WORKING PAPER

BANKING IN LAYERS

Five cases to illustrate how the market structure for financial services is evolving

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INTRODUCTION

FOR NEARLY 15 YEARS THE FINANCIAL INCLUSION SPACE HAS RIDDEN an initial wave of digital innovation, centered primarily on the increasing availability of basic mobile phones and the emergence of viable business models for mobile network operators (MNOs) to offer basic payments accounts. The resulting digital financial services (DFS) industry has spawned over 1.35 billion new financial accounts in developing countries and now facilitates more than a quarter of a trillion US dollars-worth of transactions annually (Awanis, et. al 2022)

Today, a powerful new wave of digital innovation is gathering on the horizon. Various advanced technologies—including smartphones, mobile data, cloud computing, APIs, microservice architectures, machine learning, and other types of artificial intelligence—are rapidly becoming ubiquitous and enabling the emergence of significant new business models, including Platform as a Service (PaaS) models.

There will be many implications of this wave, which is still in its early phases, and signs are just emerging that indicate the potential future developments. One of the most profound may be a shift toward a more modular financial sector, which CGAP has already written about.[1] Evidence of this shift can be seen in the unbundling and rebundling of financial products and services as well as their embedding into non-financial contexts as more non-financial businesses harness large customer bases and superior user experience to venture into the financial space. As CGAP has argued, there is good reason to be hopeful that this "modularization" could help expand financial inclusion while also profoundly altering the financial industry in ways that make it both more competitive and more efficient.

So, what does this unbundling and rebundling mean in practice? Simply put, modularization is the uncoupling of financial products and processes that used to exist only in rigid and monolithic constellations into a broad variety of stand-alone modules that can be flexibly plugged in, swapped, and reorganized in a wide range of ways.

On the **product** side, this means that clients who were once largely relegated to choosing from the menu offered by their main bank can now easily find and use a wide array of solutions from different providers that each specialize in, providing solutions for specific financial or financially

1 For further information, see https://www.cgap.org/research/slide-deck/great-unbundling-how-technology-making-financial-services-modular

intermediated non-financial needs. Obvious examples include fintechs offering various payments solutions, global remittances, on-tap insurance, point-of-sale financing, short-term liquidity supply, and buy-now-pay-later for online purchases. This lets customers assemble their own customized portfolio of financial tools and products that best meets their particular needs and preferences, expanding choice and improving product fit–particularly for more marginal customer segments.

On the **process** side, it means that banks and other financial service providers (FSPs) who used to build and run every aspect of their operations in-house can now choose among a rapidly growing set of third party fintechs who specialize in creating solutions for specific financial processes at a lower cost, higher speed, and/or better quality. Obvious examples include credit scoring, chatbots, biometric identification, and customer analytics. This lets FSPs flexibly integrate sophisticated best-in-class solutions for specific back-end processes into their offering without building them themselves and without committing upfront to a large multi-year contract to a single vendor.

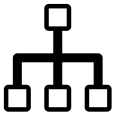
At a **market** level, this is resulting in an unbundling of the main functional layers that play distinct roles in the provision of retail financial services: the regulated balance sheet, the financial product, the customer relationship, and the physical distribution (see Figure 1). Historically, banks and other financial service providers have largely undertaken all of these functions in-house, within highly integrated value chains. But as technology clears the way for the disaggregation of these layers, standard economic forces are pushing toward greater specialization among players that have different strengths across layers.

FIGURE 1. **The modular market**

Balance sheet layer
Provision of capital, risk management and balance sheet risk, at the wholesale or retail level

Product layer
Design and manufacture of individual financial products and services

Customer relationship layer
Customer acquisition, sales, servicing and permanent primary interface



Distribution layer
Physical touch points for distributing products and serving customers

The key pieces in banking need no longer go together. We identify four core market layers that play distinct functional roles in the provision of retail financial services. These layers are historically integrated, but a combination of new technological capabilities and age-old economic incentives is now driving their growing disaggregation.

This opens up entirely new business model choices and partnership opportunities. Different players have varying strengths across these layers and will as a result specialize and partner in different ways. Others may have similar strengths but make dissimilar strategic choices. Either way, the result is a more diverse financial sector.

Regulators should allow this unbundling, but have to stay abreast of the new risks it brings. Greater competition and innovation in financial services is badly needed, not least in developing economies. However, the changing nature of banking will put regulatory and supervisory practices to the test, with significant potential consequences.

In this paper, we take the next step in exploring the market-level modularization of financial services by studying a number of illustrative examples of the new models that are emerging, how they are coming about, and what they mean for the financial inclusion of low-income people in emerging markets and developing economies.

We have chosen a set of case studies that all represent this shift toward a more modular market structure for financial services, but spring from a variety of contexts, operate in different layers, and illustrate distinct aspects of this phenomenon.

Grab in Southeast Asia represents an increasingly common model: ride-hailing and delivery companies that have in a short period of time built large customer bases served over digital channels, and see specific synergies around financial services.

Paytm in India represents a related phenomenon, driven instead by e-commerce providers which have similarly scaled fast and which see financial services as another step in their journey to expand scope.

Both of these companies moved very early into digital payments as a foundational piece of their core business. Soon they saw opportunities to further lubricate the core business by offering other financial services to various customer groups, such as working capital for vendors, consumer credit for end customers, and accident insurance for drivers. Over time, both companies have gradually developed a fuller offering and greater ambitions around financial services, primarily by partnering with fintechs and banks for the product and balance sheet layers.

M-Pesa in Africa represents another type of company with very strong *customer relationship* and *distribution layers*, this time in the mobile money space. With large numbers of voice customers converted to the payments business and sizeable agent networks built out, many mobile money operators have been moving toward a richer financial services offering by partnering with banks and fintechs. M-Pesa is now taking this to its full extent by creating a marketplace model that delivers products from a variety of FSPs using their own *balance sheets* over M-Pesa's *customer relationship* and *distribution layers.*

Daviplata in Colombia represents quite a different side: that of a bank with strong *balance sheet* and product offerings that is looking to deploy those assets at greater scale by partnering with companies that can bring complementary strengths in the *customer relationship* and *distribution layers*.

Kaleidofin in India represents yet another aspect: a fintech that has built a highly innovative offering in the *product* layer and established partners for the *balance sheet* as well as the *customer relationship* and *distribution layers*.

SECTION 2

THE MODULAR MARKET IN PRACTICE

What are the core drivers behind the modularization of markets?

Several core drivers underpin how retail financial markets will transition toward increasing modularization, and these drivers will likely play out differently in diverse market contexts.

GROWING ROLE OF PLATFORMS IN DELIVERING FINANCIAL SERVICES TO BROAD SEGMENTS OF THE MARKET

At its core, modularization is driven by simultaneous advances in digital technologies, from cloud computing to cheaper smartphones, the digitalization of economies, an upsurge in fintech innovations, and the rapid rise of platform models. Venture capital has developed into a global business model at a time when new technologies are transforming the production and distribution of financial services. Venture capital investments in fintech more than doubled from 2020 to 2021 (CB Insights 2021). In South-East Asia alone, there was a seven-fold increase in foreign investment into fintech since 2015 (Balzer, et al. 2020). This is happening in parallel with a massive expansion in the digital economy around companies with platform business models, which operate on fundamentally different economic principles than their linear counterparts in ways that make them highly attuned to economies of scale and scope.[2] Taken together, these two phenomena are driving a fundamental reconfiguration of the financial landscape, opening up opportunities for non-financial actors to participate in the delivery of financial services and shifting competitive pressures in ways that are pushing incumbents to reassess their strategies. This is best exemplified by the rapid changes in Indonesia, a market that has experienced explosive growth in its fintech sector and significant growth of platform businesses in just a few years, driven by massive investments from global players including China's Ant Group and Tencent (Fintechnews Indonesia 2021).

These developments provide the context and motivation for the entry of non-financial players into financial services. First, platform models thrive on economies of scale and scope, as

2 For more on platform models, how they are different, and what it means for financial inclusion, see https://www.cgap.org/research/reading-deck/platform-business-models

network effects can produce exponential yields across activities, and this provides a strong motivation for diversification. Beyond these incentives, platforms can harness their ecosystems and build on data generated in their core business to solve information asymmetries and offer advanced, compelling financial services.

Second, the potential to capture synergies between financial services and their core business drives platforms to embed finance in their offerings such as working capital loans, buy-now-pay-later (BNPL) credit, and asset finance. Depending on the type of platform, specific financial services can have a considerable role to play in expanding the core business as well as deepening customer loyalty. This has led to red envelopes being embedded in WeChat messaging, credit and insurance products being seamlessly offered to ride-hailing drivers, and business financing loans being made available to SMEs trading on e-commerce platforms. One example is **Grab**, a leading ride-hailing company in South-East Asia, which leveraged its large user base and existing marketplace across the region to incorporate payments with GrabPay in 2017 and to further expand its portfolio of financial services beyond payments, from lending and insurance into investments and an upcoming digital bank in Singapore and Malaysia. Unsurprisingly, this move also supported core business growth by attracting millions to Grab's 'super app' and driving both habitualization effects and increased stickiness while diversifying revenue streams, in a self-reinforcing way. Similarly, **M-Pesa** in Kenya was built on the back of Safaricom's extensive user base across the country, leveraging its scale, reach and readily available user data to offer increasingly sophisticated financial services. In turn, this drove user loyalty and engagement with its core mobile operator businesses.

Lastly, having services-oriented architecture in their core technology systems enables platform models to easily incorporate new services in their offerings, including those of third parties. Platforms typically have large customer bases and incur low marginal cost to deploy another service to customers they have already acquired and are already serving. This makes it easier to layer financial services on top of existing offerings and enables third parties to reach low-income and mass-market segments at a relatively low cost. This, in turn, opens-up opportunities to partner with established players such as traditional banks, who do not have the right channels and cost structures to serve those segments. A good example is the Colombian digital financial services player **Daviplata**, launched by Banco Davivienda, the third-largest incumbent bank in the country. The bank first established Daviplata as a payment business and low-cost channel to underserved segments, addressing limitations in the traditional banking model. Daviplata later capitalized on its success in getting 40% of the Colombian adult population on its payment service to roll out a full-fledged financial services offering.

Common across these examples is how the digitalization of the economy has driven non-financial actors to incorporate financial services in their offerings, particularly platforms. One outcome of this process is the growth of an ecosystem of actors that connect with platforms in various ways, from providing the balance sheet and technology underpinning financial services to channeling innovative financial products through their user interfaces, leading to more modularized market structures. The specific form that these modularized markets will take is context-specific and based upon choices made in terms of which segments to reach, financial services to prioritize, channels to build, and partnerships to develop.

SIMULTANEOUS ATTRACTIVENESS AND COMPLEXITY OF UNTAPPED MARKETS

Achieving scale often requires expanding into new segments and to address their needs. Sometimes the needs of such segments are too complex to easily serve them, but the fundamental incentives to incorporate the offering still exist. In such cases platforms often rely on partnerships with third party players that are more specialized and better able to serve those segments, which can drive modularized approaches to serving them. Serving excluded or underserved groups in the market might be commercially attractive, but it also often entails moving away from the old 'vertically-integrated' way of doing things towards more complex, distributed business models for several reasons. For one, the underserved are often digitally marginalized and geographically remote. Onboarding them therefore involves some combination of reach, affordability, and convenience. More importantly, it requires offering seamless experience and increased relevance, i.e., delivering financial services in new ways, built into their day-to-day lifestyles and needs. This often implies partnering with a range of organizations fulfilling specialized roles, from contributing relevant products to building adequate distribution to managing customer relationship effectively.

In South-East Asia, persistent access gaps became a key motivator for **Grab's** entry into financial services. Grab recognized that 6 out of 10 Asians were either unbanked or underserved and saw the opportunity to unlock financial services across its core business ecosystem, bringing enhanced accessibility, convenience, and transparency. This led it to develop targeted financial services and partnership strategies, for example with Zhong An as a fintech product partner and Chubb as the underwriter for various insurance products.

In the case of **Daviplata,** the challenge of serving a particular segment with complex needs led to creative partnerships around shared goals. Daviplata recognized that players like Rappi, a Colombian food-delivery business, had much more penetration and recurrence in the lives of their clients than they themselves did. Conversely, Rappi was keen to make its food delivery business more effective by enabling digital payments, but also by harnessing its ecosystem to offer more sophisticated financial products. But it needed licenses to offer digital wallets and financial services to the users and felt it would be an extraordinary hurdle to achieve regulatory requirements. There was therefore strong logic for a partnership, which led Daviplata to both invest in Rappi and partner with it.

For **M-Pesa,** the success of its digital lending product M-Shwari led it to realize the potential that digital lending held for an expansion of its financial services offering. At the same time, it also recognized practical limitations in addressing the demand. First, its existing partnership with Commercial Bank of Africa (CBA, which later merged with NIC to form NCBA) proved difficult and slow to scale across markets. Second, both within each market but also across markets, effectively addressing a myriad of user needs while complying with different banking regimes, and doing so at speed, would require a more scalable partnership approach, more akin to a marketplace model. Accordingly, M-Pesa took a first step to make its credit scoring algorithms and channels available to other partner banks for lending to underserved segments, which are unable to demonstrate a financial services history to inform credit decisions but can produce records of payment activities on M-Pesa. Having access to these data trails and being able to process them in a way that is meaningful for credit decision making, M-Pesa decided

to make credit scores and other product capabilities available to the broader market. This solved the data asymmetry problems that had bogged down access to credit and created new market opportunities for other players, including traditional banks. It will contribute to increased modularization of the digital lending space across M-Pesa markets, starting with Mozambique and Tanzania.

Kaleidofin, an Indian fintech which started with a savings product for the informal sector, faced significant challenges in meeting the complex needs of its target segments. Focusing primarily on people who invested whatever available money they had in gold, with limited understanding of more complex financial products such as mutual funds and insurance, Kaleidofin recognized that no-single savings, credit or insurance product would really meet the real-life needs of its target customers. Instead, a thoughtful combination of these products was needed, and that realization shaped Kaleidofin's specific approach to products. On the front end, it partnered with a range of Non-Bank Financial Companies (NBFCs) and MFIs, who owned the main customer relationship as well as physical distribution. Kaleidofin provided small NBFCs and MFIs with various solutions including its Ki Score credit analytics platform, a machine learning-based automated credit health scoring for informal sector customers, as well as the technology and data science capabilities that were required to effectively run a lending business. Meanwhile, on the back end, it partnered with a broad range of institutions such as insurers and other financial service providers, allowing Kaleidofin to focus on assembling a rich and complex product offering without bearing the costs of securing its own licenses and balance sheets. This enabled it to deliver meaningful products at scale and low cost, while also providing intuitive, blended products that resonated with the actual needs of its customers.

Similarly, **Paytm,** a large fintech and digital payments player in India, set out to address existing gaps in meeting the credit needs of both users and merchants transacting on its platform, through targeted products such as short-term liquidity loans, working capital loans and BNPL (buy-now-pay-later). It recognized that credit organizations were not serving that base and that it had specific capabilities that could address market limitations. This led it to harness unique strengths such as established customer relationships, its ability to acquire and KYC users at low cost, and both access and technical capability to draw insights from user transaction and third-party user data, in designing and offering relevant products in partnership with Non-Bank Financial Companies (NBFCs). While Paytm retains control over front end user engagement and product design, NBFCs are playing more of a back-end role, lending off their balance sheet.

As illustrated by these examples, the commercial attractiveness but also inherent complexity in serving frontier markets with a rich but low-cost offering at scale has motivated and shaped new approaches and partnerships. These have been advanced to overcome specific hurdles, including regulatory requirements, or around perceived capabilities and comparative advantages of market actors, affecting the distribution of roles and economic value across value chains and catalyzing entirely new business models. In so doing, the shift toward a more modular market structure is unlocking opportunities for financial inclusion that may not have existed in the past.

SHIFTING CONSUMER NEEDS AND EXPECTATIONS

The relentless digitalization of the economy has contributed to both a massive growth of digital platforms and an increased demand for digital experiences and services. It is estimated that by 2022, 60% of global GDP will be digitalized (World Economic Forum 2019). Already, 4.5 billion people are actively engaged on social media (Kemp 2021). By some estimates, up to 88 million workers in Africa will rely on digital technologies, to find, manage, and execute work by 2023 (Porteous 2020). And at least 1.5 billion people are consuming products through e-commerce platforms (UNCTAD 2020). This has led to a gradual shift in user expectations in how they engage with a digitalized economy and with financial services. New developments in embedded finance are showing that users prefer products that are connected to their daily needs and integrated in daily interactions. These trends will continue to grow and impact users across all markets, and drive new business models between more established FSPs and digitally native businesses.

In Colombia, **Daviplata** recognized early on that it had much to learn about running a digital business and that partnering with digitally native businesses could help accelerate its learning curve while providing opportunities to monetize its banking license and capabilities. In that context, partnering with Rappi was a win-win opportunity: it would enable more digital wallets to be opened on the Daviplata payment system through a third-party interface that offered richer user engagement. To further increase its presence in the day-to-day lives of its users, Daviplata also partnered with PayKey, a company that integrated its payment services into third-party social media interfaces, enabling Daviplata users to transact directly from their social media apps.

Grab, as a digitally native company, was able to access specific insights on the needs of its users, drivers, and merchants and design a range of financial products embedded in rich user experiences. Through data analytics and the harnessing of core business interfaces and channels, it launched a PayLater product for users, asset-financing for drivers, and unsecured loans for merchants to address its most basic financing needs. Grab also discovered that its users wanted to consume financial products in a more granular fashion, which aligned better with the intended purpose and with its cash-flow constraints, in a frictionless way. This was true for how drivers conceived of insurance policies and riders viewed investment products. Accordingly, Grab launched new microinsurance policies (pay-per-ride), fractionalized premiums, and investment products allowing its users to invest as little as $1. These products would be difficult for insurance and investment companies to launch on their own, due to the customer acquisition, risk assessment, and distribution costs it would entail. However, they were easier to develop for platform businesses such as Grab, which could then become effective distribution channels for such products. This opened up new opportunities for partnerships and further modularization, with fintechs like Zhong An on the product side and insurers like Chubb on the underwriting side.

Kaleidofin, despite powering loans through NBFCs and MFIs, noted persistent gaps in access to both larger individual loans and lower denomination loans catering to small cashflow mismatches. As a result, the company evolved its business model to develop its own balance sheet to catalyze the supply side: having ‘skin in the game’ would persuade other banks of the

value of its scores. This is an example of how market constraints can push a particular player to go beyond its intended role to fill gaps and unlock opportunities. Furthermore, Kaleidofin is pursuing the delivery of richer products to the Indian market, such as insurance bundled with goal-based savings and asset-based lending. Delivering such products and experiences, as discussed previously, requires partnering with insurance providers and aggregators of used cars on the one hand, and NBFCs and MFIs on the other hand, with Kaleidofin playing the bridging product role.

The unifying thread through these examples is how modularization opens up new possibilities and allows providers to more effectively address latent consumer needs and new demands in terms of product experiences. It also drives more personalized services and experiences and invites a new generation of more agile providers, leading to more bundling of services and super App-like positionings. This is driving more modularization at process and product levels, but also re-bundling.

Which central questions arise along the way?

DESIGNING PARTNERSHIPS AROUND COMPARATIVE ADVANTAGES AND EXPECTED RETURNS

Several questions arise for providers when designing partnerships in a modularized environment. These questions include: “What value-add am I bringing to financial services?”, “What is my comparative advantage?”, “What do other organizations bring to the table?”, “What partnerships do I need?”, and “What is my long-term strategy?”. They also includes: “What license(s) does this require and which partner holds the necessary license?”, and ultimately “How will this work out for me?”. These questions may lead to different answers in different contexts, even for the same organization, and these answers might also change at different points in time. Strategies set clear directions, but at the same time have a considerable degree of fluidity and need to be recalibrated with changing market conditions.

When **M-Pesa** first opened its scoring capabilities to traditional banks, the move was well received by the market. However, the economic return that it was able to extract seemed out of sync with its perception of the value it was bringing to the table. This feeling was compounded by the fact that balance sheet partners seemed to demand high returns for what turned out to be a relatively low-risk business. As a result, M-Pesa decided to expand its role in the credit value chain with the objective of capturing greater economic value while driving more impact: the company developed a more sophisticated product combining end-to-end loan operation through its e-wallets, effective consumer engagement, credit scoring analytics, and flexible/configurable business rules. This new offering concentrated more responsibilities across the digital lending delivery process, and M-Pesa is now able to improve how they monetize the value of their product while unlocking new partnerships across multiple markets, building on the success of its own lending products. The offering is still very beneficial for partner banks, who are getting easy and low-cost access to customer acquisition, risk assessment, and distribution pieces of the value chain.

In India, **Paytm** decided to shift gears and is taking an integrated approach by acquiring its own NBFC license in addition to getting a small finance bank license, which is made available to them after five years of operating as a Payments Bank. This move, primarily motivated by economic considerations but also by a stated intention to operate under a fully regulated environment, is pointing to Paytm's transformation into a full-stack lending platform. This shows the fluidity around how these models evolve and the choices businesses make in response to the context, as discussed in the initial sector of the paper. One factor that may have contributed in this case is the switching fee inherent to the UPI (Unified Payments Interface) platform in India, which charges around four Indian Rupees (0.05 USD) for every transaction it processes, without providing a revenue model to providers since it does not allow for charging of merchants nor users. In a sophisticated but fragmented payments market, this puts increasing pressure on providers to build viable revenue models on top of existing payment rails, especially in targeting low-income segments, and could incentivize dominant players to drive greater control of value chains through more integration.

Where there is an incentive to partner, finding an arrangement that builds on the assets and maximizes the value of each partner is critical. For example, **Grab** opted for partners that were complementary to GrabPay and to its portfolio of financial services, like Maybank and Citibank. **Davivienda** partnered with organizations that accelerated its learning curve, like Rappi. Partnerships between financial institutions, Fintechs, and other platforms are key in bringing complementary skills to effectively combine distribution capabilities, good product design, superior customer relationship, and an adequate balance sheet.

RESOLVING INTERNAL TENSIONS AROUND COMPETING BUSINESS MODELS

As one walks on the modularization path, tensions inevitably arise around competing business models. This is especially the case when partnerships enable other actors to compete with one's own products. Resolving these tensions requires going back to the fundamental questions asked in the previous section and achieving some clarity about the long-term strategy of the business.

In the case of **Daviplata,** which consistently aspired to remain relevant and play a key role in its clients' lives, the concurrent need to enable a larger ecosystem and, as a result, its banking-as-a-service, platform-as-a-service and channel-as-a-service positioning, pushed it toward the back-end function of other market players. Managing well that internal tension between playing a back-end role and owning the customer relationship was key for the company. Daviplata resolved this by positing that the market was big enough for everyone and that it could continue to simultaneously grow its business while enabling competition. This view was likely supported by the benefits that its partnerships had already brought, from learning about digital businesses to venturing into new spaces such as powering the Medellin metro with QR-based payments, which was partly inspired by what it had learned from its interactions with Rappi and other digital businesses.

M-Pesa's journey in the digital lending space has also been particularly insightful. It started with failed attempts at developing a partnership with Equity Bank around M-Kesho, a digital savings and lending product, which led to both partners competing for the same markets.

Learning from this unsuccessful experience, M-Pesa went on to partner with CBA, which presented little competitive threat given its focus on high-value customers. The successful joint launch of M-Shwari uncovered new opportunities and unveiled limitations in terms of both domestic and regional scaling, which led M-Pesa to open its capabilities to more mainstream banks such as KCB. Eventually, that move would lay the foundation for its current decision to open its customer channels, analytics capabilities, flexible product designs, and collections support functionalities to other FSPs. This decision inevitably raised concerns about enabling competition to go head-to-head with M-Pesa in pursuing the unbanked market. M-Pesa eventually decided to pursue its own lending products strategy while also enabling others to target the same market, by designing and offering products in ways that would enable it to capture significant economic value from competing third-party businesses. **Kaleidofin,** faced with a similar situation, saw it as an opportunity to better serve its clients with its own lending and combined products while powering NBFCs and MFIs with its Ki Score and technology. It increased the size of the pie instead of cannibalizing existing business.

Resolving these inevitable tensions requires having a long-term vision. In the long term, an ecosystem approach can yield many benefits. It helps enable companies to continuously tap into the capabilities of other companies to enhance user experience and engagement by bringing new features without having to build them, for businesses focused on customer relationship management. For others, it is an opportunity to power more customer-facing businesses with their unique assets, products and capabilities. For example, through its partnership with Mastercard, **Grab** was able to drive significant transaction volumes at non-Grab merchants through the Mastercard-powered GrabPay debit card in 2020 and is still accelerating merchant acceptance, allowing it to have a much broader merchant reach, although indirectly. In the long run, this is expected to pay off as its user base starts to demand more interoperable services through Grab's ecosystem. In a similar way, Daviplata's powering other businesses while growing its own financial services play is expected to increase the size of the market and drive better services for consumers.

While not immune to competitive tensions, the modular market structure is arguably less prone to them because of the clear competitive advantage of the respective players—and the considerable investment it would often require for other partners to match those advantages. Any fintech startup with an excellent product would no doubt prefer to acquire customers directly, but is daunted by the time and cost this would require compared to simply plugging into partners with vast existing customer bases and low-cost channels to serve them. Similarly, many consumer banks are launching digital apps to serve customers more effectively, but can't realistically reach the scale of e-commerce or mobile money providers without an enormous investment in agent networks that very few have shown any appetite to make. Conversely, mobile money providers, e-commerce players, and ride-hailing platforms would no doubt love to own the full financial services stack, but are almost uniformly reluctant to pursue banking licenses of their own due to the direct and indirect costs this would bring.

Because of these costs that divide the layers in our modular market structure, the roles tend to be more deeply demarcated and the barriers to integrating vertically are often substantial for partners on both sides. The most vulnerable to this are probably the fintechs and others in the

product layer, who will need to continually innovate and develop their technology to avoid being absorbed or replaced by partners from either the *balance sheet* or *customer relationship* sides.

What forces shape how modularization develops?

Many forces, both internal and external to businesses, can shape how modularization develops in practice.

MARKET MATURITY AND STRUCTURE

Modularization as discussed previously is driven by the long wave of digitalization. The level of digitalization of the economy, the availability of smartphones, access to capital, and innovation talent, are all features that will determine how ready a market is for modularization and how a modularized financial ecosystem might unfold. For example, when **Kaleidofin** started in India, the market, and particularly its target segment, was far from ready: had it gone fully digital three years earlier it would have excluded many of the low-income customers it aimed to serve. Its vision, therefore, crystallized around the multiplication of access channels to its target segments by partnering with banks who were willing to lend to priority sectors before Kaleidofin could develop a more digital play of their own. In contrast, the exact same factors enabled **Paytm** to develop an app-based strategy for serving the needs of its better-off target users and merchants, who were already digitally equipped to transact on the platform. In this way, market maturity can determine the speed and conditions of modularization, and these might play out differently for different market players.

Market structures can also play a role in shaping the direction of modularization. For example, **M-Pesa's** dominance in the Kenyan market is well established. As a result, it could have been unwise to introduce a product that would significantly empower M-Pesa's competitors, erode its existing market dominance and disrupt its current business model. Accordingly, M-Pesa is piloting its new ecosystem approach and digital lending product with banks in Tanzania and Mozambique first, while figuring out the least disruptive approach for Kenya. Similarly, **Grab** will adopt a granular strategy in each South-East Asian market where it has an interest. In Singapore, a market with good digital traction but less scale, a rapid move toward becoming a digital bank will allow the company to harness its ecosystem into a financial services business line. In other markets where compliance costs might be high and market conditions do not yet support a full digital play, it will be partnering with local and regional financial institutions based on market footprint, synergies and complementarity. **Kaleidofin** had to expand its own CICO footprint to be able to reach its audience instead of relying on other channels, essentially internalizing some distribution function into its product-focused organization. These points illustrate the range of constraints that specific market conditions can impose on the shape and trajectory of modularization.

REGULATORY ACTION

Regulatory frameworks can be enablers of a modularized financial system just as they can constrain it. In some markets, a banking license is still needed to operate digital wallets, making it natural for customer-facing digital businesses to partner with banks or other licensed entities. In other contexts, even with the appropriate licenses, non-banks are at times constrained by specific regulatory arrangements that, for example, require KYC to be conducted by branch staff, which can impact their ability to onboard customers for more sophisticated products, as is currently seen in India. In South-East Asia, licensing regimes differ across markets, which can impose higher costs of compliance on businesses operating at a regional level, but country-specific regulatory arrangements such as the bespoke digital banking licensing in Singapore can open up opportunities for players like **Grab** to enter niche businesses. Differences in authorized wallet balances and transaction limits can further constrain product replicability and economies of scale. Lastly, specific arrangements that impact cost structures for various players can also shape market strategies. For example, in the case of **Paytm,** the desire to secure acceptable returns on top of existing payments-switching fees may have partly motivated its shift toward more integration across the value chain.

In the EU and other jurisdictions, regulatory decisions to enforce open banking principles have catalyzed growth in the fintech sector and modularized ecosystems. As discussed earlier, platform business models thrive on economies of scope and scale, and the ability to drive cost-effective business models. By introducing more friction, regulatory action can potentially reduce incentives for the emergence of platform businesses. Inversely, by deliberately designing and shaping more open ecosystems, regulators can catalyze richer ecosystems of actors. Either way, regulatory actions have the potential to influence the speed at which platformization and the related modularization of finance unfold. This should be one of several considerations when developing the regulation of this space,

STRATEGIC RESPONSES TO COMPETITIVE DYNAMICS

Strategic stances, and particularly how incumbents respond to changing competitive dynamics in an increasingly sophisticated ecosystem of products and players, can also shape how modularization plays out, given their market significance.

For example, since its early days, Banco Davivienda's strategy has been to become a service hub for all market players across industries (mobility, entertainment, cell phone recharges, gaming, etc.) and the bank adopted a deliberately open strategy: banking as a service, as a platform and as a channel. In practice, **Daviplata** is a key element of the operationalization of that strategy, and the vision to enable a rich ecosystem to flourish around the bank has likely contributed to the development of a more modularized environment in Colombia. Similarly, the shift of mobile money providers like **M-Pesa** away from a vertically integrated approach toward a more horizontal platform model, although with context-based specificities, will likely lead to positive modularization outcomes in concerned markets (Naghavi 2019). In the case of **Grab,** its evolution toward becoming a super app will also catalyze more players to provide specific solutions that add to their offering, and more banks to play in the back-end. **Paytm's** journey offers a contrasting perspective by following a more integrated trajectory: in addition to pursuing its own lending license, Paytm also acquired an insurance company (Raheja QBE) and set-up its own

wealth management product Paytm Money, under which Paytm Wealth Community was recently launched. While Paytm's move to become a full-fledged, diversified financial services provider of its own seems to be built around more integration in the short-term, it may evolve toward a more open platform for third-party based financial products to be distributed to their users in the future.

In many ways, how large businesses and incumbents respond to new opportunities and threats will shape how modularization unfolds. These responses show some degree of fluidity and are continuously being reassessed and recalibrated. This continuous steering process and the choices that it underpins will likely determine who stands to gain from it and who will lose.

SECTION 3

THE INCLUSION POTENTIAL OF A MODULAR MARKET STRUCTURE

The theoretical basis

CGAP is studying this phenomenon because we believe a more modular market structure can help advance financial inclusion. It can do this by helping to overcome barriers across all four dimensions in the analytical framework that CGAP has developed to explore the financial inclusion potential of business model innovations (see Figure 2). This tool helps to identify whether a given innovation is lowering barriers to financial access, use, and value across four key dimensions: cost, access, product fit, and customer experience.

FIGURE 2. **Framework for assessing the financial inclusion potential of business model innovations**

Does modularization make financial products or services more affordable for providers to offer and for underserved customers to use?

- Lowers operating costs
- Lowers end user fees
- Offers more flexible payments
- Reduces the need for expensive devices
- Requires less or cheaper connectivity
- Reduces the need for collateral
- Etc.

Does modularization make financial products better suited to the needs and wants of underserved customers?

- Addresses a customer need not served by typical products
- Aligns better with the needs and wants of underserved customers
- Allows greater customization to different contexts, user needs and preferences
- Has a higher degree of suitability for target customers
- Enjoys higher general trust and satisfaction from users
- Etc.

Does modularization make financial products or services more accessible to underserved customers?

- Expands eligibility through innovative means of customer due diligence
- Expands eligibility through innovative means of risk assessment
- Requires less interaction at physical transaction points
- Expands or improves the distribution of physical transaction points
- Etc.

Does modularization make financial products easier for underserved customers to use and to understand?

- Has product features that are easier to access, understand and compare
- Has an interface easier for most customers to understand and use
- Delivers clearer value to users
- Helps users identify, understand and resolve problems
- Gives users control over data
- Stronger technical security
- Etc.

The shift toward a more modular market structure for financial services can help *reduce costs* in the end-to-end value chain thanks to the specialization of each partner in layers where they have a competitive advantage; to FSPs being able to cheaply acquire and serve users to whom customer-facing partners have already incurred the cost of acquiring and building channels; and to the economics of scale that come with the ability to serve a large consumer base.

It can also *expand access* thanks to the presence of financial services in digital environments where customers are already active; their lower reliance on formal documentation requirements; and their ability to use digital data typically collected by customer-facing partners for risk assessments on thin-file customers that were previously not viable for FSPs to serve, expanding eligibility for financial products.

At the same time, modular market arrangements can create *better product fit* by being tailored to fit within the specific consumer context of the customer-facing partner, such as e-commerce or ride-hailing; and by lowering barriers to market entry and scaling even for startup fintechs that invent compelling offerings, enabling a greater diversity of products and consumer choice.

Finally, these models can create *superior user experiences*, not least for weakly literate and financially inexperienced consumers, by embedding financial products in user interfaces that customers are already familiar with; through tight integration with existing digital channels, such as through accident insurance that is automatically enabled when a taxi trip is starting; and by leveraging on sophisticated technologies like automation, chatbots, and visual interfaces where product and customer-facing partners often have stronger capabilities than most FSPs.

The empirical evidence

As a first exploration of whether these potential financial inclusion benefits can be observed in the market, CGAP has undertaken demand-side research with end customers of some of the companies profiled in our case studies. Specifically, CGAP commissioned 60 Decibels to conduct research consisting of live phone interviews with a random sample of customers of Kaleidofin in India and Grab in Indonesia, Vietnam, and the Philippines. Between January and June 2022, around 1,100 people from these companies were interviewed.[3] The methodology used was uniform across countries and also identical to our prior research with customers of TymeBank, which therefore offers another useful reference point even though TymeBank does not operate as clearly in a modular market structure.[4]

While the data do not speak to all four dimensions in the analytical framework in Figure 2, our results provide compelling evidence that modular market structures can indeed advance financial inclusion as well as improve financial wellbeing, as reported by customers themselves. Our surveys hint that these models might play a particularly powerful role in expanding financial access beyond accounts and payments, including to insurance where global progress has thus far remained negligible.

3 For more information on the methodology that 60 Decibels uses, see https://60decibels.com/

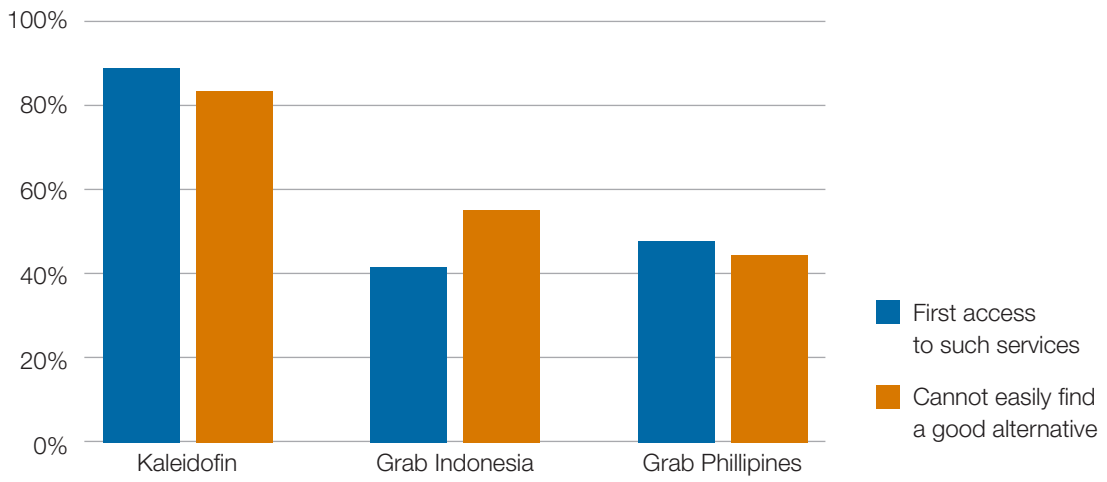
4 To view the full TymeBank case study, see https://www.cgap.org/research/publication/tymebank-case-study-customer-impact-inclusive-digital-banking

The findings also underscore the important point that the nature and degree of the impact that the financial inclusion potential actually translates into depends heavily on the broader goals of the partner holding the customer relationships. Looking at data from our three companies—Grab, Kaleidofin, and TymeBank—companies that have a more explicit social mission are disproportionately serving poor and female clients, improving their self-described quality of life and financial wellbeing. Meanwhile, companies that have a more general mass-market strategy do not necessarily reach the poor and may skew male in their financial outreach as a result of general gender patterns in that market. However, in every case our research shows clear evidence that financial inclusion is being expanded and that this is adding real value to customers, regardless of gender or poverty status.

On financial access, substantial numbers of clients indicate that they are accessing the financial services concerned for the first time (see Figure 3). In the random sample of **Kaleidofin** customers that we interviewed, nine in ten clients say they previously had no access to similar financial services and that they could not easily find a good alternative to Kaleidofin for these services.

The research similarly offers compelling evidence that **Grab** is increasing financial access, far beyond access to accounts and payments; and that this is resulting in good financial and wellbeing outcomes for users. Nearly half of the clients in both Indonesia and the Philippines say that Grab offered their first access to the financial services they are using and around the same (albeit more in Indonesia) say that they could not easily find a good alternative to Grab for these services. In the Philippines, more than four in five customers who have insurance products say that their access to insurance has increased thanks to Grab, and two thirds of those say it has increased "very much." Meanwhile a full 92% of users with credit products from Grab say their access to credit has increased, and half of those say it increased by "very much".

FIGURE 3. **Customer responses on financial access**

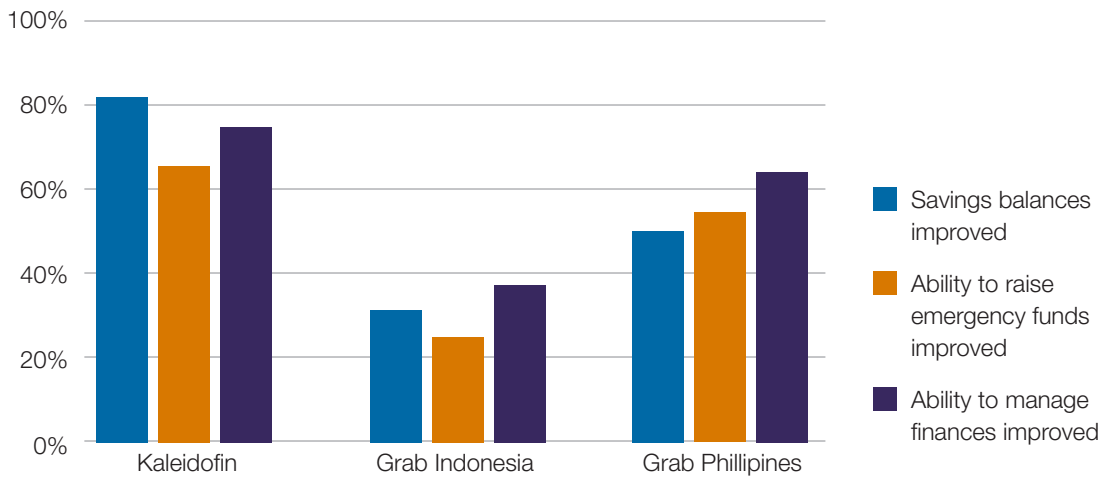


Source: CGAP/60 Decibels market research, 2022

Methodological note: responses of "don't know / can't say" are excluded from the analysis. These are typically less than 5 percent of responses

Our findings also indicate that these services are making the financial lives of customers easier (see Figure 4). In India, more than two thirds of **Kaleidofin** clients interviewed say their ability to raise emergency funds has grown thanks to the company, which is important given that nearly half of them indicate they would find it hard to raise such funds—particularly female clients.[5] In the Philippines, half of **Grab** financial services customers say their savings balances have increased and two thirds report that their ability to manage their finances has increased thanks to the financial services that Grab offers. In Indonesia, over a third of Grab users say their savings balances and their ability to manage their finances have both increased thanks to Grab.

FIGURE 4. **Customer responses on improved financial lives**



Source: CGAP/60 Decibels market research, 2022

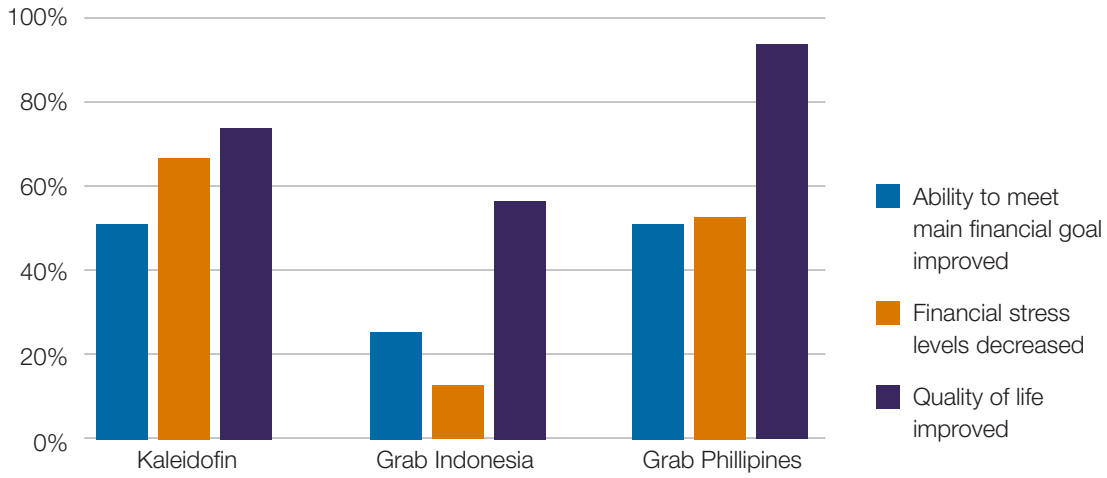
The research also offers evidence that this increase in financial access is resulting in positive welfare outcomes for customers (see Figure 5). Over half of **Kaleidofin** clients say their ability to meet their main financial goal has increased and over two thirds say their financial stress levels have decreased thanks to the services they are getting access to. Perhaps most important, three in four clients say their quality of life has improved, nearly half of whom say it has improved "very much".

In Indonesia, a third of **Grab** users say their ability to manage their finances has increased and a quarter say their ability to meet their main financial goal has increased thanks to the company. Their financial stress levels have improved only marginally: just over one in ten users say it has improved, and most of these said it had improved "slightly". Meanwhile, around 7 percent of users indicated their financial stress had *increased*. However, more than half of users still say the financial services from Grab have improved their quality of life, while only a single user said their quality of life had fallen. In the Philippines, more than half of Grab clients say their financial stress levels and their ability to meet an important goal have both improved thanks to

5 The ability to raise emergency funds is defined here as the ability to raise 1/20 of GNI within 30 days, which is in line with the similar indicator included in the Findex global survey on financial access that is regularly undertaken by the World Bank.

the financial services they are accessing through Grab. And a staggering 92 percent of users surveyed say the financial services from Grab have improved their quality of life, one third of them saying it has improved "very much". Meanwhile five percent said their financial stress levels have increased, one percent said their ability to manage their finances had fallen, and one person said their quality of life had decreased.

FIGURE 5. **Customer responses on wellbeing outcomes**



Source: CGAP/60 Decibels market research, 2022

Taken together, our data provide compelling early evidence that financial services offered in these new modular market structures are able to expand the financial inclusion of poor and underserved populations—and are improving both financial outcomes and overall wellbeing as a result.

The social impact is best illustrated by **Kaleidofin**, which in line with its mission is achieving these impressive gains for a clientele largely consisting of poor, rural women: four in five of the clients interviewed were women and virtually all (97 percent) live in a village or rural area.

The **Grab** findings are also compelling, particularly in the Philippines where our research shows clear evidence of expanding financial inclusion far beyond access to accounts and payments. Four in five users of their insurance products say Grab has expanded their access to insurance and a full 92 percent of credit customers say the same for lending. Both financial and general wellbeing has increased for a substantial share of users. The evidence from Indonesia is more mixed, both on the uptake of products and the impact on financial and general wellbeing. However, with four in ten customers saying their ability to manage their finances has increased and more than half saying their quality of life has improved, the value of the financial products offered by Grab Indonesia also seems fairly evident.

These findings are all the more compelling when one considers that Grab has over 28 million monthly active users in the region, while similar companies like Uber and Didi have over 100 million. Leading mobile money providers have similar user bases: M-Pesa has over 50 million

users across Africa. Combined with our research findings, this illustrates with great clarity the potential for large scale expansion of financial inclusion inherent in these models that combine those user bases, digital channels, and extensive distribution networks with a full offering of banking services backed by the requisite licenses, compliance and risk management skills, and balance sheets.

It is worth noting that very few of the Grab customers in our random sample are likely to be low-income, based on a proxy assessment using the Progress out of Poverty Index (PPI).[6] Hence any poverty impact one might hope for is likely very modest. However, this does not in any way diminish the clear impact Grab seems to be having on financial inclusion: Even if Grab's customers are not poor, they certainly appear to have been unbanked and underserved. The offering provided by Grab is expanding their financial inclusion in multiple dimensions and giving them a greater sense of control over their financial lives.

Gender analysis

In exploring these findings, one central dimension of analysis is *gender*: Are women and men seeing similar gains in access to financial services from these models and similar value from those services? It is crucial to gain an early understanding of this in order to avoid the risk of widening the already prevalent gender gaps in financial inclusion as these models expand.

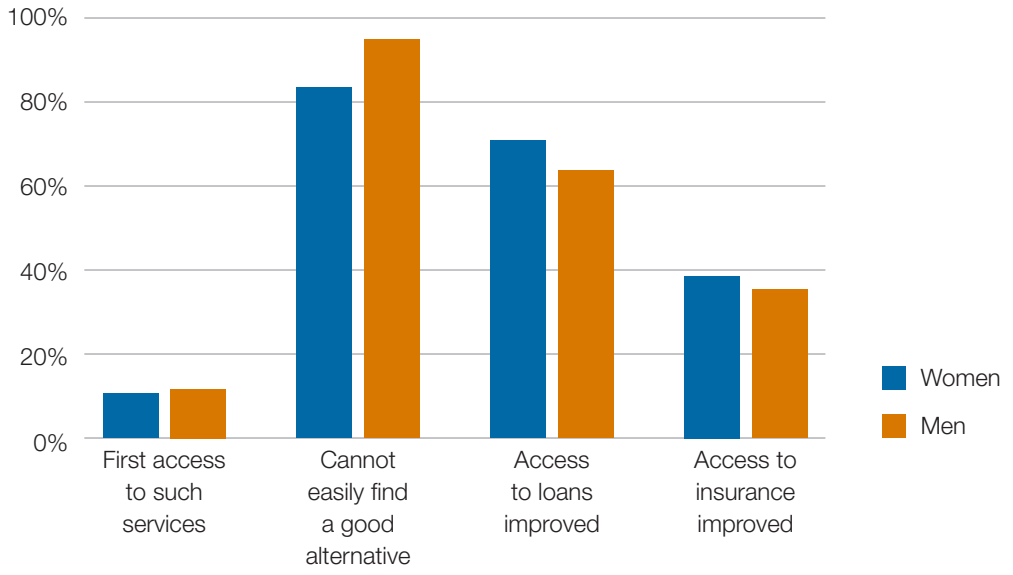
Kaleidofin is on the one hand a shining example of the potential for closing gender gaps through the use of these models: our data show that the company is serving almost exclusively poor and female customers, as they aim to do. In our random sample of Kaleidofin clients, five in six were women. These women are clearly benefitting from expanded financial access, greater financial control, and higher overall quality of life thanks to these services.

However, the Kaleidofin data also show a series of gender gaps: while impressive, many of the gains reported by female customers are nevertheless *lower* than those of the male customers that the company serves. When it comes to financial access, our findings are a mixed bag: a slightly higher share of men say Kaleidofin represents their first access to these types of financial services in general and that they could not easily find a good alternative; but slightly higher shares of women say their access improved to credit and insurance specifically (see Figure 6).

There is also a small but consistent gender gap when it comes to how people say the services they are accessing through Kaleidofin are improving their financial lives: More male customers than female ones report improvements in their savings balances, their ability to raise funds in an emergency and their ability to manage their finances. However, a slightly higher share of female clients report improvements in their ability to meet their main financial goal (see Figure 7).

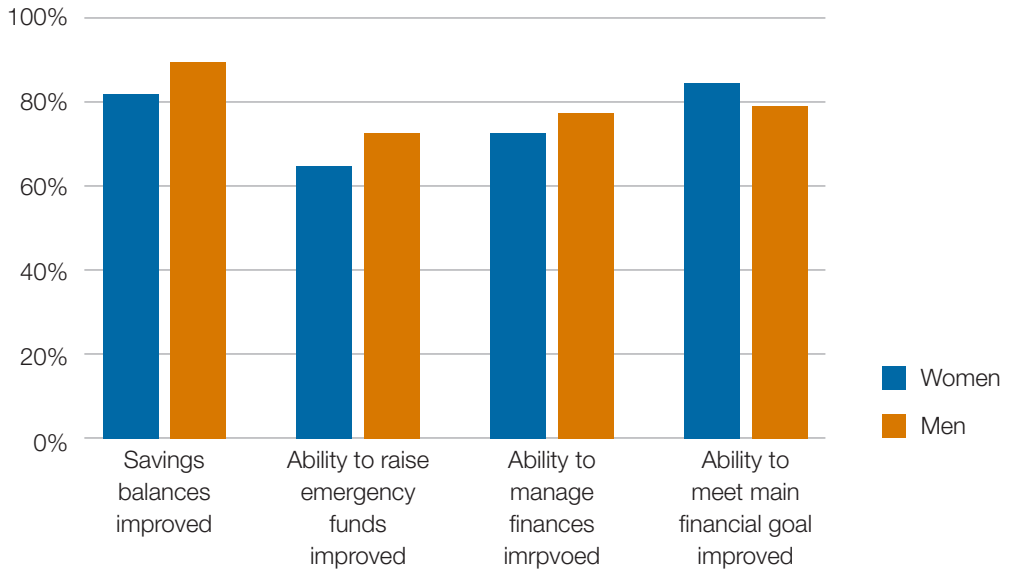
6 The Progress out of Poverty Index (PPI) is a widely used proxy measure for poverty consisting of 10 easy-to-answer questions. It was developed in 2005 by Grameen Foundation with the support of CGAP and Ford Foundation, with the goal of creating an easy-to-use tool for MFIs to manage their social performance. The PPI has since found a permanent home at Innovations for Poverty Action (IPA).

FIGURE 6. **Kaleidofin customer responses on financial access, women vs men**



Source: CGAP/60 Decibels market research, 2022

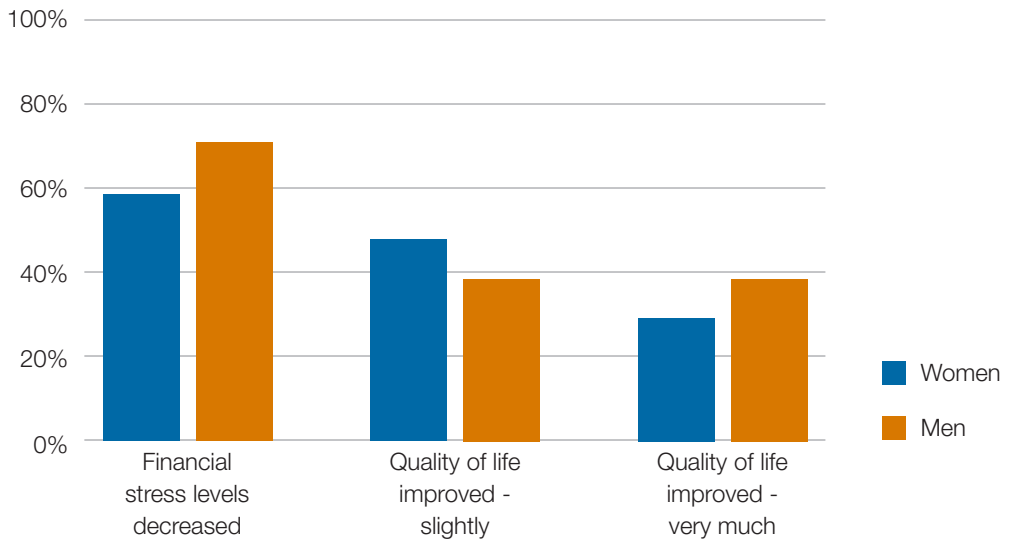
FIGURE 7. **Kaleidofin customer responses on improved financial lives, women vs. men**



Source: CGAP/60 Decibels market research, 2022

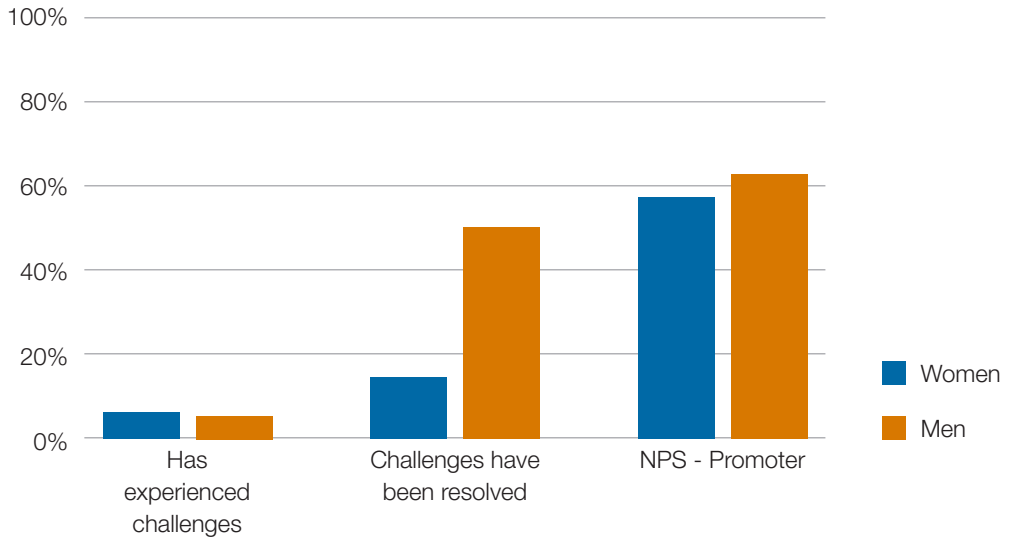
A higher share of male clients also report improvements to their financial stress levels and quality of life (see Figure 8). Very importantly, 50 percent more female clients report having encountered challenges with the services they are accessing and two thirds fewer female clients say those challenges have been resolved. These are stark findings for a provider focused heavily on women and could be one reason why female clients are less likely than male ones to promote Kaleidofin to others (see Figure 9).

FIGURE 8. **Kaleidofin customer responses on wellbeing outcomes, women vs. men**



Source: CGAP/60 Decibels market research, 2022

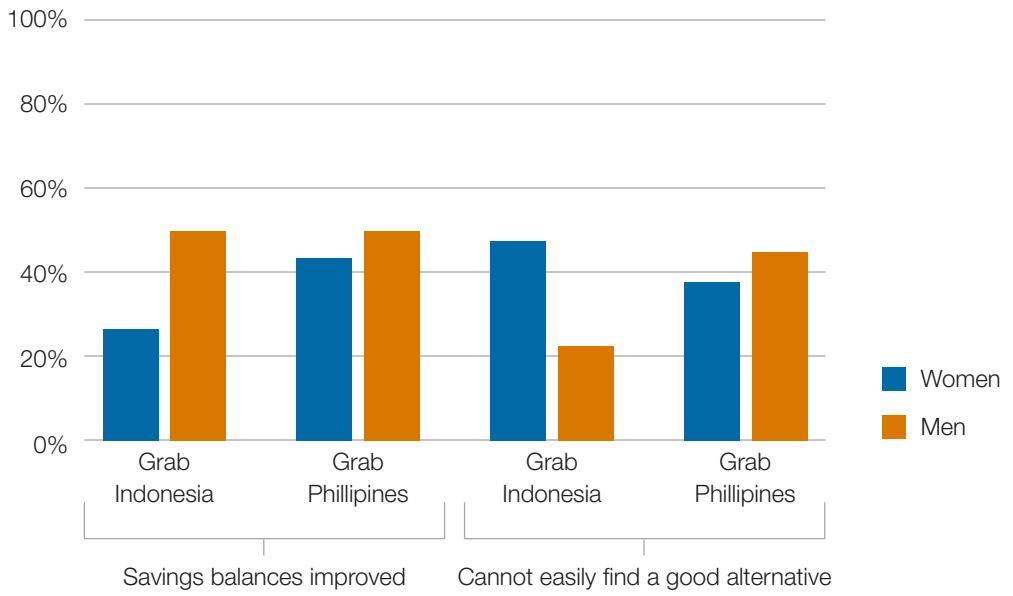
FIGURE 9. **Kaleidofin customer responses on challenges and NPS**



Source: CGAP/60 Decibels market research, 2022

Gender differences are also clearly apparent across countries in the data from **Grab**. Most obviously, in both the Philippines and Indonesia, women make up only around a third of clients in our random sample. Female customers also appear to have their financial access expanded less: In Indonesia, half of male users say that they had not previously been able to access the financial services they are using through Grab—but only a quarter of female customers say the same; in the Philippines the difference is smaller but still present (see Figure 7).

FIGURE 10. **Grab customer responses on financial access, women vs men**



Source: CGAP/60 Decibels market research, 2022

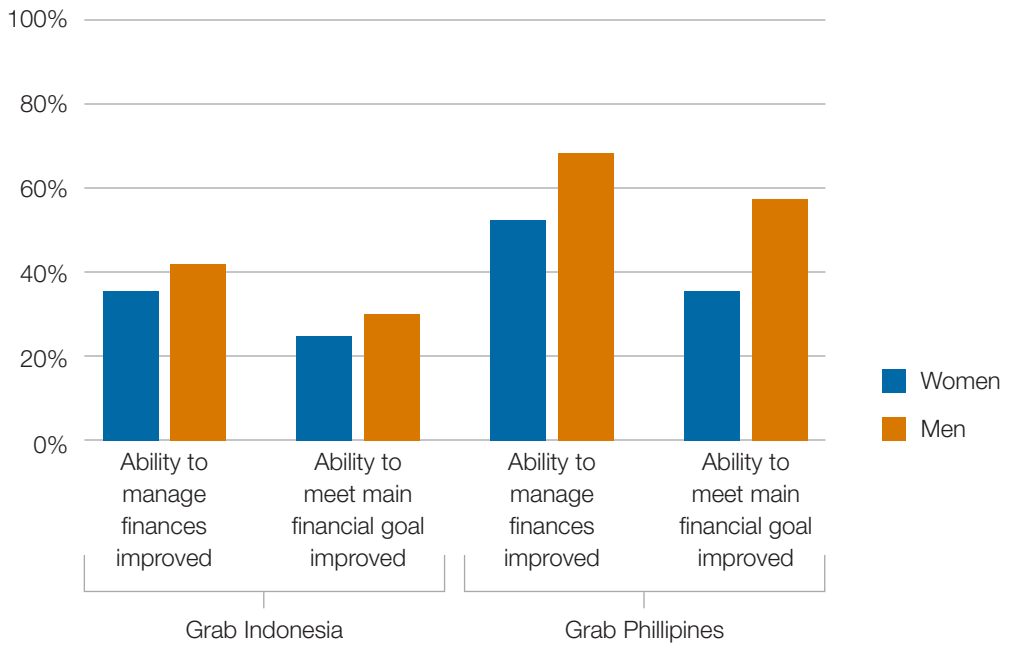
It also appears that the services are not adding value to women to quite the same degree as men: In both countries, the responses on improvements to financial lives are generally less favorable for women (see Figure 7). For instance, two thirds of male users in the Philippines say that the services from Grab have improved their ability to manage their finances, whereas only half of female users say the same. Two thirds of male users say that their savings balances have increased, whereas only a quarter of female users say the same.

Some of the above findings may be colored by the fact that women and men seem to be very different types of Grab users: notably, two thirds of male interviewees are drivers, whereas nearly all (98 percent) of female respondents are consumers. This inevitably has implications for the financial services they are accessing through Grab, since the offering for consumers and drivers respectively are not the same.

When all is said and done, perhaps the most important aspect of the gender analysis is that the responses on broader measures of general wellbeing tend to be quite similar across women and men (see Figure 8). This would seem to indicate that the value that Grab's services ultimately bring to women is no less than what they bring to men, regardless of the differences outlined above.

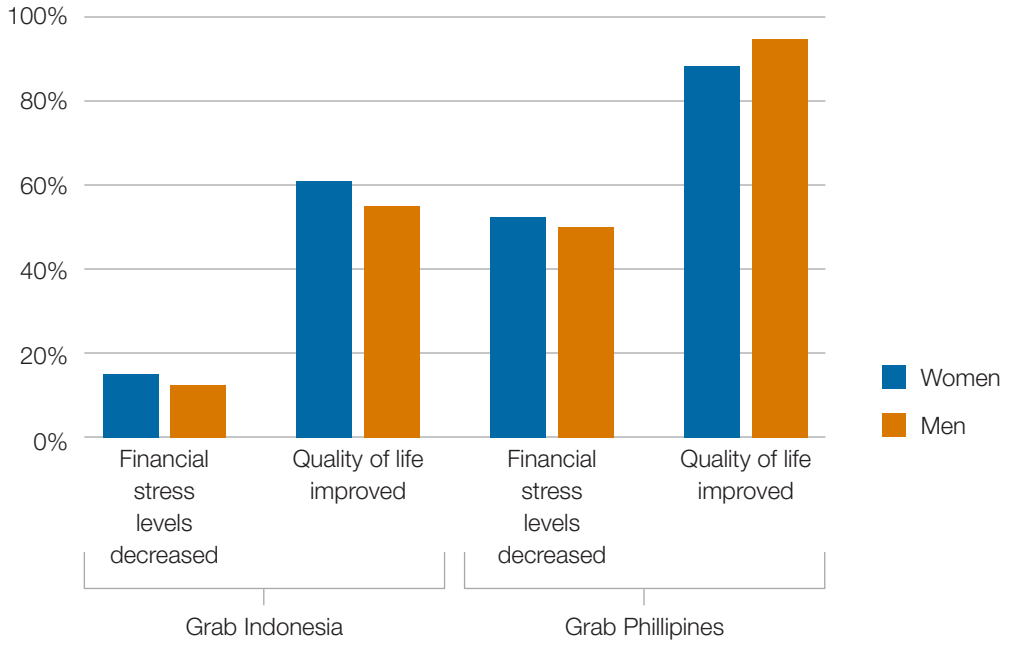
In conclusion, our empirical research with customers of these firms seem to bear out our hypotheses around the expansion of financial inclusion that these models can bring as well as the broader benefits this can have for their financial control and general wellbeing. Whether or not clients are poor, they are clearly telling us that their financial access has improved and they are getting compelling value from these businesses.

FIGURE 11. **Grab customer responses on improved financial lives, women vs. men**



Source: CGAP/60 Decibels market research, 2022

FIGURE 12. **Grab customer responses on wellbeing outcomes, women vs. men**



Source: CGAP/60 Decibels market research, 2022

Echoing our earlier findings in similar research with TymeBank, the data also show that where these capabilities are combined with a social mission, considerable progress can be made even in the most excluded populations, including low-income, rural, and female customer segments. Nevertheless, the findings also point to enduring gender gaps as male clients seem to benefit more than female ones with some consistency across models and countries.

Taken together, our data provide compelling evidence of the powerful potential for financial inclusion that can be tapped through these models; and also point toward several agendas for future research in confirming and complementing our findings as well as in additional probing around the biases and gaps that remain.

SECTION 3

WHERE ARE THINGS HEADED?

Markets are getting more modularized through the combined effects of digitalization, shifting user demand, and commercial attractiveness of untapped opportunities. Players are coalescing around shared objectives and respective strengths, not without fear of cannibalization of their core businesses. How regulators respond to rapid changes will further shape potential outcomes. The stakes are high, and the effects of business decisions that support or oppose modularization will be exacerbated when customer loyalty becomes more difficult to secure, partnerships become more conflicted, and reconciling 'old' business models with new market reality becomes nearly impossible.

In this section we discuss some of these potential future scenarios, what they mean for various players and what new risks are emerging along the way that will require careful consideration.

Looking ahead

Modularization will create new winners and losers in financial services as successful innovators scale more quickly and customers will be able to switch away more easily from less compelling offerings. The commoditization of basic financial services will continue to grow, spurred on by new business models like Banking-as-a-Service (BaaS), resulting in limited scope for margins in that segment and motivating stronger differentiation. In that context, consumer-facing brands will win the digital experience game, and will likely compete by introducing more frictionless, intuitive, transparent, seamless, proactive, intelligent, financial services. Players that excel in these areas will gain market share from others. In back-end value chains, B2B fintech solution providers will gain bargaining power in relation to the financial services providers that need them. If a business depends on leading edge solutions by B2B providers to differentiate and meet customer demand (in a modular value chain) then the B2B providers that offer those solutions will be in a good bargaining position to capture a higher share of margins. Best-in-class fintechs may thus become highly sought after and earn significant profits as consumer expectations raise the minimum standards for what providers must offer in order to contest the market.

So where does that leave ***banks***? These developments do not mean the end of retail banking, but they will continue to reconfigure the sector and push incumbent retail banks to rethink their business. For banks, the upside is that this new modularized market structure creates more

opportunities to grow the business by focusing on *balance sheet* and *product* layers of the market (see Figure 1) and deploying their capital at greater scale through partnerships. This is exemplified, for instance, in the strategy adopted by Banco Davivienda in Colombia and its **Daviplata** platform, powering customer-facing digital businesses and deploying assets through them. This has also been a motivation for the various banks that have partnered with **Grab** or with **M-Pesa,** seeing in these platforms an opportunity to deploy (and mobilize) more assets. The downside is that unless they are able to develop a strong customer play themselves, adopting this type of back-end role focused on enabling other players may gradually lead incumbent banks to lose ground in the consumer market and create increasing tensions with their existing core business. One way to resolve this tension is to lean into the modular market structure by adopting a pure Banking as a Service (BaaS) model and step out of the *customer relationship* layer altogether. In specific cases, FSPs have been able to protect their last-mile advantage, as reflected in the relationship that non-bank financial institutions have built to distribute **Kaleidofin's** products in India. How long they will be able to enjoy that advantage is a function of how quickly digitalization progresses in India, and one possible outcome is for them to eventually pull-back toward a back-end role once their clients are digitally equipped. In short, while some banks will have the resources, appetite and incentive to play both in the back-end and in the customer relationship space, it remains possible that many will relinquish the customer relationship in favor of better positioned digital platforms.

Although ***Platforms*** are completely transforming the Customer and Distribution layers of the market, they have so far been reluctant to underwrite financial products directly due to the underlying licensing and oversight requirements. This might play out well for banks in the near-term. As long as the market remains largely to be captured, platforms have an incentive to focus on growth instead of integration, but this is already starting to change in some markets. **Grab** is launching a digital bank in Singapore to deepen their financial services play in a market with limited scale and Rappi, initially powered by **Daviplata,** is now seeking its own license in Colombia to integrate its services more. In many ways, platforms will likely find themselves in a position of strength, in selecting the few banks that they want to partner with and leaving them in a weak bargaining position. Their cost-efficient models will then push pressure down to balance sheet partners, further impacting already thin margins. This is already playing out in how **M-Pesa** reengineered both its product offering and value chain positioning to capture a larger share of revenue.

Mobile money providers are likely to remain primary suppliers of digital payments in many markets given the capital-intensive nature of their business model. For the foreseeable future, they will also have an obvious competitive advantage in the Customer and Distribution layers of the market in many countries. Monetizing their infrastructure and other assets (customer accounts, agents, mobile channels, data) in support of the rapidly growing fintech ecosystem or in unlocking access to market opportunities for incumbent financial institutions can generate significant upside. For example, they could widen their customer offering by plugging a range of banking and fintech products into existing mobile money accounts. This could be achieved through transitioning toward a platform business model, a move that **M-Pesa** and others are already embracing, including in the lending space. Open APIs are providing the technological underpinning for a more open platform play, which will unlock new opportunities. Some mobile

money providers might acquire a banking license of their own, further verticalizing part of their financial services business while also supporting a horizontal ecosystem play. To be sure, very few mobile money providers have pursued a banking license in the first fifteen years of that industry. However, the advent of bespoke digital banking licensing regimes and Banking-as-a-Service business models are expanding the available options, so that mobile money providers will have multiple avenues to explore in further evolving their business model to adjust to new market realities and opportunities.

Fintechs will likely continue to play an important role in the Product layer and will have more opportunities to connect with platforms on the one hand, to access vast numbers of digital customers at lower distribution costs, while partnering with balance sheet providers on the other hand to overcome regulatory hurdles and minimize investments in financial licenses and operations. In this way, they will be able to embed white-label products and services into third-party platforms and achieve scale. **Kaleidofin** provides an illustration of how these partnerships are already playing out both on the front end and in the back end, in the specific context of financial inclusion in India. **Grab** provides another example of how fintech companies specialized in insurance risk scoring can partner with ride-hailing platforms and insurance companies to enable the underwriting of microinsurance products. With favorable conditions for investing in Fintech, improved digital infrastructure, and more policies that promote innovation, including more regulatory convergence across borders, Fintechs are likely to create a meaningful role for themselves in increasingly distributed ecosystems.

For ***customers***, probably more in the longer run, this all should translate into greater access to better, more flexible, and more affordable products that provide a better fit with their complex day-to-day needs. It might also drive more ease of use of financial products as they get increasingly embedded into other products and experiences with which customers are more familiar. This of course comes with barriers and risks, especially for low-income segments of the population. On the barrier side, access to connectivity, digital tools, and some level of digital proficiency in addition to financial skills will be required for individuals to take full advantage of the opportunity. On the risk side, new risks are emerging around cybersecurity, data privacy, consumer protection and of course digital governance more broadly. We will discuss some of these risks in more detail below.

Emerging risks

Despite the benefits discussed, modularization will also bring new and increased risks. The changes to the functioning of the financial services market outlined in this report will likely be beneficial in various ways, but they will also contribute to an evolving risk environment. Here are some of the high-level areas about which regulators and supervisors will need to be particularly alert:

- As the number of companies involved in the provision of services increases, oversight may grow more challenging, and questions of where risk and liability reside could become increasingly complicated to answer. If left unmitigated, the incipient modularization of finance can lead to lack of clarity on risk exposure across actors in the financial services value chain.

As with all financial innovation, the imperative to ensure consumer protection is crucial. Modularization will present new risks around liability and transparency, not least around the security and appropriate use of customer data. Whether they use fintechs in back-end value chains or customer facing product offerings, the onus on traditional banks and others to manage third party risk will increase significantly. Beyond the risk to individual banks, a growing reliance across multiple banks on the same set of highly specialized providers of various banking processes can also create concentration risk across the banking sector. This is something regulators will have to consider and may need new registration, licensing, and oversight responsibilities as well as new considerations around the regulatory perimeter as non-banks and other entities outside the purview of financial authorities play an increasing role in the financial sector.

- Banks moving into BaaS models will need to have exceptionally strong due diligence and compliance functions to manage risks around how client companies onboard new customers and the way they treat them. This risk may be compounded by the difficulty in seeing end-to-end transactions that happen on the client companies' platforms. The importance of economies of scale in BaaS models may also create competition and "too big to fail" concerns, as unit costs decline with scale and become an effective moat against potential competitors. Price competition with players that have far leaner cost structures and whose motivations in financial services may not primarily revolve around direct revenue may erode the profitability of some banks. Customer disintermediation may exacerbate this risk and pose a threat to the soundness of some institutions. If multiple incumbents are impacted by such trends at the same time, it could risk growing into a broader financial stability concern. While this does not negate the potential consumer gains from lower costs and higher competition, it may create periods of transition that need to be carefully managed by financial authorities.
- The emergence of financial platforms that have regional or global remit heightens the need for cross-border regulatory coordination and convergence. Indeed, these platforms raise trans-national concerns in complex areas such as data privacy, cybersecurity, data concentration, algorithmic biases, income taxation, etc. The need for more coordinated approaches to effective regulation will increase the burden on financial regulators and others.
- Lastly, the modularization trend is closely linked to technology and business model innovation. As a result, it will be essential for regulators and supervisors to keep their own capabilities up to date. This may include updating staff training and composition as well as developing reflective and iterative approaches that are more fit for purpose. In that process, technology may also offer new ways for financial authorities to fulfill their mandates, thanks to innovation in "RegTech" and "SupTech".

The scenarios depicted above, as well as the emerging risks, are helpful as we reflect on the trajectories that modularization might take and their potential effects on ecosystem players, on customers and on the work of regulators. How these play out is still uncertain but will largely be shaped by decisions that these actors make today.

Concluding thoughts

All of the companies described in our case study are on a journey. They set out from different starting points and they have different destinations in mind; in many cases, the destination may not yet be entirely clear. What unites them is that this journey has taken them into partnership models with an unusually high degree of clarity around the division of roles, along the four layers described in Figure 1. As such, they all illustrate the 'gains from trade' across complementary partners that a modular market structure can offer in financial services.

That being said, this is not a static picture. Over time, the ambitions and partnership decisions taken by companies like these are evolving, in response to a combination of factors including market maturity, corporate strategy, commercial viability, regulatory context, and customer demand. Some of these companies may yet move toward greater vertical integration by absorbing additional layers, such as deploying their own balance sheets, building their own distribution networks, or pursuing their own digital channels direct to customers.

This fluidity is normal during a period of flux and rapid innovation in the marketplace and does not, in our view, contradict the basic drive toward as more modular market structure. The dividing lines between the four layers are often deep, meaning there are good reasons to specialize:

- The *balance sheet* layer is distinguished by the significant regulatory requirements and related costs that tend to come with banking and other financial licenses. As these requirements change, for instance due to digital banking licenses and other specialized licensing regimes or to the reinterpretation of existing regulation for fully digital models, this dividing line may diminish and make vertical integration more appealing.
- The *customer relationship* layer is defined by the cost of customer acquisition, which tends to be a hurdle for FSPs in general and fintech startups in particular. The potential for scale through partnership with players that have already acquired large customer bases and serve them through low-cost digital channels is a powerful driver of specialization for balance sheet and product actors.
- The *distribution* layer is predicated heavily on the considerable investment required to build out and service physical distribution infrastructure, whether in the form of cash agents, delivery vehicles, or ride-hailing providers.

The shift toward a more modular structure of financial services will therefore take different routes and move at different speeds in different markets, depending on the regulatory context, the state of financial inclusion, the existence and trajectories of digital platforms, the extent of distribution networks, the maturity of fintech ecosystems, and the choices made by various stakeholders. By presenting a series of case studies, we have tried to describe the underlying forces and illustrate what they have led to in these specific circumstances and at this particular point in time.

By undertaking demand research to explore how Grab and Kaleidofin customers themselves perceive the financial services they are offered, we are providing an initial set of empirical evidence around the impact that these modular market structures can have on financial inclusion. While our effort was limited in scope and further research in this space is undoubtedly

needed, we believe that this first set of data can help shed valuable light on the hypotheses that CGAP has articulated in our earlier work around the potential role of these models.[7]

Our findings offer compelling support for the idea that the shift toward a more modular market structure can have a profound impact on financial inclusion. They demonstrate clearly that such models can contribute to both a significant expansion in scale and a deepening of the range of services the to which the unbanked and underserved populations have access.

7 Review CGAP's body of work on modularization and broader fintech topics at www.cgap.org/fintech

REFERENCES

Awanis, Aramé, Christopher Lowe, Simon K. Andersson-Manjang, and Dominica Lindsey. 2022. "State of the Industry Report on Mobile Money 2022." London, United Kingdom: GSMA. https://www.gsma.com/sotir

Balzer, Ben, Brian Lavery, Sangho Lee, and Janel Ong. 2020. "Singapore FinTech Landscape 2020 And Beyond."Oliver Wyman. https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2020/dec/singapore-fintech-landscape-2020-and-beyond.pdf

BFA and Mastercard Foundation. 2019. "Digital Commerce and Youth Employment in Africa." https://mastercardfdn.org/research/digitalcommerce/

CB Insights. 2022. "State of Fintech 2021 Report." https://www.cbinsights.com/research/report/fintech-trends-2021

Fintechnews Indonesia. 2021. "Indonesia Fintech Report and Map 2020." 18 October. https://fintechnews.sg/45513/indonesia/indonesia-fintech-report-and-map-2020/

Kemp, Simon. 2021. "Digital 2021 October Global Statshot Report." Datareportal, July. https://datareportal.com/reports/digital-2021-october-global-statshot

Naghavi, Nika. 2019. "Payments as a platform: The future of mobile money." GSMA blog post, 21 February. https://www.gsma.com/mobilefordevelopment/blog/payments-as-a-platform-the-future-of-mobile-money/

Porteous, David. 2020. "iWorkers: How large is the African market for digital commerce?" BFA Global blog post, 19 February. https://bfaglobal.com/iworker/insights/iworkers-how-large-is-the-african-market-for-digital-commerce/

United Nations. 2020. "Estimates of Global E-Commerce 2019 and Preliminary Assessment of COVID-19 Impact on Online Retail 2020." UNCTAD Technical Notes on ICT for Development, N 18. https://unctad.org/system/files/official-document/tn_unctad_ict4d18_en.pdf

World Economic Forum. 2019. "Our Shared Digital Future Responsible Digital Transformation – Board Briefing." Geneva, Switzerland: WEF. https://www.weforum.org/whitepapers/our-shared-digital-future-responsible-digital-transformation-board-briefing-9ddf729993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