looking and context-specific policy frameworks to unlock the full potential of digital banking across APEC economies.

Key messages

The analysis across APEC economies highlights a clear but nuanced pattern: higher levels of digital banking activity are generally associated with more developed enabling conditions, yet the relationship is neither linear nor deterministic. Economies in the Leaders group by digital banking activity levels tend to exhibit strong alignment between enablers maturity and activity, suggesting that sustained and coherent progress across the multiple dimensions reviewed creates a conducive environment for digital banking to emerge and scale. However, the presence of notable exceptions—both among high-income economies with relatively lower activity levels and among emerging economies with strong performance—demonstrates that no single factor can fully explain digital banking outcomes. Instead, digital banking development reflects the interaction between structural conditions, market dynamics, and policy choices.

Each enabler factor plays a differentiated role to support digital banking development. For example, digital readiness has advanced significantly across APEC economies which provides the foundational infrastructure required for digital banking, but its impact materializes gradually and depends on complementary factors. Innovation and startup ecosystems maturity show the greatest divergence between economies and are critical in determining the supply of new digital banking models and the capacity for experimentation and scaling. Financial market development presents a dual dynamic: while more mature systems offer stronger infrastructure and trust, they may also limit entry by reinforcing incumbent advantages, whereas less developed markets can create stronger demand for alternative digital solutions. Finally, policy and regulatory frameworks have evolved and converged substantially across the region, but their effectiveness in each market depends local socioeconomic conditions, overall policy objectives and on how well they balance innovation with stability, and on how quickly markets respond to these reforms.

Across these dimensions, a consistent gap persists between economies in the Leaders group and those that are still emerging, particularly in areas related to innovation capacity,

startup ecosystem maturity and institutional quality. While digital connectivity and core infrastructure have broadly converged, differences in business environment conditions, access to capital, and regulatory effectiveness continue to shape investment decisions and the ability of digital banking providers to scale. At the same time, the increasing adoption of digital payments and the expansion of digital public infrastructures are helping to narrow these gaps, creating opportunities for further convergence in the medium term.

Progress in one dimension can partially compensate for gaps in others, but only up to a point. Economies with large market size or dynamic fintech ecosystems may achieve relatively high activity levels overcoming structural constraints, while others with advanced infrastructure and strong policy frameworks may experience slower development due to market structure or competitive dynamics. This reinforces the idea that digital banking ecosystems evolve through a combination of reinforcing and offsetting forces, rather than through a linear progression of capabilities.

Enabling digital banking growth requires coordinated progress across multiple dimensions. Strengthening digital infrastructure, fostering innovation ecosystems, deepening financial markets, and ensuring effective and adaptive regulatory frameworks are all necessary components of a coherent strategy. Importantly, these elements must evolve together and be tailored to local contexts and policy objectives. There is no single reform or policy lever that can, on its own, unlock digital banking activity.

Building on these insights, the next chapter turns to the policy implications of these findings. It explores how APEC economies can design integrated and forward-looking strategies to strengthen enabling conditions, address persistent gaps, and support the sustainable and inclusive growth of digital banking across the region.

4. The Way Forward

The analysis presented throughout this report highlights the growing relevance of digital banking as a driver of financial inclusion, innovation, and efficiency in financial systems across APEC economies. As emphasized in the APEC Economic Policy Report 2024, financial inclusion remains a key pillar for sustained economic growth and development, and digital financial services have emerged as a powerful driver to expand access and improve the quality of financial service delivery. Building on these insights, digital banking offers important opportunities to reach underserved populations, reduce transaction costs, and enhance competition, ultimately supporting more inclusive and resilient economies.

At the same time, the findings of this study underscore that digital banking development is shaped by a complex interplay of enabling factors, including digital infrastructure, innovation capacity, financial system structure and development, and the policy and regulatory environment. While progress has been significant across APEC economies, important gaps remain—particularly in reaching population segments with untapped potential and ensuring that digital financial services are used effectively and responsibly. Moreover, the expansion of digital banking introduces new challenges, including managing risks related to financial stability, consumer protection, data privacy, and market concentration, which require careful and proactive policy responses.

This concluding chapter outlines a set of policy considerations for APEC economies seeking to foster the development of digital banking. These are not intended as prescriptive recommendations or one-size-fits-all roadmaps. Rather, they aim to provide a structured framework to inform policy dialogue and support decision-making, recognizing that the relevance, sequencing, and effectiveness of policy actions will depend on each economy's specific context, including its stage of financial and digital development, institutional capacity, market structure, and broader policy priorities.

Indeed, different economies may pursue distinct pathways as they advance along the digital banking development trajectory. Some may focus on strengthening foundational infrastructure and inclusion, while others may prioritize fostering innovation, competition, or the scaling of existing ecosystems. Similarly, societal preferences regarding market structure, data governance, and the role of public versus private actors will influence policy choices and tradeoffs. As digital banking ecosystems evolve, authorities will need to remain adaptable and intentional in shaping outcomes that balance efficiency, inclusion, and stability.

In this context, the policy considerations presented in this chapter draw on the evidence from across APEC economies and aim to highlight practical areas where coordinated action can help strengthen enabling conditions for digital banking. By identifying common

challenges and emerging good practices, the chapter seeks to support economies in designing context-specific strategies that harness the benefits of digital financial services while managing associated risks, contributing to sustainable and inclusive development across APEC.

Foster supportive and context-driven policy frameworks that balance innovation and entrepreneurship while managing the risks inherent in digital banking activities.

This means ensuring proper safeguards are in place to maintain fair competition, financial stability, (efficiency, and inclusion), ensure data and consumer protection, concentration and potential abuse of market power, and minimize cybersecurity risks. Also ensure the applicable approach is proportional to the risks inherent in the digital banking business model and technology neutral to maintain a level playing field and not impose significant compliance costs on industry participants which could disincentivize market entry and investment.

Finally, authorities need to regularly evaluate the appropriateness of the supervisory frameworks to account for the digital transformation of the financial sector, considering the evolving policy tradeoffs as digital banking adoption increases.

Have a guiding policy that sets clear goals and expected outcomes for digital banking development.

Articulate a guiding policy for digital banking development. This can be instrumented through a broad-based fintech strategy or focused specifically on digital banking (e.g., HKMA Fintech 2025 and the follow-up Fintech 2030); it can also be part of an overarching financial industry transformation roadmap (e.g., Bank Negara Malaysia's Financial Sector Blueprint or Viet Nam's Banking transformation strategy) a

Economies benefit from setting clear objectives and expected outcomes, and from aligning public investment with those goals. Investing in public—or publicly sponsored—capabilities to support innovation, and establishing structured channels of communication between fintechs, incumbents and regulators, can significantly accelerate progress, particularly in emerging markets.

Ensure competition and contestability in the market.

Ensuring competition and contestability in the market is another central element. This requires proactively monitoring market structure trends, expanding access to critical financial infrastructure and data, and promoting interoperability.

Markets can rapidly trend towards concentration due to economies of scale and network effects in data leveraged by digital banking players and BigTech companies operating in the financial market. Authorities need to monitor market conduct to ensure that markets remain contestable, while continuing to dynamically balance tradeoffs between competition, concentration, efficiency, data protection, and inclusion. Open and fair access to payment systems and data platforms helps create a level playing field for new entrants and reduces the risk of excessive concentration driven by scale and network effects.

Expand access to critical financial infrastructure and data to enable competition and contestability.

Analyze broadening access to fast-payments systems and data exchange platforms for new digital players (independent of licensing status), this can level the playing field and foster innovation in the market, always with clear guidelines and compliance standards, and ensuring interoperability and open access.

Promote open banking, open finance and data ownership frameworks to evolve in alignment with digital public infrastructures. Whether through regulation and guidelines or guidance in a market-driven context, these frameworks and corresponding infrastructure enable innovation, competition, efficiency and better customer experiences.

Continue focusing on the development of the digital payments ecosystem and enable interoperability.

Digital payments have proven to be a key driver for digital banking development and adoption. Update national infrastructures as needed, guide and monitor the introduction of new fintech services ensuring interoperability (public infrastructure or standards, guidelines for market-driven solutions), risk management and compliance.

Strengthen financial and digital literacy to support adoption and responsible use of digital banking.

Expanding access to digital financial services must be complemented by efforts to ensure that individuals and businesses can use these services effectively and safely. Gaps in financial and digital literacy can limit adoption, reduce trust, and increase exposure to risks such as fraud, over-indebtedness, or misuse of financial products.

APEC economies could prioritize initiatives to build both financial capability and digital skills, including integrating financial and digital education into formal curricula, designing targeted programs for underserved and vulnerable groups, and promoting partnerships between public authorities, financial institutions, and civil society. Strengthening literacy

helps ensure that expanded access translates into meaningful usage, reinforces consumer protection outcomes, and supports the sustainable development of digital banking ecosystems.

Ensure the foundations are in place and capabilities are fit for purpose.

It is essential to ensure that the foundations are in place and fit-for-purpose. Continued development of digital infrastructure, combined with investment in digital and financial literacy, supports broad and effective adoption. Strong and proportionate frameworks for data protection, cybersecurity, AML/CFT and consumer protection are non-negotiable, both to safeguard users and to build trust in digital banking models.

Invest strategically in the development of the local innovation and startup ecosystem.

As shown in the report, being able to leverage mature innovation capabilities and having access to a dynamic startup ecosystem make a significant difference for new players venturing into the digital banking space. Authorities could explore a combination of initiatives to develop their innovation ecosystems, for example: introducing incentives for investors (e.g., taxes), foster the development of the local capital markets to facilitate exits, pursue public-private partnerships to develop the enabling infrastructure and capabilities to support innovation and startups (e.g., innovation hubs, incubation and acceleration programs), talent development for high-demand skills, and instrumenting cross-border collaborations to develop the fintech or digital banking sector.

Assess and adapt regulations to facilitate market entry in the digital banking sector.

The analysis in this report also highlights the importance of assessing and adapting regulations to facilitate market entry for new players adopting emerging digital business models and whether regulations may pose obstacles against incumbents becoming digital or for providers serving the unbanked/underbanked. This includes the use of licensing frameworks that allow staged pathways for new entrants (specifically for digital-only banks or for full-banks) with clear conditions and requirements, for example, activity restrictions or a modular approach (e.g., phased introduction of new products and services, business segments), capital requirements, operational and risk management capabilities.

Ensure proportionate requirements for new digital players, while avoiding regulatory choices that could create competitive imbalances between digital-only and traditional banks. Furthermore, explore alternative approaches to facilitate market-entry for foreign digital banking players with proven capabilities and capital support, this can accelerate market development and introduce healthy competition in the market with controlled risks.

Review regulatory framework for e-money issuers to ensure it is fit-for-purpose. Given the growth and adoption trends of e-money and digital wallet solution across APEC economies, regulators need to ensure appropriate safeguards for customer funds, liquidity risk management, AML/CFP controls and market conduct. Also, explore alternative pathways for these companies to become licensed banks.

Also, authorities should analyze the need to expand the regulatory perimeter to monitor and supervise effectively. Innovative business modes based on the integration between different companies (e.g., platforms and ecosystem), relevance of BigTech players, and strategic reliance on technology partners, could require expanding the perimeter to include non-FS institutions, and more integration between supervisors.

Finally, there is a growing need to develop guidelines on responsible use of AI since the application of artificial intelligence (AI) techniques has been shown to pose consumer protection risks and biases and digital banking players, and BigTechs providing digital financial services, are increasingly implementing these models to leverage their business models.

Accelerate regulatory and supervisory capability development.

Economies need to accelerate the development of regulatory and supervisory capabilities, adopting evidence-driven policymaking, complemented by robust data and monitoring systems (RegTech and SupTech). This involves investing in digital skills for supervisory teams and strengthening collaboration across regulatory agencies. This will be critical to unlock the full potential of digital banking for inclusive and sustainable economic growth.

Pursue strong cross-border coordination and sharing of information and best practices.

The cross-border nature of digital financial services makes regional coordination and the sharing of information and best practices increasingly important. As fintech providers can serve customers across jurisdictions without necessarily being regulated locally, cooperation across APEC economies is essential to safeguard financial systems and protect consumers.

Annex 1 - Methodology and Sources

This Report is center around the analysis of two original indexes related to digital banking activity in APEC economies. The first focuses on digital banking activity levels in each economy and the second focuses on the existence and maturity of key enablers to foster digital banking growth and development. To ensure comparability, both indexes only include APEC economies with available information from confirmed sources to calculate every indicator in each index.

As described in the Report, each of these indexes is structured in pillars representing key dimensions relevant to digital banking activity or its enablers. Furthermore, each pillar is composed of specific indicators to measure different factors in each dimension. These indicators are sourced directly from reputable and representative sources or constructed using base data from trusted sources. Most of the indicators are based on quantitative data, however, due to limitations on available information or complexity of the measured dimension, some indicators are based on qualitative assessments based on multiple relevant factors. In the few cases where primary data was not available for an economy on a specific indicator, the value was calculated based on comparable economies and complemented with secondary reference data on the topic.

When necessary, the indicators or pillars scores are normalized using a standard Min-Max approach to facilitate aggregation between indicators and pillars. Outlier values on any indicator are adjusted through normalization using the 95th percentile as Max value.

Aggregations to generate pillar scores and the overall index score are calculated applying simple averages. No specific ponderations are applied between indicators or pillars following the same approach as most academic and industry reports on the subject.

Digital Banking Activity Index

The index is composed of three pillars that are aggregated using a simple average to generate the overall index score. The table below details the indicators and data sources for the indicators in each pillar and, when applicable, the transformation applied to normalize the results.

Pillar / Indicator	Data sources	Year	Input transform.
A. Digital Banking Activity Index			Average
A.1 Supply of Digital Banking Services			Min-Max normaliz.
Number of licensed digital-only banks in the economy (per 100.000 adults)	<ul style="list-style-type: none"> Local official registries of licensed Financial Institutions 	2025	Min-Max normaliz.

Top 5 licensed digital-only banks market share - Total assets	<ul style="list-style-type: none"> • S&P Capital IQ • Companies' financial statements • Official banking statistics (Central Banks or Financial Market authority) • UN DESA World Population Prospects: 2024 Revision 	2025	Min-Max normaliz.
Top 5 licensed digital-only banks market share - loans			Min-Max normaliz.
Top 5 licensed digital-only banks market share - deposits			Min-Max normaliz.
A.2 Funding for fintechs in the digital banking sector			Min-Max normaliz.
Total value of venture funding for digital banking companies per economy in US dollars (2021-25) as % GDP (US\$ current prices)	<ul style="list-style-type: none"> • Crunchbase (equity, debt, grant funding rounds) • IMF World Economic Outlook database 2025 	2025	Min-Max normaliz.
Total value of venture funding for digital banking companies per economy in US dollars (2021-25) as % total value in APEC	<ul style="list-style-type: none"> • Crunchbase (equity, debt, grant funding rounds) 	2025	Min-Max normaliz.
# of digital banking companies that received funding in each economy (2021-25) as % total companies funded in APEC	<ul style="list-style-type: none"> • Crunchbase (equity, debt, grant funding rounds) 	2025	Min-Max normaliz.
A.3 Digital Payments			Min-Max normaliz.
% of adults in the economy that made or received a digital payment during the year	<ul style="list-style-type: none"> • World Bank Global Findex database 2025 	2025	Direct
Total value of A2A real-time transactions in the economy as % GDP	<ul style="list-style-type: none"> • Official payment statistics (Central Banks, Financial Market authority, Payment's system providers) • IMF World Economic Outlook database 2025 	2025	Min-Max normaliz.
Total value of digital transaction in e-commerce and in-store (POS) as % of total value with all payment instruments	<ul style="list-style-type: none"> • Worldpay, Global Payments Report 2025 	2025	Direct

Digital Banking Enablers' Index

The index is composed of four pillars that are aggregated using a simple average to generate the overall index score. The table below details the indicators and data sources for the indicators in each pillar and, when applicable, the transformation applied to normalize the results.

Pillar / Indicator	Data sources	Year	Transformation
B. Digital Banking Enablers' Index			Average
B.1 Digital Readiness			Average
Digital Connectivity			Min-Max normaliz.
ITU - ICT Development Index (IDI) score 2025	<ul style="list-style-type: none"> ITU ICT Development Index (IDI) database 	2025	Direct
IDCA - Digital Readiness Index score 2025	<ul style="list-style-type: none"> IDCA Global Digital Economy Report 2025 	2025	Direct
Digital Public Infrastructure maturity index			Average
Digital ID	<ul style="list-style-type: none"> UCL IIPP DPI Map Digital Identity Index (Folio Initiative) 	2025	Average + Min-Max normaliz.
Real-Time Payments	<ul style="list-style-type: none"> UCL IIPP DPI Map WB Project FASTT Official data from local regulators & operators 	2025	Min-Max normaliz.
Consent-Based Data Sharing	<ul style="list-style-type: none"> UCL IIPP DPI Map Official data from local regulators & operators 	2025	Min-Max normaliz.
B.2 Innovation & Startup Ecosystem			Average
Innovation capabilities			Min-Max normaliz.
Global Innovation Index Score 2025	<ul style="list-style-type: none"> WIPO - Global Innovation Index 	2025	Direct
Most Innovative Countries in the world Index 2025 Score	<ul style="list-style-type: none"> CEOWorld Most Innovative Countries in the world Index 	2025	Direct
Innovators Business Environment Index 2025 Score	<ul style="list-style-type: none"> StartupBlink - Innovators Business Environment Index 	2025	Direct
Startup Ecosystem maturity			Min-Max normaliz.
Global Startup Ecosystem Index 2025 Score	<ul style="list-style-type: none"> StartupBlink - Global Startup Ecosystem Index 	2025	Min-Max normaliz.

World's Most Startup-Friendly Countries 2024 Score	• CEOWorl World's Most Startup-Friendly Countries	2024	Direct
World's Most Entrepreneurial Countries 2024 Score	• CEOWorld World's Most Entrepreneurial Countries	2024	Direct
B.3 Financial Services Market Development			Average
Banking			Average
% adults with an account at a bank or similar financial institution	• World Bank Global Findex database 2025	2025	Direct
% individuals who accessed online banking services in last 12 months	• DEN 2025 survey	2025	Direct
Outstanding loans balance at commercial banks as % of GDP (local currency, current prices)	• IMF Financial Access Survey database 2025 • IMF World Economic Outlook database 2025	2025	Min-Max normaliz.
Outstanding deposits balance at commercial banks as % of GDP (local currency, current prices)	• IMF Financial Access Survey database 2025 • IMF World Economic Outlook database 2025	2025	Min-Max normaliz.
Average concentration in banking industry (top 3 banks in assets and deposits)	• Official banking statistics (Central Banks or Financial Market authority) • S&P Capital IQ	2025	Direct + Inverse
Payments			Average
% adults with a debit card	• World Bank Global Findex database 2025	2025	Direct
Total value of A2A real-time transactions in the economy as % GDP	• Official payment statistics (Central Banks, Financial Market authority, Payment's system providers) • IMF World Economic Outlook database 2025	2025	Min-Max normaliz.
% of adults in the economy that made or received a digital payment during the year	• World Bank Global Findex database 2025	2025	Direct
Total value of non-cash transaction in e-commerce and in-store (POS) as % of total value with all payment instruments	• Worldpay, Global Payments Report 2025	2025	Direct
Total value of digital transaction in e-commerce and in-store (POS) as % of total value with all payment instruments	• Worldpay, Global Payments Report 2025	2025	Direct

Open Banking / Open Finance index (composite)			Min-Max normaliz.
Live data types (out of 6)	<ul style="list-style-type: none"> • CCAF - Global State of Open Banking and Open Finance • CCAF - APAC State of Open Banking and Open Finance 	2025	Direct
Allowed functions (AISP, PISP)			
# API aggregators	<ul style="list-style-type: none"> • Open Banking Tracker 	2025	Direct
OB/OF maturity	<ul style="list-style-type: none"> • Qwist Open Banking worldwide 2025 Edition • Twimbit Global State of Open Finance 2025 	2025	Direct
B.4 Policy and Regulation			Average
Policy enablers (composite)			Min-Max normaliz.
. Existence of national fintech strategy	<ul style="list-style-type: none"> • Official data from government agencies and regulators • APEC Economic Policy Report 2024 • APEC Fintech Scoping Study 2023 • Global Financial Innovation Network (GFIN) 	2025	0 - 1
. Existence of innovation facilitators			0 - 3
. Public funding facilities for fintech			0 - 1
. Cross-border collaboration agreements			0 - 1
Regulation and Supervision (composite)			Min-Max normaliz.
Overall regulatory framework	<ul style="list-style-type: none"> • Official data from government agencies and regulators • APEC Economic Policy Report 2024 • APEC Fintech Scoping Study 2023 	2025	0 - 100
Licensing framework			0 - 3
Open banking / open finance regulation (passed, live)	<ul style="list-style-type: none"> • Official data from government agencies and regulators • CCAF - Global State of Open Banking and Open Finance • CCAF - APAC State of Open Banking and Open Finance 	2025	0 - 4
Foundational frameworks (composite)			Min-Max normaliz.
Data Protection framework	<ul style="list-style-type: none"> • UNCTAD Data Protection and Privacy Legislation Worldwide 2025 • Data Protection Laws of the World Score 2025 • WEF EOS - Business Personal Data Protection 	2025	Average
Cybersecurity capabilities	<ul style="list-style-type: none"> • ITU Global Cybersecurity Index 2024 	2025	Direct
AML/CFT risk	<ul style="list-style-type: none"> • Basel AML Index 2025 	2025	Direct (inverse)
Consumer Protection framework	<ul style="list-style-type: none"> • UNCTAD World Consumer Protection Map • Official data from government agencies and regulators 	2025	Average

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