MOBILE LENDING
THE NEW FRONTIER IN MOBILE FINANCIAL SERVICES:
A COMPLEX ENVIRONMENT WITH NO CHAMPION YET

by Stefano Sorrentino, Maria Vittoria Grilli, Gary Zhou
Mobile Lending
The new frontier in Mobile Financial Services:
A complex environment with no champion yet

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CONTENTS

THE RAPIDLY CHANGING LANDSCAPE IN FINANCIAL AND TELECOMMUNICATIONS INDUSTRIES 5

MOBILE LENDING: AN ATTRACTIVE NEW BUSINESS OPPORTUNITY BUT FEW PLAYERS YET 7

CASE STUDY 1. FROM CASH-IN/CASH-OUT TRANSACTIONS TO MOBILE LENDING: THE EVOLUTION OF MOBILE MONEY 10

KEY ENABLING FACTORS: REGULATORY ENVIRONMENT, CONSUMER DEMAND AND TECHNOLOGICAL READINESS 12

MAIN PLAYERS: MOBILE OPERATORS, BANKS, AND INDEPENDENT THIRD-PARTY PROVIDERS 15

CASE STUDY 2. GLOBE’S ENDEAVOUR IN MOBILE LENDING 17

BUSINESS MODEL: PARTNERSHIP OR GO-SOLO? 19

PARTNERSHIP BETWEEN BANKS AND MOBILE OPERATORS: PAVING THE WAY TOWARDS THE CHAMPION 21

CASE STUDY 3. SUCCESSFUL PARTNERSHIP BETWEEN CHINA MERCHANTS BANK AND CHINA UNICOM TO LAUNCH CONSUMER FINANCE JOINT VENTURE 22

KEY RISKS IN THE MOBILE LENDING BUSINESS: CREDIT DEFAULT, TECHNOLOGY, REGULATION AND IP 24

PROPOSED ROADMAP TO ESTABLISH MOBILE LENDING BUSINESS 25

CONCLUSION 26

AUTHORS 27

ABOUT VALUE PARTNERS 28
Four forces are shaping the financial services and telecommunications industries today: financial inclusion, mobile-services, digital transactions and data processing capabilities.
THE RAPIDLY CHANGING LANDSCAPE IN FINANCIAL AND TELECOMMUNICATIONS INDUSTRIES

The fast-paced, rapidly changing world of the 21st century is not only transforming customer needs but also reshaping industry boundaries, as technology shatters entry barriers and redesigns value chains. Financial services and telecommunications industries are among the most affected by the changing force of technology, and traditional players in these segments need to adapt quickly to avoid being swept away by the latest outsiders joining the game.

Four forces are shaping the financial services and telecommunications industries today: the growing need to boost financial inclusion, the pervasiveness of mobile-based service delivery, the increased confidence in handling digital transactions, and the unprecedented availability of data and processing capabilities.

1) Financial inclusion

Financial inclusion allows every individual and business to access basic financial products and services, such as savings, credit, and payments. Financial inclusion has been under the spotlight of developing countries’ regulators in recent years, to improve the quality of life of the poorer segments of the population.

Initially, only a concern of NGOs or specialized microfinance institutions, financial inclusion is now being positively eyed by traditional banks, originally concentrated in affluent urban areas, as an opportunity to expand into a new untapped segment while at the same time pursuing a community-enriching social cause. The main challenges, however, lie with the model development itself, i.e. how to assess the credit worthiness of the unbanked segment? How to set up a cost-efficient model that could thrive in a high-risk environment?

EXHIBIT 1
Four forces shaping the financial services and telecommunications industries
2) Mobile-based service delivery

As mobile technology penetrates every aspect of the customer’s daily lives, companies in almost every industry are tapping the mobile channel to both acquire new, and serve existing customers through tailored and cost efficient service models. In addition to expanding the range of financial services offered online, banks are also changing the way they interact with clients. For example, China Merchants Bank pioneered the use of WeChat, the most widely used instant messaging (IM) mobile app in China, allowing customers to live chat 24/7 with customer service representatives. This shift allowed mobile phones to become the primary point of contact between the bank and the clients, bypassing physical branches.

3) Digital money

The pervasiveness of mobile money services in developing countries and the steep rise of m-commerce in more developed countries have educated users on the convenience and security of handling digital money. By the end of 2016, there were over 250 mobile money service providers across the world. Noteworthy, mobile money products offered by mobile operators have thrived in countries with low smartphone penetration and financial inclusion. One of the most successful mobile money services, M-Pesa, originating from Kenya, sourced most of its client base among mobile users who had never opened a bank account.

Through digital money, cashless payment for online and offline shopping, bill payment, real-time and low-cost remittances, investment on wealth management products, all converge on one smartphone application.

4) Data processing capabilities

The ubiquitous use of technology in designing, delivering and using services generates an unprecedented amount of data, from transaction records, to demographics, and even lifestyle and behavioural information. Thanks to the most recent technological developments, such as data mining algorithms and machine learning technology, companies are now able to store and process such data. Where regulations allow, institutions are setting up agreements to share customer data and expand the volume and type of information available to each party, one example being the recent partnership between the Industrial and Commercial Bank of China (ICBC) and JD.com, the second largest online shopping portal in China.

Within the lending industry, enhancing data processing capability is also revolutionizing credit underwriting procedures by deploying a new set of social and transactional data to enrich or even replace traditional credit profiles, especially among those markets or client segments where standard credit records are unavailable.
MOBILE LENDING: AN ATTRACTIVE NEW BUSINESS OPPORTUNITY BUT FEW PLAYERS YET

The convergence of the four forces above has set the ground for the development of mobile lending, especially in developing countries, where technically advanced service providers have found a sizeable segment of digitally-educated customers with a largely unmet demand for credit.

However, there is growing diversity on how providers deploy mobile technology in their loan products. We classify three types of loans (Exhibit 2). For traditional loans, mobile technology is deployed merely as a method of notification (e.g. approval of loans, reminder for repayment). For mobile-enabled loans, application, disbursement and repayment can be completed via mobile phones, while credit assessment is still conducted offline based on traditional credit records (e.g. payroll, traditional collateral, etc.). Pure mobile loans, on the other hand, deploy mobile technology throughout the entire loan process, and, in particularly, draw on social and transactional data for the credit assessment.

This perspective focuses on the third type, pure mobile loans, where the loan process becomes paperless and even cashless, replacing lengthy documentation, long queues at the branches, and prolonged approval time.

Commercial banks are generally offering traditional loan products via their mobile banking applications. In some cases, smartphones are used as the application channel, however underwriting, disbursement and collection procedures remain offline. Only in recent years, some commercial banks, such as Regions Bank and JP Morgan Chase in the US, have started experimenting with innovative credit scoring models, where new sets of data are used to assess clients’ credit worthiness.

On the other hand, in a mobile-enabled or fully mobile-based lending model, the loan process can be completed entirely through mobile phones. Most active operators are fintech companies, such as Zopa in UK and LendingClub in USA, which first established transaction platforms for peer-to-peer (P2P) investment and borrowing, and mobile operators, which started to offer mobile lending as a natural evolution of mobile money solutions in developing countries.
## EXHIBIT 2
Comparison of loan types

<table>
<thead>
<tr>
<th></th>
<th>Loan Application</th>
<th>Credit Scoring</th>
<th>Loan Disbursement</th>
<th>Repayment and Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Traditional Loans</strong></td>
<td>Paper-based application forms in branches</td>
<td>Credit history from official credit bureau, property, employment status</td>
<td>Loans disbursed via bank account</td>
<td>Relies heavily on human efforts, such as call centers, collectors</td>
</tr>
<tr>
<td></td>
<td>Standard documents including ID, payroll, bank statements etc.</td>
<td>Offline evaluation and credit officer approval</td>
<td>Client may receive SMS notice on due day and upon repayment</td>
<td>May engage collection agencies</td>
</tr>
<tr>
<td></td>
<td>Collateral may be required</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mobile-Enabled Loans</strong></td>
<td>Application via mobile phones</td>
<td>Credit assessment primarily offline through branch network or agents</td>
<td>Loans disbursed and repaid via either mobile money wallet or bank account</td>
<td>Similar to traditional loans, relies heavily on human efforts</td>
</tr>
<tr>
<td></td>
<td>Documents uploaded on the mobile applications or posted to providers’ offices</td>
<td>Traditional scoring models, no transactional / behavioral data used</td>
<td></td>
<td>May deduct outstanding balance from client’s mobile wallet</td>
</tr>
<tr>
<td><strong>Pure Mobile Loans</strong></td>
<td>Application via mobile phones</td>
<td>Scoring model include non-traditional data (e.g. airtime, transaction, social media records)</td>
<td>Loans disbursed and repaid via client’s mobile wallet</td>
<td>Few human-involved collection activities</td>
</tr>
<tr>
<td></td>
<td>No or limited documents required</td>
<td>Algorithm-generated scoring, no human interaction</td>
<td>Client can withdraw cash at banks / agents network</td>
<td>May deduct outstanding balance from client’s mobile wallet</td>
</tr>
<tr>
<td></td>
<td>No collateral</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The main innovation of pure mobile loans is to be found in the credit model, which leverages on transactional and social data available online to increase predictive capacity and provide real-time client evaluations. Such models also allow operators to expand their lending services to the unbanked segment of the population, lacking credit records and other official documents (e.g. payslips, ID cards).

For example, the credit scoring algorithm of M-Shwari, the mobile lending service launched by Safaricom in partnership with a local Kenyan bank, consists of a set of transaction data from Safaricom’s airtime, M-Pesa’s (mobile money) transaction records, as well as their tenure as a customer.

Similarly, the credit scoring model of Alipay, the largest mobile money provider in China, encompasses data sources from 5 areas: credit history from the credit bureau, consumption behaviours (payment records on Alipay, search and purchase history on Taobao, the online shopping portal), transaction history on Alipay (credit card, loan repayment history, and deposits, also from other bank accounts linked with Alipay), identity verification (ID, job and payslip), as well as the credit scores of the client’s personal connections on Alipay (for more information on the innovative credit models, see the enclosed case study “Globe’s endeavour in mobile lending”).

Nevertheless, mobile lending remains relatively small in terms of size. By 2016, only 52 out of 277 mobile money providers worldwide (19%) offered mobile-enabled loans or pure mobile loans. The value of mobile loans released in Kenya, despite being deemed the most active market for mobile lending, was still less than 1% of the total transaction value on mobile money in 2016.

The main reason is to be found in the credit risk intrinsic to a low-touch lending model. As the whole process shifts to mobile, human touch becomes marginal up to non-existent and the standard mechanisms normally deployed by microfinance institutions, such as group lending or cash pick-up, cease to exist, and risk of default increases.

The following chapters will investigate the exogenous market conditions and endogenous factors that allow lending services to thrive while mitigating risks.
CASE STUDY 1
FROM CASH-IN/CASH-OUT TRANSACTIONS TO MOBILE LENDING: THE EVOLUTION OF MOBILE MONEY

First launched in 2001 in the Philippines to enable domestic remittances, mobile money services are now thriving in developing markets, where they play a critical role to serve the underbanked population and promote financial inclusion.

After a slow uptake, 2007 was a watershed year, set apart by the launch of M-Pesa by Safaricom in Kenya. Before M-Pesa, there were only 6 mobile money providers in 4 countries, counting around 580,000 active users collectively. Merely a year since its launch, M-Pesa crossed the one million active accounts mark. Safaricom gradually replicated the business in 10 neighbouring countries, providing the underserved population access to safe and fast financial services.

Mobile money providers initially provided only basic services such as cash-in/cash-out (to deposit and withdraw money through a network of partner outlets), P2P transfers and domestic remittances, and airtime top-up. Still today, P2P transfers contribute nearly 70% of total transaction value and over 60% of transaction volume.

In recent years, mobile operators introduced new services including bill payment, merchant payment and bulk disbursement services (such as salary payments), which brought mobile money into a more sophisticated phase of development. These advanced services have broadened the scope of mobile wallet from simply a money transfer tool to an enriched financial service platform with positive network effect (see Exhibit 3).

Although volumes and values are still growing, the number of service providers is finally stabilizing after a decade of impressive growth globally (see Exhibit 4). With up to three to four players in a single market, a phase of consolidation has started with the aim to achieve synergies in customer acquisition and operations, while focusing on the launch of new, value-added services.
EXHIBIT 3
Estimated mobile money transaction volume in millions, 2001-2016

EXHIBIT 4
Number of mobile money providers globally, 2001-2016
KEY ENABLING FACTORS: REGULATORY ENVIRONMENT, CONSUMER DEMAND AND TECHNOLOGICAL READINESS

The local regulatory environment, consumer demand and technological readiness of each country will determine the success of the mobile lending initiatives and the type of providers.

**Regulatory environment.** Regulatory environment is the foremost consideration, since local regulators may restrict lending licenses to financial institutions, and exert more stringent Know-Your-Customer (KYC) and Anti-Money-Laundering (AML) requirements. In such cases, non-banking players may be required to obtain lending licenses or partner with local banks to launch a mobile lending service.

On the loan repayment side, factors such as availability and speed of judicial remedies or the existence of a national identification system, will regulate the efficacy of collection initiatives.

**Consumer demand.** Consumer demand will determine the speed of mobile lending uptake and upsize of the business. In particular, in developing countries where traditional financial services fail to reach the lower strata of society, there is a strong unmet demand for credit from alternative sources. This is the case for example of the Philippines whereby only 30% of the population is banked, while 80% is indebted. Under such market condition, mobile loans have massive potential to develop and scale up.

**EXHIBIT 5**
Ideal market conditions for mobile lending

![Diagram showing ideal market condition with axes for Regulation Pervasiveness, Consumer Demand, and Technology Diffusion.](image-url)
Technological readiness: The technology environment also plays a critical role in the development of mobile lending services. First, smartphone penetration will determine which technology (i.e. USSD or iOS/Android-based apps) is to be deployed. Second, mobile money presence increases the expected uptake of mobile loans and lowers the risk of default, since a widespread mobile money service reduces customer education costs. Both factors also play a key role in determining which data are available to providers to be used in the credit scoring model.

A supportive regulatory environment, strong consumer demand for small credit, and readily available mobile technology are key to the success for mobile lending services in any markets (see Exhibit 5).

In markets where mobile lending is flourishing, such as Kenya, the Philippines and China, these enabling factors have already reached at least medium to high level (see Exhibit 6). Interestingly, although regulatory environment and technology are favourable in the US, the low demand for consumer loans via mobile, met instead by traditional loans, hampered growth of mobile lending services.
## Main mobile lending players and key characteristics

<table>
<thead>
<tr>
<th>MOBILE OPERATORS</th>
<th>BANK</th>
<th>THIRD PARTY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRODUCT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Microloans with loan size below USD500, generally unsecured</td>
<td>• Loan size smaller than traditional loan products</td>
<td>• Microloans in emerging markets</td>
</tr>
<tr>
<td>• Short term</td>
<td>• Online application and fast approval</td>
<td>• Unsecured consumer loans (&lt; USD 1,000) in developed countries</td>
</tr>
<tr>
<td>• Linked with mobile wallet</td>
<td>• Unsecured</td>
<td></td>
</tr>
<tr>
<td><strong>TARGET CUSTOMER</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Unbanked and low income population</td>
<td>• Banked population</td>
<td>• Younger generation</td>
</tr>
<tr>
<td>• Mobile money users</td>
<td>• Smartphone users</td>
<td>• Small or urgent needs for cash</td>
</tr>
<tr>
<td><strong>TECHNOLOGY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• USSD-driven</td>
<td>• Via bank’s mobile banking app</td>
<td>• App based</td>
</tr>
<tr>
<td>• Add-on to mobile money platform</td>
<td></td>
<td>• Cash-to-deposit or cash-to-wallet disbursement</td>
</tr>
<tr>
<td><strong>CREDIT RISK</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Credit scoring based on mobile money history and call records</td>
<td>• Credit scoring based on clients’ credit history</td>
<td>• Credit scoring based on bureau rating, airtime, and social media data</td>
</tr>
<tr>
<td>• Partner banks (if any) share default risks</td>
<td>• Undertakes full default risk</td>
<td>• Service providers take full risk</td>
</tr>
</tbody>
</table>
MAIN PLAYERS: MOBILE OPERATORS, BANKS, AND INDEPENDENT THIRD-PARTY PROVIDERS

Three players operate in the mobile lending landscape: mobile operators, commercial banks and third-party fintech companies. The prevalence of each type of player will depend on the market conditions of the country, namely regulatory, demand and technological environment:

Mobile operators. Mobile operators are the leading service providers of mobile lending, usually in partnership with a local bank and leveraging proprietary mobile money platforms for loan application, disbursement and repayment. Mobile lending services initiated by mobile operators are more prevalent in developing countries, where the local mobile operators enjoy substantial advantage due to their unparalleled client base and access to customers’ data, while the banks’ penetration is generally limited to the affluent segments of the population. Safaricom, for example, successfully launched M-Shwari in Kenya, in partnership with Commercial Bank of Africa, and later entered Tanzania with M-Pawa. Following a different path, Globe in the Philippines has recently relaunched its mobile lending service through the fully-owned subsidiary Fuse, after terminating a joint venture with a local bank. As part of the re-launch, Globe, collaborating with an external provider, developed a new credit scoring based on transaction (call data records, mobile money transactions) and online data.

Banks. Commercial banks are offering mobile loans through their self-developed mobile banking applications. This model has a stronger presence in the developed world, especially where direct banking is matured and pervasive. BNP Paribas founded Hello Bank in 2013, the first pure mobile bank in Europe, offering a wide range of products and services including mobile loans. In developing countries, however, banks are more likely to partner with local mobile operators to reach clients, as web- or app-based direct banking is less pervasive in these markets.

Third-party. Third-party fintech companies are also active players in the mobile lending landscape. Historically, third-party providers have focused on peer-to-peer (P2P) lending where borrowers can publish their credit needs on the platform, and investors can choose which loans to fund according to their risk preferences. P2P platforms charge commission fees and let individual investors bear default risks. Zopa, launched in 2005 in London, was the first P2P lending platform. Since its establishment, Zopa has lent over GBP 2.3 billion (~USD 3 billion) to around 270,000 borrowers. As the market evolves, fintech companies, such as Alipay (China) and Avant (USA), are now offering standard consumer loans. Avant funds its loan portfolio through external capital investments, granting unprecedented fund size and flexibility relative to P2P players, and draws on various social and transactional data for credit assessment.
Different players will operate better under certain market conditions (see Exhibit 8), mobile operator-led initiatives are more prevalent in developing markets struggling with financial inclusion where the unmet demand for credit guarantees significant potential for mobile lending. Bank-led mobile lending services, on the other hand, are more prosperous in the developed world due to the availability of traditional credit records and the clients’ familiarity with direct banking via mobile. Fintech companies prevail in markets where the regulator encourages innovation and there is unmet demand for small consumer loans.

Similar offerings are also starting to emerge in developing countries, especially where mobile money is a well-established reality. Jumo, first launched in Kenya in 2014, offers mobile money users access to borrowing and saving opportunities. The fintech company deploys a credit scoring based on mobile usage, including number and type of apps downloaded, number of records on the phone address book and their recording methodology, such as presence of name/nickname only, name and surname, additional info, etc.

**EXHIBIT 8**
Favourable market pre-requisites for each player

<table>
<thead>
<tr>
<th>REGULATION</th>
<th>MNO-LED</th>
<th>BANK-LED</th>
<th>THIRD PARTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Regulator encourages competition and innovation</td>
<td>• Lending licenses restricted to non-banking players</td>
<td>• Lending licenses restricted to registered financial institutions</td>
<td>• Regulator encourages innovation and loosens compliance requirements</td>
</tr>
<tr>
<td>• Lending licenses to non-banking players</td>
<td></td>
<td>• Compliance procedures favoring players with lobbying experience</td>
<td>• Well-defined KYC and AML requirements to guide and regulate loan providers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONSUMER DEMAND</th>
<th>MNO-LED</th>
<th>BANK-LED</th>
<th>THIRD PARTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Large unbanked or underbanked population</td>
<td>• Strong unmet demand for small credit</td>
<td>• Majority of population is banked with track credit history</td>
<td>• Limited credit options for specific population segments (unbanked, lacking regular income, etc.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TECHNOLOGY</th>
<th>MNO-LED</th>
<th>BANK-LED</th>
<th>THIRD PARTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Well established mobile money service</td>
<td>• Ability to use non-traditional data for credit scoring</td>
<td>• High smartphone penetration</td>
<td>• Advanced IT capabilities in credit scoring algorithm, data mining</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Availability of mobile banking solution</td>
<td>• Pervasive mobile money service or high smartphone penetration</td>
</tr>
</tbody>
</table>
CASE STUDY 2
GLOBE’S ENDEAVOUR IN MOBILE LENDING

With a population of 100 million scattered across over 7,000 islands and largely unbanked, the Philippines has been a prosperous country for mobile money.

In October 2004, Globe launched GCash, a mobile money platform offering remittances, cash-in/ cash-out, and bill payment. GCash immediately achieved significant success, and now counts 3 million clients conducting PHP 1 billion (~US $20 million) worth of transactions per week. To strengthen its financial capabilities, Globe launched a joint venture with its sister company Bank of the Philippine Islands (BPI) to establish BPI Globe BanKO (BanKO) in 2010, the first mobile savings bank in the country.

While the joint venture was eventually terminated, Globe remained committed to mobile lending. In 2015, it established Mynt, a wholly owned fintech subsidiary, to manage GCash (mobile money) and Fuse, its new in-house lending, financing and credit arm. Fuse currently offers mobile micro-loans, private loans and business loans for micro- and small-entrepreneurs. Within a year of operation, Fuse had extended 4,000 loans to over 3,000 borrowers.

Lacking a national credit bureau, Fuse has developed its own credit scoring model, which integrates proprietary loan repayment performance data, airtime data from Globe, mobile money transactions from GCash, and deploys psychometrics algorithms provided by scoring partners such as EFL. All data contribute to create a comprehensive assessment of the client. For example, the mobile phone model reveals information on financial capacity, the quality of uploaded images provides information on the client’s character (e.g. punctuality on repayments) while location-based airtime data are an indication of the client’s profession.
## EXHIBIT 9
Advantages and disadvantages of each lending model

<table>
<thead>
<tr>
<th>Lending Model</th>
<th>PROS</th>
<th>CONS</th>
</tr>
</thead>
</table>
| MNO-LED       | • Unparalleled customer base and wide retail network  
• Established mobile money as a low-cost platform for transaction  
• Vast air time and transaction data for credit scoring | • Need to establish relationship with regulators, especially negotiation for license  
• Lack of essential skills and knowledge in the financing business, especially credit risk control | |
| BANK-LED      | • Existing lending license  
• Extensive market expertise in compliance, risk, sales, etc.  
• Established credit profile and credit scoring model | • Primarily serves existing clients, hard to reach unbanked or underbanked population  
• Strict risk control and credit assessment prolong loan process | |
| THIRD-PARTY   | • Entrepreneurial and innovative, willing to learn from errors  
• Disruptive market offerings to target segments  
• Backed by seasoned institutional investors who bring in capital and management expertise | • Small and unbranded, facing challenges in customer recognition and competition with giants  
• Vulnerable to external regulatory oversight and shifts in consumer demand | |
BUSINESS MODEL: PARTNERSHIP OR GO-SOLO?

Mobile operator-led initiatives can enjoy an unrivalled customer base and have access to vast customer data from the traditional telecommunication business, but inevitably lack relevant experiences in the microfinancing industry. On the contrary, bank-led businesses understand risk dynamics well, but their reach is generally limited to existing clients of the bank and may be slower in implementing innovations, specifically on credit underwriting.

Third-party providers are much smaller in size and may lack data and client access unless they partner with mobile operators or operate in developed countries with established credit scoring systems. However, given their smaller scale and entrepreneurial spirit, they are agile to market changes.

To take advantage of the strengths under each mode and minimize risks, each player may choose to enter the mobile lending business through partnerships or independently. In Exhibit 10, businesses mapped on the axes adopt the “build-it-independently” model, whereby the engagement of another organization is minimal. On the contrary, businesses mapped on the quadrants choose to collaborate with another organization in developing mobile lending services.

EXHIBIT 10
Examples of business models adopted by different players
The “build-it-independently” model allows the organization to assume full control of the business, but it may generate additional risks due to its limited knowledge and expertise. Commercial banks, mobile operators and third party providers are still distinctive in the way they build the business. For example, as a subsidiary of Globe Telecom, Fuse leverages heavily off Globe’s airtime data and transaction data while it uses Globe’s mobile money solution for loan disbursement and repayment. Hellobank, in contrast, still relies on traditional credit profiles and credit bureau scores to evaluate credit worthiness. Alipay, a third-party player, established its credit model through vast transactional and social media records.

Partnerships, strategic alliances or joint ventures, on the contrary, enable participating players to share the initial investment and leverage their respective strengths, but it may also increase coordination costs. The interplay among three main players generates three partnership modes:

Bank-Third party partnership. This partnership mode is prevalent in mobile lending, as third-party service providers disburse loans and demand repayment through bank accounts, with banks acting as custodians. More remarkably, banks, similarly to mobile operators, have also started to adopt the predictive credit scoring model developed by third party providers. In April 2016, US-based Regions Bank announced a partnership with Avant, a mobile app-based lending service provider, to offer unsecured loans via online and mobile, using Avant’s credit scoring technology.

Mobile operator-Bank partnership. Since mobile operators and banks both have extensive customer bases and complex business coverage, they are able to establish a more holistic and in-depth partnership with greater influence. M-Shwari and MUCFC are successful cases benefiting from the mobile operator-bank partnership. This partnership mode is presented in more detail in the next chapter.
PARTNERSHIP BETWEEN BANKS AND MOBILE OPERATORS: PAVING THE WAY TOWARDS THE CHAMPION

While no single business model has triumphed over others, an effective partnership between mobile operators and commercial banks can leverage essential assets and capabilities from both parties, thus paving the way towards the establishment of a market champion.

Rooted in the financial industry for decades, commercial banks can draw on their industry knowledge and expertise, which include, among others: understanding of the regulatory environment (license, KYC, AML, etc.); availability of credit data to be transferred to the new venture; funding; etc.

Mobile operators, on the other hand, claim unrivalled access to their customer base, which not only enables them to cross-sell loan products together with existing services via online and offline outlets, but also unlocks the possibility to expand into the unbanked segment of the population. Mobile money also provides an accessible, secure and low cost channel to process loan transactions, from disbursement to repayments. Most importantly however, mobile operators possess airtime and transaction data, which can be used to segment clients and develop a predictive credit policy for the unbanked segment.

Merchants-Unicom Consumer Finance Co. (MUCFC) is an example of a successful joint venture between China Merchants Bank (CMB) and China Unicom, counting 7 million customers and a portfolio of RMB 18 billion (~USD 2.7 billion) after one year of operations. Its pure mobile and cloud-based business model relies heavily on the IT infrastructure of the parent companies. In addition, both CMB and Unicom actively leverage their offline retail resources, such as branches and service points, to enable the joint venture to profit from fast and low-cost customer acquisition.
In 2015, China Merchants Bank (CMB) and China Unicom jointly established Merchants-Unicom Consumer Finance Co. (MUCFC), with each holding 50% of the shares. MUCFC offers two main products: unsecured mobile loans and consumer credit sales. In 2016, MUCFC earned a net profit of RMB 324 million (~US $50 million), immediately turning around the initial loss of RMB 83 million (~US $13 million) in its first year of operations. As of 2016, MUCFC had extended loans for RMB 57 billion (~US $9 billion) to over 7 million clients, with an outstanding balance of RMB 18 billion (~US $3 billion), in the same year, it recorded NPL rate of 0.83%, much lower than the industry average of 4.11%.

MUCFC’s great success can be contributed to favourable market conditions as well as two key strategic choices: being a pure-mobile operator and leveraging mutual synergies and partnerships.

**Favourable market conditions.** On the regulatory side, China’s Banking Regulatory Commission loosened regulations on consumer financing in 2014 (minimum holding shares of investors, registration capital and location) to encourage the development of consumer credit and MUCFC was one of the first companies established after the policy changes. In addition, consumer demand for loans has been shifting from housing and cars to more diverse consumption needs, such as education, purchase of electronic devices, home decorations, weddings, etc. which could not be satisfied by traditional loan products. Technology-wise, Alipay (by Alibaba) and WeChat Payment (by Tencent) started an intense customer acquisition competition in 2013, which brought mobile financial services to millions of Chinese households. Users became familiar with mobile shopping, payments, and investment services, tremendously reducing customer education time and marketing cost for mobile lending companies.

**Pure mobile, cloud-based.** MUCFC’s entire transaction process, from client acquisition, credit approval, to disbursement and repayment, is completed via online and mobile platforms. MUCFC currently employs a staff of 600 in the headquarters and no offline outlets. Such strategy has allowed MUCFC to lower OPEX significantly compared to competitors, such as MaShang Consumer Finance, who relies on offline sales agents to grow businesses.
Mr. Yangqing Zhang, CEO at MUCFC and former General Manager of the IT department at CMB, emphasized self-developed technology as one of the core competencies of the company. Its core banking system, including accounting and tellering, customer service, clearance, risk control, credit approval, and collections, is inherited from CMB. Based on this, MUCFC also designed functional modules, such as target customer portrait, credit scoring and analytics, risk pricing, and collection monitoring, to further enhance automation in the business. Unicom, on the other hand, provides technical support and handles construction of the IT infrastructure. Currently, MUCFC’s IT system is based on the one-stop “WoCloud” service provided by Unicom.

The partnership also combines traditional and alternative data for its credit scoring model. As one of the leading retail banks in China, CMB contributes credit data from traditional consumer lending and credit card businesses, while Unicom integrates mobile and data usage records, such as call records, top-up frequencies, broadband usage, etc.

**Integrating internal resources and establishing external partnerships.**

Unicom and CMB are actively synergizing their traditional businesses with MUCFC’s lending business. For example, clients can avail of mobile loans directly on CMB and Unicom’s mobile applications. A QR code to download MUCFC’s mobile app is also visible in both companies’ offline branches and outlets. Unicom is aggressively driving credit sales of smartphones, one of MUCFC’s core product offerings, on both its offline outlets and online shops. Such synergy brings MUCFC enormous client resources at a low acquisition cost.

MUCFC has also been active in establishing partnerships with third party platforms to reach potential clients. Since 2015, MUCFC has partnered with Alipay, the most popular mobile money service in China, allowing clients to apply for loans and purchase Unicom’s contract smartphones on credit on Alipay. The partnership not only gave MUCFC access to a much larger customer base, but also allowed MUCFC to integrate ZhiMa Credit Score provided by Alipay, combining vast online and offline transaction records, into its own credit scoring model. MUCFC also partnered with offline merchants, such as airlines, professional education agencies, and home decoration agencies, to promote its credit sales business.
As an emerging business with a relatively small size, mobile lending inevitably presents various types of risks that may hamper the chance of success in any market. The most relevant risk faced by mobile lending players include:

**Default risk**
The credit default risk is the primary concern for mobile lending service providers, as the high-touch model deployed by traditional financial institutions is no longer applicable and is generally being replaced by centralized collection activities with limited human involvement, e.g. client visit replaced by SMS or direct calls. To mitigate the risk, a predictive credit scoring model should be in place to properly assess clients’ credit worthiness. However, learning from trial and errors, and especially choosing the right predictors and their weights, can become a long and daunting process.

**Technological risk**
Mobile lending services are exposed to substantial technological risks. First, technological advancement may replace existing software and systems before they are even completed or pave the way for new, disruptive services. For example, Alipay entered mobile lending with dynamic pricing and offered customized interest rates and maximum loan size based on individual customer profile and credit score, which quickly earned Alipay market share from mobile lending companies only offering standardized products. Second, service providers are facing increasing challenges on data security and privacy, generating additional costs to ensure security and compliance.

**Regulatory and market risk**
Mobile lending business is vulnerable to regulatory and market changes. As mobile lending is gradually gaining popularity, authorities are also tightening regulations. One of the recent cases involves the new regulations on P2P lending (e.g. introduced in China in 2016) to prevent illegal fund-raising and money laundering.

On the market side, mobile lending service providers need to compete within the credit industry, facing the risk of potential shifts of customer preferences, such as loan types (secured vs. unsecured) or loan purposes, and changes in the country macro-economic situation (e.g. liquidity risk or interest rate risks) or political conditions (especially in developed countries with high levels of government instability).

**Intellectual Property (IP) risk**
Intellectual properties, such as credit scoring algorithms or client profiles, are the key assets possessed by service providers that will determine the success of the venture. Service providers need to prevent competitors from replicating or stealing such essential information.
In view of the risks inherent in the business, venturing into mobile lending requires careful design and meticulous implementation. New entrants should start from a detailed assessment of the market before moving into the model design and implementation phase. The initial market assessment will provide an understanding of the exogenous market conditions that will define the business model with the highest likelihood of success. During this phase, activities may include:

**Evaluation of market potential.** A holistic assessment of the market size, including customer segments and study of existing players.

**Assessment of the regulatory environment.** As regulatory oversight is the principal consideration to operate the business, the player needs to familiarize themselves with essential compliance obligations, such as company registration requirements, licensing, Know-Your-Customer and Anti-Fraud regulations. In the case of a bank, or a bank partnership, this activity will be faster as most of the information will already be available.

**Identification of the credit scoring data and algorithms available.** A predictive underwriting system is critical to mitigate credit risk. While established credit scoring models could be faster to implement and possess measurable track records, they may not be immediately applicable. A partnership with an external provider should be carefully evaluated and, in any case, the credit scoring must be tailored to the population’s specific needs and behaviour.

**Evaluation of the mobile technology and IT infrastructure required.** Availability of different mobile technologies will affect the operations (e.g. credit scoring model) and delivery model of the mobile lending offer. A 10-year market projection is generally necessary to ensure that the right infrastructure is implemented.

**Identification of potential partners.** As mentioned earlier, a partnership may bring together invaluable resources and allow players to overcome regulatory limitations, but factors such as culture and skills could play a relevant role in the decision to bring a partner on board.

Following the initial market study, the new player needs to select the business model, including partner(s) definition, target customer segments, loan products and delivery model (size, term, interest rates, repayment methods, etc.), designing the credit scoring algorithm and collection strategies, and identifying the requirements for the IT infrastructure (software and hardware) to support the new business.

The design phase is followed by a pilot phase to test and fine-tune the model. Before launching the pilot, it is essential to define all processes and responsibilities, set up the program management team, obtain the required licenses, and ensure a sufficient budget is available.
Driven by the convergence of four market forces, including the need for financial inclusion, the increased confidence in handling digital transactions, the pervasiveness of mobile service delivery, and the unprecedented data availability and processing capabilities, mobile lending has the potential to become the next “big thing” in mobile financial services after the advent of mobile money.

Local demand for credit, regulations, and technological readiness will set the market potential for mobile lending in any one country, but, ultimately, the success of the initiative will depend as much on exogenous factors as on the ability of players to design and implement the right model.

The complexity and high risks associated with this venture have so far restricted the number of players and curbed the scale of their operations. In particular, the development of a successful, mobile-based credit policy leveraging non-traditional client data appears to be critical, as human touch is being replaced by technology and standard collection initiatives may be impossible to implement.

A carefully planned and executed plan, even in partnership with another operator to share the risks and leverage existing assets, will be at the onset of a winning mobile lending strategy. With no Uber or Airbnb for mobile lending yet, the competition to elect the new industry champion has just begun.

Value Partners is the advisor of choice for clients looking at launching new ventures in the mobile financial services ecosystem. We work hand-in-hand with our clients to ensure the success of their initiatives, from strategy design to hands-on support during the execution phase.

A partnership between mobile operators and commercial banks can leverage essential assets and capabilities from both parties, thus paving the way towards a market champion.
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ABOUT VALUE PARTNERS

Value Partners is a global management consulting firm with a proven track record across the financial services and telecommunications industries. Over a quarter of our projects are on behalf of financial institutions, covering micro-finance, retail banking, payments and digital services. We also possess one of the largest TMT practices worldwide, as we collaborate with the leading Telecom, Media and Content players globally, on projects that span the full universe of telecom & media technologies – fixed, wireless, broadband, satellite, broadcast –, and range from customer segmentation, to product launch, market entry, strategic alliances, and M&A.

An area of focus in developing countries across the Middle East, Asia and South America is also “financial inclusion”, helping universal banks and other industry players to target the unbanked population at the bottom of the pyramid, through mobile financial services or more traditional community lending business models.

Members of our team have played a primary role in advancing financial inclusion by building micro-lending businesses in multiple Asian countries. In this context, we help our clients adapt their business models in an increasingly complex and rapidly evolving business environment, to maximize impact and returns in the financial services industry.

Founded in Milan in 1993, Value Partners has, over the years, grown to over 200 professional consultants from 23 countries, building a portfolio of over 350 international clients – from the original 10 in 1993 – with a global revenue mix. It has offices in Milan, London, Istanbul, Dubai, São Paulo, Buenos Aires, Beijing, Shanghai, Hong Kong and Singapore.

For more information on the issues raised in this note please contact the authors.

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