PHILIPPINES

COUNTRY DIAGNOSTIC

The State of Digital Payments in the Philippines

DECEMBER 2019

BANGKO SENTRAL NG PILIPINAS

BETTER THAN CASH ALLIANCE

UNCDF

Authors
Project Leads: Keyzom Ngodup Massally, Rodrigo Mejía Ricart
Technical authors: Malavika Bambawale, Swetha Totapally, and Vineet Bhandari

FOREWORD

Our country was one of the first to pioneer digital payments nearly 20 years ago. Recognizing the untapped market potential and the opportunity to foster greater access to financial inclusion, the Bangko Sentral ng Pilipinas (BSP) has worked, hand in hand, with the government and the leaders across financial, retail, and regulatory sectors to boost digital payments.

Over the past three years, since the launch of the first digital payments diagnostic, the Philippines has experienced remarkable progress toward building an inclusive digital payments ecosystem. In 2013, digital payments accounted for only 1% of the country's total transaction volume. In 2018, this follow through diagnostic study showed that the volume of digital payments increased to 10% corresponding to 20% share in the total transaction value. These numbers speak of significant progress and success. I am optimistic that e-payments will gain further momentum as we have laid the necessary building blocks to accelerate innovation and inclusive growth over the next few years.

Notably, Filipino women are ahead of men in the uptake of digital payments, placing us ahead of global standards. The rise of fintech and their solutions are starting to play a transformative role, as we can see from the rapidly-growing adoption of the emerging QR codes for digital transactions. I am confident that the BSP has built a good digital foundation and is well positioned to leverage fintech in increasing the share of digital payments toward a cash-lite Philippines. In line with our commitment to achieve sustainable development, our aim is to provide every Filipino access to digital financial services.

As this study examines both the barriers and the opportunities for innovation, I hope that its valuable insights and recommendations will help to usher in a new age of digital payments for The Philippines. From this point, we continue our journey toward a payment system that works for the benefit of every Filipino. Mabuhay!

Benjamin E. Diokno
Governor, Bangko Sentral ng Pilipinas

TABLE OF CONTENTS

APPENDICES

EXECUTIVE SUMMARY

CONTEXT AND METHODOLOGY

The Bangko Sentral ng Pilipinas (BSP) and the Philippine Government recognize digital payments as a policy priority to enable Filipinos to seize the opportunities of the digital revolution. The Philippines was a global early-mover in digital payments, with the launch of mobile money in 2001. However, as in most countries, the path to widespread adoption and usage has not been straightforward. The first Better Than Cash Alliance diagnostic on the state of digital payments in the Philippines (released in 2015) found that adoption had been limited. The first diagnostic estimated that the share of digital payments in the Philippines was only about 1% by volume (26 million out of 2.5 billion payments per month). Recognizing that digital payments are an enabler and driver of digital transformation, the BSP set a target of driving the share of digital payments to 20% by 2020. The BSP considers that 20% could be the tipping point, after which the country could expect faster growth in digital payments. The BSP further set out a vision for modernizing the retail payment system, pushing a number of significant regulatory reforms. In turn, the Philippine Government has led by example, becoming the most digitized stakeholder in the ecosystem, with 64% of all government transactions carried out digitally.

This report assesses the developments in the digital payments ecosystem, measures the progress made in the digitization of payments since the previous diagnostic (2015), and identifies opportunities to accelerate the growth of digital payments going forward. The Better Than Cash Alliance in partnership with the BSP, commissioned this second diagnostic to have an updated overview of the state of digital payments in the Philippines, as of 2018. To do so, (1) data from over 25 sources across 25 payment use-cases were collated and analyzed; (2) interviews were held with over 90 stakeholders across government and the payments industry to validate key assumptions and calculations, and to understand the drivers behind the shifts; and (3) more than 100 publicly available knowledge resources were analyzed. This also surfaced the priority use-cases, barriers, and key initiatives to accelerate growth.

The methodology for computing the share of digital payments in this diagnostic has been updated. The previous diagnostic relied on data points from the period 2010–2013 and a primary survey conducted for business payments in the year 2010. This report has been able to incorporate data that have been made available since then. These include expansive data sets

Defining digital payment

Monetary transaction between two parties (individuals, businesses, or government) through a digital payment instrument (such as cards, bank transfer, mobile wallet, etc.) in which both the payer and the payee use an electronic medium.

© Better Than Cash Alliance/Erwin Nolido

FIGURE 1

Use-cases analyzed mapped to the payment grid

PAYER		PAYEE: GOVERNMENT	PAYEE: BUSINESS	PAYEE: PERSONS
	GOVERNMENT	• Transfers from national government to LGUs • Social welfare contributions • Common use item procurements	• Procurements and supplier payments • Utilities	• Social welfare contributions • Salaries and wages
	BUSINESS	• National and local taxes • National and local fees • Social welfare contributions	• Supplier payments • Business lending • Interest payments	• Salaries and wages • Social welfare contributions • Consumer lending
	PERSONS	• National and local taxes • Government fees levied for services • Social welfare contributions	• Utilities • Monthly merchant transactions • Interest and loan repayments	• Domestic remittances • International remittances • P2P lending

We estimate that there are 470-490 million digital transactions every month in the Philippines. That is nearly 20 times more than the number of monthly digital transactions in 2013.

from the Philippine Statistics Authority (PSA), World Bank Global Findex, Euromonitor, BSP, and more. Further, several new use-cases were included – utility payments by national agencies, business and consumer lending, interest payments, and person-to-person lending. As a result, the analyses covered a wider base – the total number of transactions in 2018 is estimated to be between 4.6 and 5.8 billion a month (estimated at 2.5 billion in 2013). Despite the wider base, the direction and magnitude of the shift measured in this diagnostic reflects the on-the-ground changes over the past few years.

FIVE-YEAR SNAPSHOT ON PROGRESS

The Philippines' progress in the last five years is outstanding: We estimate the share of digital payments to be 10% by volume and 20% by value in 2018.[1]

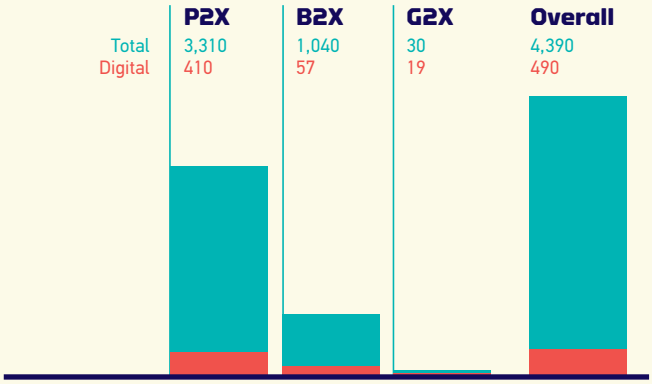
- This translates to about 470–490 million digital payment transactions every month in the Philippines. That is nearly **20 times** the estimated total monthly volume of digital transactions in 2013 (25 million). This phenomenal increase is driven by a surge in digital payments made by individuals (P2X). These increased significantly to 12%, up from less than 1% in 2013.
- Of the 470–490 million digital payments per month in 2018, about 400 million are made by individuals, or 85%. Digital payments made by businesses (B2X) and government (G2X) contribute the rest (12% and 3%, respectively).

FIGURE 2

Shift in and share of digital payments in the Philippines BY VOLUME

Classified by the payer and overall

All numbers are in millions



Share of digital payments	2018	12%	5%	64%	10%
	2013	0.3%	1.3%	54%	1%

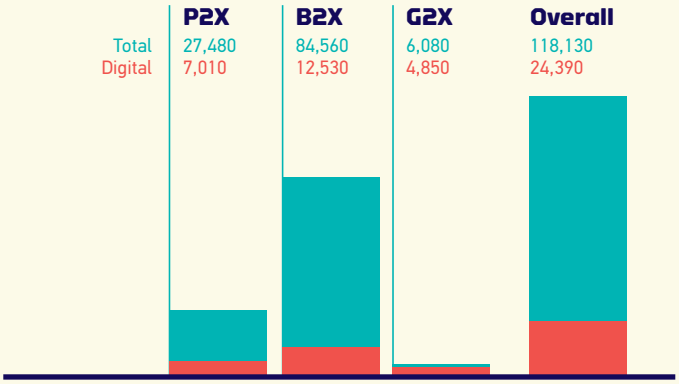
Note: Aggressive estimates. All numbers have been rounded to nearest 10.
Source: Dalberg estimates, The Better Than Cash Alliance Country Diagnostic Philippines (2015)

FIGURE 3

Shift in and share of digital payments in the Philippines BY VALUE

Classified by the payer and overall

All numbers are in USD millions

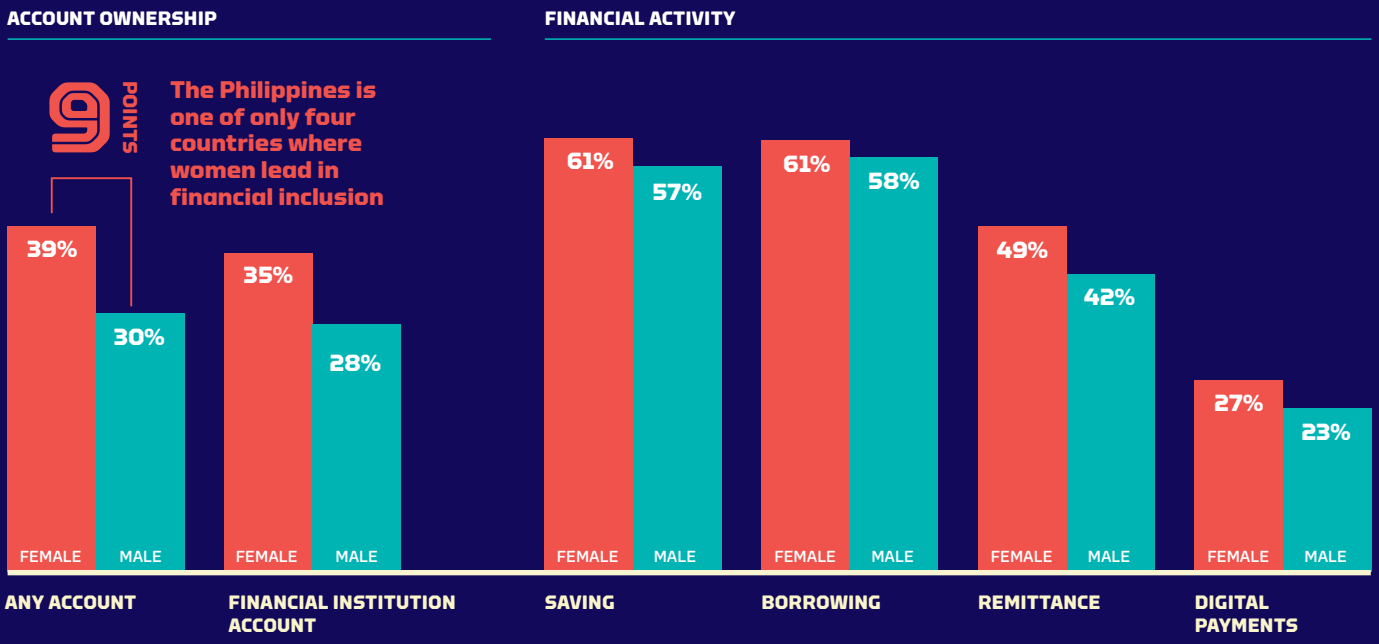


Share of digital payments	2018	25%	15%	80%	20%
	2013	5%	5.6%	38%	8%

Note: Aggressive estimates. All numbers have been rounded to nearest 10.
Source: Dalberg estimates, The Better Than Cash Alliance Country Diagnostic Philippines (2015)

Leading on women's economic participation and access to digital financial services

The Philippines is a global leader when it comes to women's economic participation and addressing the gender gap in the use of digital financial services. While globally women are 2-12 percentage points behind men in account ownership, Filipino women are 9 percentage points ahead. Filipino women are also ahead of men (by 4 percentage points) in the uptake of digital payments.[2]



Women's access to and use of financial services in the Philippines has established a solid foundation for their economic participation

- A higher proportion of Filipino women hold accounts than men; 39% of adult women hold accounts, as opposed to 30% of adult men.
- Filipino women are more active savers and borrowers than men, through both formal and informal channels; women save more (61% of all adult women) than men (57% of all adult men) through formal or informal channels. Moreover, a larger proportion of women save through formal financial institutions: there is a gap of 4 percentage points.
- More women participate in transactional activities such as remittance, bill payments, and purchases; 49% of all women receive and send domestic remittances, compared to 42% of men. While card ownership is marginally higher for men, more women are making digital transactions.

The key drivers behind women's favorable rates of access to and use of financial services in the country include:

1. Cultural norms that favor the agency of women in household financial matters[3] and higher financial capability of women.[4]
2. Microfinance institutions that largely cater more to women than other countries.
3. Government transfers that target women.

Further research can help identify actionable learning from the Philippines to improve access to and use of financial services, including digital payments, for other countries.[5]

- Digital payments in the G2X stream have also shown a healthy increase, from 54% in 2013 to 64% in 2018. Thus, **the government has continued to lead the way in digitization**.
- The change in B2X payments has been the slowest (less than 4 percentage points). The B2X payment stream stays the least digital: only 5% of total transactions in 2018 are digital.
- 20% digitization of payments by value translates to approximately USD 2124 billion in payments in 2018, about four times more than the value in 2013 (USD 6 billion). By this measure, the government continues to lead in digitization as well – with about 80% of its payments amount digitized in 2018.

Given the government's lead in digitization and the remarkable growth in digital P2X payments, digital payments in the Philippines have seen a considerable increase in the past five years as a whole. This growth has been enabled by big changes on two fronts – regulatory reform and industry-led expansion of payment options. This joint effort has laid the foundation that will support the country on its digital payments transformation journey.

On the regulatory and policy front, two initiatives implemented since the 2015 diagnostic have established a bedrock for payment systems in the country. These are:

1. **The National Retail Payment System (NRPS), launched in 2015.** Under the NRPS, the BSP helped create two automated clearing houses (ACH), namely, PESONet, launched in November 2017, and InstaPay, launched in April 2018,[6] that allow fund transfer between any two accounts in the country. Financial institutions are mandated to offer fund transfers through these ACHs, thus enabling interoperability between accounts. By the end of 2018, the measurement period of this study, PESONet and InstaPay had only been operating for a few months. Payment volumes under InstaPay and PESONet make up a small share (0.02%) of all payments but continue to grow month-on-month and offer potential to increase the penetration of digital payments even further. The NRPS also led to the formation in 2017 of an industry-led payment system management body (PSMB) to create high-level policies and rules, and ensure that appropriate dispute resolution and redress mechanisms are available to timely address grievances from the provision of services.[7]
2. **The National Payment Systems Act (NPSA), enacted in 2018.** Under the NPSA, the BSP's regulatory oversight expanded beyond banks and non-bank financial institutions to cover all payment service providers and operators of the payment systems.

In addition, the BSP has recently adopted a new rule requiring providers to adopt a national QR code payment standard,[8] which seeks to foster interoperability and competition to help further accelerate the growth in digital payments in the coming years. Low-cost business models and a thriving fintech ecosystem can drive the digitization of high-volume use-cases, such as merchant and transportation payments.

Together, these initiatives represent very substantial steps toward the creation of a competitive industry, which will unlock the next phase of dynamic growth in digital payments.

At the same time, the banks and fintech have expanded access to payment options for consumers:

1. **Increased adoption of payment cards and mobile money by consumers.** Investments by banks and other payment service providers have resulted in 21 million Filipinos owning prepaid and debit cards, up from 12.7 million in 2013.[9] Similarly, mobile money was barely on the horizon in 2013. By 2018, active mobile money accounts had jumped to 5 million, driven by fintech companies and low-cost, QR code-enabled payments.[10] Recent investments by fintech players in customer acquisition have yielded these gains: building awareness, offering incentives and subsidized fees. Purchasing airtime is a popular use of mobile money accounts, as seen in other geographies.[11] Prepaid and debit cards are increasingly used for making payments to merchants.
2. **Increase in acceptance of digital payments by merchants.** Incumbent banks and fintechs alike are driving acquisition through partnerships with large retailers and chains. Further, acquirers are subsidizing initial setup costs, such as the cost of the point-of-sale (PoS) terminals. This has led to a year-on-year improvement of 19% in merchant acceptance.[12]

In the Philippines today, a greater proportion of women transact digitally than men

The Philippines' overall growth rate in digital payments is estimated to be 27–30%, compared to 25% in emerging Asian countries.[13] **While on a global scale, a gender gap of 2–12% persists across all metrics of engagement, in the Philippines today, a greater proportion of women (27%) transact digitally than men (23%)**. This trend is not a one-off; it follows most other metrics of financial and digital inclusion and usage – account ownership (39% women own as opposed to 30% men), paying bills online (12% women vs. 8% men), online purchases (11% women vs. 7% men), and remittances (49% women vs. 42% men).[14] **As a result, the Philippines is not only rapidly catching up on digitization with its peers, the country is actually leading on the digital engagement of women.**

© Better Than Cash Alliance/Erwin Nolido

© Better Than Cash Alliance/Erwin Nolido

THE OPPORTUNITY AHEAD

As the Philippines continues on this journey toward becoming a cash-lite economy, five payment use-cases offer the most promise – both in terms of increasing the share of digital payments as well as democratizing the benefits of digital payments: (1) merchant payments, (2) supplier payments by businesses, (3) remittances, (4) utility payments, and (5) social benefit transfers.

Businesses could save USD 20–45 billion annually by digitizing supplier payments alone.

Fully digitizing social payments could save the government USD 100 million annually and result in 11 million additional accounts.

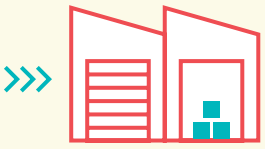
These use-cases are key for the following reasons:

These use-cases account for 97% of all transactions in the country. Thus, even a small shift toward digital payments in these use-cases could onboard larger numbers of individuals and businesses.

Access to accounts has opened up opportunities for wider use of digital payments. One in three Filipinos owns an account. Yet less than 5% of the population regularly[15] makes, and thus gains from, digital payments. Similarly, the proportion of businesses that benefit from digital payments also has great opportunity to grow by targeting some clearly identified challenges. The transition to digital payments should also provide social, economic, and financial benefits, such as broader financial inclusion, poverty reduction, technical innovation, efficiency, and lower costs. The shift to digital payments would also help advance the Sustainable Development Goals.[16]

Merchant payments
P2B

Merchant payments form a large majority of payments made – digitally, as well as overall. As of 2018, about 180K merchants and less than 24 million individuals can accept or pay digitally.[17] Despite the large numbers, this represents only about 15% of all merchants and 31% of all Filipino adults who have accounts. The majority of these account holders do not regularly make digital payments. Further, acceptance is close to negligible among Micro, Small and Medium Enterprises (MSMEs), which form the large majority of all merchants. With such a large base and low penetration of the merchant channel, the potential is still sizeable.

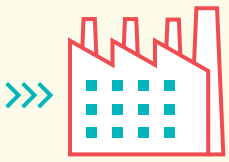


Supplier payments
B2B

About 1 billion supplier payments are made every month in the Philippines, many by formal businesses.[18] However, less than 2% by volume and 6% by value of these payments are made digitally. Informal businesses, forming about 85% of all supplier payments by volume, rely solely on cash. More importantly, supplier payments come with a larger ticket size per transaction and account for approximately 60% of all payment transaction value. Digitizing this use-case has the benefit of improving business efficiency and perhaps spurring innovation. Given the natural "pull" among businesses to accept digital payments because of lower cash/check handling and processing costs, this is a "low-hanging fruit" for the country to reap.

Remittance
P2P

Remittance is defined as a fund transfer from one individual to another individual, either from overseas or domestically. It is estimated that out of the total 120–130 million remittances sent monthly, less than 4% are digital and 80% of all remittances are made over-the-counter (OTC). As a result, Filipinos continue to bear the high cost and the administrative burden of sending remittances through brick-and-mortar branches.[19]



Utility payments
P2B

Filipinos make an estimated 65–75 million utility payments every month. However, less than 5% of these payments are made digitally. As with remittances, most utility payments are made OTC in cash, and thus are inconvenient and expensive. In fact, it is reported that the average utility bill payment (USD 10–30) is so small that the cost of conveyance is often higher than the bill amount. The opportunity cost of transacting in cash combined with the regularity of utility payments builds a compelling case for prioritizing this use-case.

Social benefits
G2P

The Philippines has a well-established social benefits system. All private and public sector employees are mandatorily registered in social security (Social Security System [SSS] and Government Service Insurance System [GSIS], respectively) as well as home and health insurance and savings programs. In addition, the Philippines has a targeted conditional cash transfer scheme benefiting over 4 million households, among the largest globally. Of all social benefit payments, 45% are made digitally (primarily using cash cards). The remaining 55% of payments not yet digitized presents a real opportunity. Digital transfer of social benefits can be the first step in the digital payments journey for a large number of financially excluded Filipinos. This can potentially have a knock-on effect on other digital payment use-cases.

USERS FACE REAL BARRIERS TO SHIFT TO DIGITAL PAYMENTS:

Digital payment solutions remain costly relative to income levels for large segments of the population. As noted above, the use of digital payments has, indeed, increased substantially over the past few years. And yet, this increase is driven by approximately 15% of the estimated 15–23 million individuals with access to any account. Over half of the account holders continue to prefer cash over digital to make payments within the current incentive structure.[20] The cost of digital payments is often at par, or above the current means (see Figure 4); thus, limiting any financial incentives to shift.

On the contrary, in cases where some financial incentives are present, for example in mobile wallets and closed loop cards, because of cashbacks and rewards on purchases, and no fees, there has been an exponential uptake. Similarly, small merchants perceive the Merchant Discount Rate (MDR) to be very high (which ranges from 2% to 4%). Worse, the MDR is structured such that it disincentivizes small transaction value payments which are often the largest by volume by charging these at the highest rate. Merchant rates are high because acquirer costs are high. Acquirers cite the high cost of onboarding a merchant, which is as much as USD 1000, as a challenge.[21] Additionally, cash and OTC are deeply entrenched, and thus are perceived to be inexpensive and convenient.

Payers see less benefit from shifting when the business processes for their transactions are not entirely digital. This is particularly relevant for businesses which typically realize savings and efficiency gains from digitizing supplier payments. However, few businesses are willing to digitize payments when the rest of the process still requires the use of paper. For example, businesses still have not embraced the use of electronic Official Receipts (eOR), even though eORs are acceptable under the current regulation.[22]

FIGURE 4

Perceived cost of cash/OTC/checks versus digital means paid by the consumer (unless stated otherwise)

	Average transaction size	Cash/OTC/checks	PESONet/Instapay	Cards	E-wallets
MERCHANT PAYMENTS	Ranges from USD 3.7 to 5.5	Zero*	Zero – USD 2 for InstaPay	2–4% MDR for the merchant	Zero
REMITTANCES	USD 50 for domestic remittances	Zero* – USD 2.5	Zero – USD 2 for InstaPay	N/A	Zero – 2%
UTILITY PAYMENTS	Ranges from USD 10 to 30	Zero*	N/A	4% MDR passed on to the customer for online payments	Less than USD 1
SUPPLIER PAYMENTS	USD 30 to 50 for informal enterprises USD 500+ for formal merchants	Zero* – USD 0.1	Zero – USD 50 per transaction for PesoNet	N/A	N/A

** The "perceived" cost of cash/OTC/checks to the users does not take into account the costs linked to personnel, transportation, material, and time.*

Although some of this resistance can be traced to a natural inertia, some ambiguity remains around the requirements that the eORs must match certain information, such as the location of the payment. Paper receipts are also more widely accepted for auditing and record-keeping, and therefore businesses continue to rely on paper and checks to make payments.

The lack of trust as well as the absence of convenient recourse mechanisms are also barriers for users to shift to digital payments from cash and cheques. The willingness to shift is further lowered by a risk of transactions taking too long or failing too often and an absence of a fair and convenient recourse mechanism. Further, anecdotal evidence suggests that perceptions of security risks such as hacking, personal data breaches, and unsafe access deter potential users from using digital payments. If the financial services sector, merchants, and the government all embraced responsible practices, as described in the Responsible Digital Payment Guidelines of the Alliance, concerns around data security, transaction failure rates, fraud, lack of grievance support, and other issues faced by users could be addressed.[23]

When a value proposition exists, individuals as well as merchants have to be aware. Nearly half of the population are still unaware of the different e-money platforms.[24] And, those who are aware lack knowledge about the use-cases and the benefits of various digital payment instruments.[25]

The financial services sector and payment service providers must go beyond early adopters and push to include underserved consumers. The promotion of digital payments has been limited, especially for fund transfers by financial institutions. Financial institutions can do more to incentivize digital payments (both inter- and intra-institution) through a combination of marketing and improved user experience.

2 OUT OF 3
Filipinos are financially excluded, and, thus, do not own a digital wallet or account

Lastly, the country must overcome two foundational issues:

1. **Financial exclusion.** Two out of three Filipinos are financially excluded, and, thus, do not own a digital wallet or account. This situation limits the number of users who have a digital means to receive social benefits, receive remittance, pay bills, and save formally. As discussed, many Filipino adults are accustomed to cash and do not perceive a need to shift to digital payments. However, beyond perception, there are real barriers to account ownership. The documentary requirements to open an account – compounded by the lack of access to adequate identification – put that threshold out of reach for many.[26]
2. **Poor mobile connectivity.** Despite over 71% of the population subscribing to data services, there are only 16,500 base stations across the country's 7,000 islands, mostly localized in Metro Manila. That is 1.5 4G sites per 10,000 people, 75% lower than the required capacity.[27] Further, the limited infrastructure provides an unreliable and inconsistent experience for consumers, leading to drop-offs. This will remain an issue for the next few years and stakeholders must optimize around this reality, even while smartphone and mobile internet penetration are likely to increase.

© Better Than Cash Alliance/Erwin

RECOMMENDATIONS

Over the past few years, the government and the industry have made notable strides toward laying a strong foundation to accelerate the adoption of digital payments. The regulatory reforms and the policy environment have significantly improved the payment systems in the country. Despite the challenges outlined above, we believe that digital payments will continue to grow. However, to further accelerate growth, all the stakeholders need to work together to improve awareness, ubiquity, convenience, and, most importantly, create compelling reasons for payers to go digital. We list six (6) key recommendations.

1

REMITTANCE AND UTILITY PAYMENTS

Investment in building platforms to enable fast growth in digital remittances and utility payments by Philippine Payments Management Inc. (PPMI), its members, and clearing switch operators (CSOs). Building on the rising adoption of InstaPay and PESONet, PPMI along with its members and the CSOs, there is an opportunity to start building solutions on top of these ACHs. For instance, one solution is a common P2P payment interface that is mobile-first and allows transfer of money from any account to any account. The software development kit would be open source so that any payment provider could integrate the white label interface within their mobile ecosystem or use as a standalone app. Further, an interoperable platform connecting banks and non-banks in bill aggregation could be conceptualized over the PESONet. Such platforms could potentially enable all actors – in particular the smaller players such as rural and thrift banks and cooperatives, but also large banks, utility payers, payment centers, and merchants – to offer and push for digital payment options in their businesses.

2

MERCHANT PAYMENTS

Innovation by payment service providers to create a strong value proposition for small merchants. Research suggests that offering payment-related services, often referred to globally as Value-Added-Services, is key to improving the value proposition of digital over cash for merchants.[28,29] These services, offered by payment service providers, could include solutions that provide easy-to-access business intelligence and improved access to financial services, especially working capital by providing a credit line based on value of sales. Collection could be automated by deducting a percentage from all sales, giving the perception that the "loan pays itself."

Offering and scaling Value-Added-Services to merchants is a medium-term solution. In the interim, the digital payments industry needs to work together to create a tiered MDR structure that lowers fees for low-value transactions. This could include charging zero fees for large volume-small margin transactions.

3

ACROSS ALL PRIORITIZED USE-CASES

Build awareness of and trust in digital payments with the leadership of BSP and PPMI. As the private sector innovates and continues to drive adoption, the BSP and PPMI[30] can support it by running consumer information campaigns. These campaigns could go beyond the uses and benefits but also point out the risks as well as the safety features of digital payments. Payers must also be made aware of their rights, and the importance of protecting their data and privacy. Further, proactive measures that prevent fraud and improve confidence are needed. These could include PPMI creating a centralized fraud registry for a real-time rating of transaction risk and a consumer redress mechanism.

4

SUPPLIER PAYMENTS

For supplier payments, build awareness of eOR acceptance and create a digital invoicing system, with the leadership of the Bureau of Internal Revenue. The Bureau of Internal Revenue (BIR) would need to lead the work to overcome the lack of awareness of acceptance of eOR among government agencies. The Bureau, supported by various government agencies - such as the Department of Trade and Industries (DTI), the Department of Finance (DoF) and the Department of Budget and Management (DBM), also needs to issue a clarification on whether certain provisions, such as 'location', are mandatory for an eOR. For uptake by businesses, DTI and BIR would have to lead the efforts.

Further, a DBM subgroup to lead efforts to digitize invoices – similar to PhilGEPS and the procurement service could support the private sector in creating solutions that better link accounting systems and payment transactions. The solution could be to issue an eOR in response to a successful payment transaction in a manner that also allows for easy reconciliation of the books.

5

SOCIAL BENEFITS

For payments from and to the government, the established technical working group (TWG) under the Public Finance Management Committee can continue to promote the use of electronic payments across government agencies. Different government agencies are at different points in their trajectory to adopt digital payments. The TWG can serve as a discussion platform for coordinated and synchronized decisions among relevant stakeholders. The discussions of the TWG may include allowing the government to contract vendors after conducting due-diligence. This would enable seamless accounting and budgeting for DBM. It would also allow all agencies to weigh in on decisions related to (NRPS) transaction fees for digital payments to suppliers and individuals. There is also an opportunity for the TWG to secure learnings from other countries' governments, particularly in the ASEAN. This would be an important step toward a unified strategy for the Philippine Government to adopt digital payments.

6

ACROSS ALL PRIORITIZED USE-CASES

Finally, leverage the rollout of the PhilSys to solve for the foundational challenge of financial exclusion. The government is spearheading the rollout of the national ID system – PhilSys. The initiative would benefit from the continued collaboration of BSP with the PSA in identifying priority segments for the new ID system. The BSP and PSA have planned rollout prioritizing the conditional cash transfer program (4Ps), the Social Security Service (SSS), and the Government Social Insurance Service (GSIS), which currently receive payments in cash, cheques, or limited use cash cards. This initiative will help provide much-needed access to identification for those who do not yet have any acceptable form of ID for opening a formal account. The PSA and the BSP can collaborate to leverage the implementation process to invite financial service providers to market opening accounts to these consumers.

Beyond these initiatives, we recommend that the BSP begin tracking absolute volume of transactions (in addition to % share of digital payments) to allow for easy progress monitoring. In addition to the diagnostics that monitor the percentage (%) share of digital payments, understanding of the magnitude of progress made must also be widely shared periodically by tracking absolute volume of transactions, as has already been recognized by the BSP. This helps the industry determine when to "press the accelerator down" or recognize and celebrate the successes. The BSP has the opportunity to become the champion and the source of accurate and consistent data on digital payments.

Whereas some recommendations can be worked on in the short term by stakeholders on their own, others will require the BSP, government agencies, and private sector to work together. So far, the BSP has been enterprising and instrumental in coordinating efforts across various stakeholders and platforms. The BSP must continue to play that pivotal role by charting out a common Action Plan and coordinating the efforts of various government agencies and private-sector actors.

Sustaining the momentum toward digital payments by adopting these recommendations will have an outsized impact for the stakeholders. By our estimates, these actions could result in:

1. **USD 20-45 billion in annual savings from digitizing supplier payments.** Previous studies have found that e-invoicing and digitizing supplier payments produce cost savings of up to 4-8% of the transaction amount. We estimate that the formal sector in the Philippines makes payments worth approximately USD 44.9 billion monthly. This translates into savings worth USD 1.8 billion monthly, or USD 21.5 billion annually.

2. **USD 0.1 billion in annual savings on G2P payments.** Previous studies that mapped the cost of a G2P payment estimate that the cost of cash is 1.5%, higher than that of digital means (estimated at 0.7%).[31] Of the USD 2.6 billion in G2P payments per month, over USD 1 billion is paid non-digitally. This translates to annual savings of USD 100 million for the government in G2P payments alone.

3. **11 million in additional accounts from digitizing government welfare payments and 86.5 million additional monthly digital transactions from the unbanked.** We estimate that digitizing welfare payments and converting cash cards to basic accounts, would provide up to 11 million individuals with their first digital store of value. Assuming that these newly banked consumers comprise half of the number of transactions of those who are currently banked in a month, this is equivalent to nearly 86.5 million additional digital transactions.[32]

1. INTRODUCTION

The Philippines was an early mover in digital payments with the launch of mobile money in 2001. The regulatory environment was open in allowing the industry and fintech to collaborate and offer innovative digital financial services. Despite this, the initial growth was slow. Hence, the first diagnostic in 2015 estimated the share of digital payments to be negligible at that time. Since then, the government and the private sector have made significant progress. Favorable regulatory conditions, increasing fintech activity, and a supply side push by the banks and e-money issuers is driving digital payments growth in the country. This study sought to quantify the progress, identify the drivers of this growth, and reveal barriers and opportunities going forward.

The Philippines started its journey toward digital payments back in 2001, becoming the first country to introduce mobile money. The concept was first introduced by Smart Communications, Inc., a domestic telecommunications provider, to reach underserved markets.[33] The platform allowed users to transfer funds to other subscribers, pay their bills, and purchase goods with their mobile phones and a bank-backed reloadable prepaid card.[34] This development was quickly followed by technology allowing remittances to flow digitally via SMS to the recipients' accounts with Smart and Globe Telecommunications.[35] This is touted as the first ever use of SMS for cash transfers in the world.

To support this momentum, the regulator, the Bangko Sentral ng Pilipinas (BSP), issued regulations for banks on e-banking services and e-money issuance.[36,37] With low rates of financial inclusion and a growing, young and digitally aware population, mobile money had the potential to provide millions with their first digital store of value.

Countries that learned from the Filipino experiments and later introduced mobile money have reaped large dividends. M-Pesa, which was launched in 2007, grew to 13 million registered and active customers in under three years by 2010, corresponding to 23% of the population and over half of Kenya's adult population.[38] By 2013, M-Pesa covered two-thirds of the population and was transacting USD 1.5 billion on average per month digitally, equivalent to nearly one-third of Kenya's GDP.[39] The success of M-Pesa in Kenya is attributed to untapped demand from low-income and financially excluded segments (especially the migrant populations) to transfer funds securely and with ease. Further, the telecommunications provider behind M-Pesa enjoyed dominant market position and deep reach

with the end users through a vast network of on-the-ground agents, and was able to effectively respond to the demand through targeted campaigns. Lastly, these developments were supported by the regulator, which provided an experiment-friendly environment. Other African countries followed suit – Uganda and Zimbabwe have seen similar success with about half of the adult population owning a mobile money account as of 2017.[40]

However, until 2013, adoption of digital payments in the Philippines was slow. The previous diagnostic supported by the Better Than Cash Alliance, Country Diagnostic: Philippines (2015), using data from the period 2010-2013, found that the share of digital payments by volume was still 1%. The report identified several barriers to adoption: a patchwork of policies to regulate different payment providers, limited avenues for digital transfers, low levels of financial inclusion, and high perceived cost.

Since then, the BSP has set out a vision for modernizing the retail payment system, pushing a number of significant regulatory reforms. In part inspired by the results of the first diagnostic, the BSP recognized that moving from a cash-based to a digital economy would not only make payments more convenient and affordable for consumers and businesses, it was crucial for monetary stability and financial inclusion.[41]

This marked an important inflection point in the country's trajectory toward a cash-lite economy. Over the next few years, the BSP introduced a new policy and regulatory framework for retail payments. To boost digital payments, the BSP also issued supportive regulations for banks and non-banks, such as authorizing cash agents, basic deposit accounts, and risk-based onboarding.

Steady economic growth, rising income levels, and improved macroeconomic fundamentals have created favorable conditions for a push toward digital payments. GDP per capita has grown by an yearly average of 5% since 2013, compared to 4% for the Association of Southeast Asian Nations (ASEAN) region. Per-household income has improved by 10%. In parallel, smartphone adoption and internet penetration have deepened – covering 68% and 44% of the population, respectively, thus bringing the Philippines to par with the ASEAN region. Further, the Philippines has a growing youth population, with about 30% of Filipinos being under 14 years of age and the age median being at 23.5 years (compared to 29 years for the ASEAN countries).

With these favorable tailwinds, recent investments by banks and the fintech sector have led to a surge of digital payments in the Philippines. Access to digital payment infrastructure has grown as traditional banks expand their footprint. With the growth of mobile wallets led by GCash and PayMaya, fintechs have aggressively introduced new payments methods such as QR codes, and attracted funding from Ant Financial Services and Tencent Holdings. The BSP also launched the National Retail Payment System (NRPS) with the goal of making electronic account fund transfers more secure, convenient, and affordable, which is covered in Chapter 2 in detail.[42]

FIGURE 5

Country context indicators, compared to ASEAN countries

INDICATOR	PHILIPPINES	AVERAGE FOR ASEAN COUNTRIES
DEMOGRAPHIC		
Population growth rate (annual)	1.4%	0.6%
Age profile (0–14 years/median age)	30% / 23.5 years	20% / 28.8 years
Literacy rate (people aged 15+)	96%	96%
Financial literacy rate (adults)	25%	34%
ECONOMIC		
GDP per capita (based on purchasing power parity, USD '000)	8.93	19.33
Annual growth in GDP per capita	4.8%	3.6%
Contribution of informal sector (% of GDP)	34.7% (2017)	—
FINANCIAL SERVICES INDUSTRY		
Financial inclusion	34% (2017)	74% (2017)
Fintech funding compound annual growth rate (by value)	197% (2018)	92% (2017)
TECHNOLOGY ADOPTION AND INFRASTRUCTURE		
Smartphone adoption	68% (2017)	60% (2017)
Internet penetration	44% (2019)	58% (2019)
Mobile connectivity score	67.25/100 (2018)	75.27/100 (2018)
Average connection speed	5.5 Mbps (Q1 2017)	17.2 Mbps (Q1 2017)
Cost of internet (per GB and adjusted for affordability)	USD 7.10 10 hours' work required to afford 1 GB data (2015)	USD 4.90 5.5 hours' work required to afford 1 GB data (2015)

Sources: ASEAN Economic Progress Report, July 2017; MF World Economic Outlook, October 2017; The World Bank Data, 'Population ages 0–14 (% of total population)', 2017; The World Bank Data, 'Population growth (annual %)', 2017; Akamai, 'State of the Internet', Q1 2017; GSMA, 'State of Mobile Internet Connectivity', 2018; Global Financial Literacy Excellence Center, 'Financial Literacy Around the World Survey', 2015; TechInAsia, 'Cost of internet data in Asia', 2015; GSMA, 'The Mobile Economy Asia Pacific', 2019; Philippine Statistics Authority data; share of informal sector (2017)

METHODOLOGY

To quantify this progress, more than 80 publicly available knowledge sources were collated and reviewed, and more than five datasets were analyzed to quantify the share of digital payments across 25 use-cases in 2018. Further, the study included engagement with over 90 stakeholders across government agencies and industry participants to validate key assumptions in our calculations and understand the drivers behind the shifts.

The current study is an update on the methodology of the previous diagnostic; six additional use-cases were included in the 2018 analysis. In addition, the previous diagnostic relied on data points from the period 2010-2013 and a primary survey conducted for business payments in the year 2010. This study relied on expansive datasets available from the BSP's Financial Inclusion Survey, the Philippine Statistics Authority's Annual Survey of Industries and Survey of Overseas Filipino Workers, the World Bank (Global Findex), and Euromonitor's data on consumer finance and retailing in the Philippines. As a result, the study covered a wider base – estimating that the total number of monthly transactions at 5.7 billion compared with 2.5 billion estimated in 2013.

This report presents the findings of this diagnostic in the sections that follow. Chapter 2 presents the major shifts in the digital payments ecosystem since the previous diagnostic study in 2013. Chapter 3 quantifies the progress made in digitizing payments and determines the priority use-cases for the government and the industry to unlock sustainable growth. Going further, the report deep-dives into two specific areas – merchant payments and consumer behavior. Merchant payments form the bulk of transactions in the Philippines, but the acceptance of digital payments remains low. The report explores the barriers, as well as the opportunities, in driving digital payments among merchants, in Chapter 4. On the flip side, it is equally important to understand the drivers of payments among consumers, and the fundamental behavioral challenges limiting greater adoption of digital payments (Chapter 5). Lastly, the report identifies steps for the government and the industry to accelerate growth among priority use-cases, as well as to drive digital payments further (Chapter 6).

The authors of this report hope that the readers, be they policymakers or industry players, take away valuable insights on the state of digital payments in the country, as well as actionable recommendations to push the envelope further. The Philippines is at a critical juncture; a mix of favorable regulatory policies, improved business appetite, and an untapped market for financial products has created a perfect opportunity for innovations, just as nearly two decades ago when the Philippines experimented with mobile money. The authors hope this study invites a similarly bold and innovative response to help usher in a new age of digital payments in the Philippines.

2. RECENT SHIFTS IN THE PAYMENTS ECOSYSTEM

The payment ecosystem in the Philippines has seen two key shifts over the past few years. In the private sector, both incumbent banks and newer fintech companies have increased investment in digital payments, thereby driving adoption. In the same period, the BSP introduced the NRPS, improving interoperability and thus lowering entry barriers to the payments industry. These investments in new products and infrastructure have laid the groundwork for the next stage of digital payments growth in the country.

Financial services industry

In recent years, financial institutions have shifted their focus to better serving retail consumers. The traditional banking model was anchored on corporate partnerships. Until 2014-2015, banks primarily acquired consumers indirectly, by building partnerships with corporate business and offering retail banking services to their employees. Employees had limited flexibility in choosing a bank. Further, the inability to transfer funds seamlessly between banking accounts left many consumers captive to a bank. Until recently, banks prioritized the needs of corporate employers over those of the consumers.

Rising disposable incomes have made retail consumers a more attractive segment. Strong economic growth has driven an increase in household consumer spending of 10% year-on-year.[43] Disposable income has similarly increased by 8% over the last few years. This has naturally attracted the attention of the financial services industry, which is now actively expanding penetration of debit and prepaid cards as well as acceptance by merchants.[44]

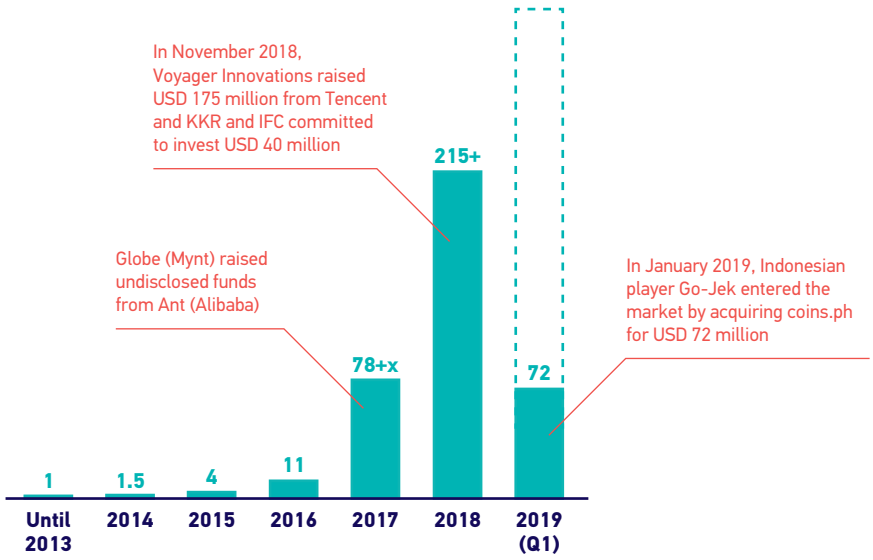
Further, the financial services industry is also getting competitive, with increased fintech activity. Funding in the fintech sector started to flow in as recently as 2017, led by foreign investors. Tencent and the International Finance Corporation (IFC) recently invested USD 175 million into Voyager, the parent company of PayMaya, following Ant Financial's investment into Mynt (GCash). In addition, Go-Jek entered the Philippines with their acquisition of coins.ph for USD 72 million. Overall, it is estimated that over USD 400 million have been invested in the Philippine fintech sector since 2017. This infusion of capital has resulted in an increased push to acquire consumers by subsidizing costs and offering incentives in the form of cashback/vouchers.

The fintech industry is also gearing up to offer more use-cases. These applications include payments through QR codes, remittances, lending, and credit scoring among others. Recent regulatory changes that mandated

FIGURE 6

Rising fintech investments

Funding in the Philippines started flowing in as recently as 2013 onwards, but the surge happened only in 2017
(USD millions)



Note: Other recent investments have been: (i) PawnHero USD 9.7 million, (ii) Ayannah USD 8.3 million, (iii) Coins.ph USD 10 million, (iv) Kalibrr USD 9.6 million, (v) FirstCircle USD 2.5 million)
Sources: "FinTech in Southeast Asia: Sector Snapshot", Tracxn, 2018; "ASEAN FinTech Census 2018", EY, 2018

interoperability between accounts helped level the playing field for these new fintech entrants (see next section for more details). This increased competition forced the incumbents to expand their digital footprint.

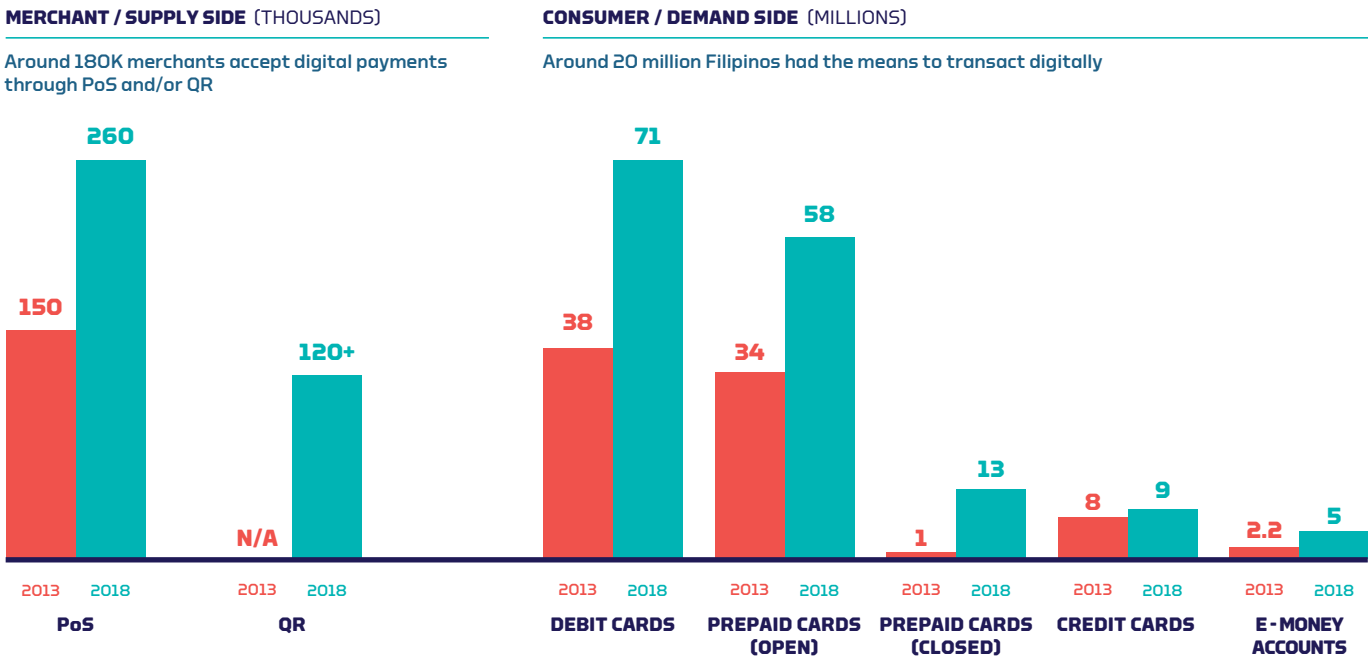
As a result, the digital payment ecosystem is evolving rapidly. Over the past five years, the number of debit and prepaid cards has almost doubled, each to 70 million cards.[45] The use of these cards has surged, growing to 4 billion transactions in 2018 from 1 billion in 2013.[46] Individuals are increasingly using e-money accounts, with active e-money accounts doubling from 2.2 million in 2017 to around 5 million in 2018.[47] Overall, 35% of Filipino adults have the means to transact using a digital store of value.

Finally, merchant acceptance has also seen an increase; it is estimated that around 180K merchants accept digital payments through PoS and/or QR.

Even with the recent gains, the transition to digital payments has only just begun. The industry is serving only a small slice of the population. Overall penetration of digital payment instruments and acceptance remain low. Only 35% of the adult population own a bank account (about 24 million people). Of those with bank accounts,[48] only 4% use their accounts to make a payment (using debit, prepaid, or credit cards, or mobile money wallets or internet banking apps).[49] The merchant penetration also remains low with only 12% of all merchants accepting payments digitally.[50]

FIGURE 7

Increased proliferation of digital payment instruments and transaction points



Source: Euromonitor Consumer Finance report; BSP Financial Inclusion Dashboard (Q4 2018)

Looking forward, market forces should continue to drive innovation in the digital payments as well as more broadly in digital financial services. The competition within digital payments is only heating up with the entrance of FinTech companies and is expected to increase further as these entrants mature. The growing competition will lead to the introduction of newer products and services, improve consumer value and experience, and, in the long term, deepen digital payments in the Philippines.

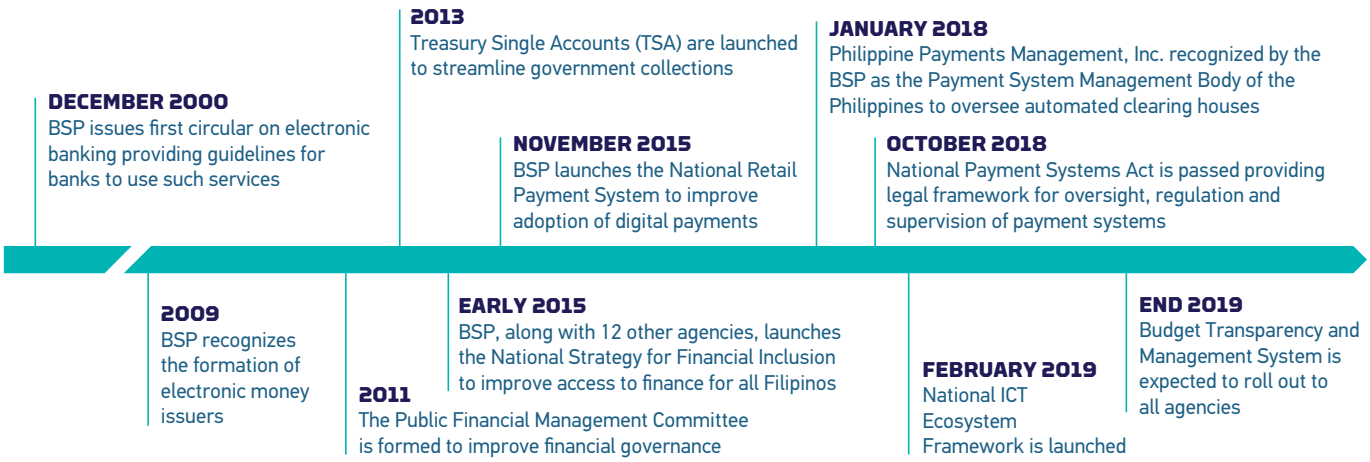
Policy and regulatory environment

Recently, the government has reformed the policy and regulatory environment to better enable the penetration, acceptance, and adoption of digital payments. These reforms have been led by the BSP, as the established authority for digital payments in the country.

Until 2015, the Philippines lacked apex regulations to govern digital payments. Prior to 2015, there was no clear mandate as to who governs digital payments, and different payment providers were regulated under differing laws and arms of the BSP. As a result, it was difficult to both monitor the progress of digital payments and instill a common vision or goals. In addition, interoperability among banks and other non-bank e-money issuers banks was limited. The incumbent clearing switch operators (CSOs) were responsible for the crafting and the implementation of rules and services, and the grievance redress mechanisms. Thus, the balance of power was skewed toward large banks, over smaller banks.

FIGURE 8

Key changes in the policy and regulatory space governing digital payments

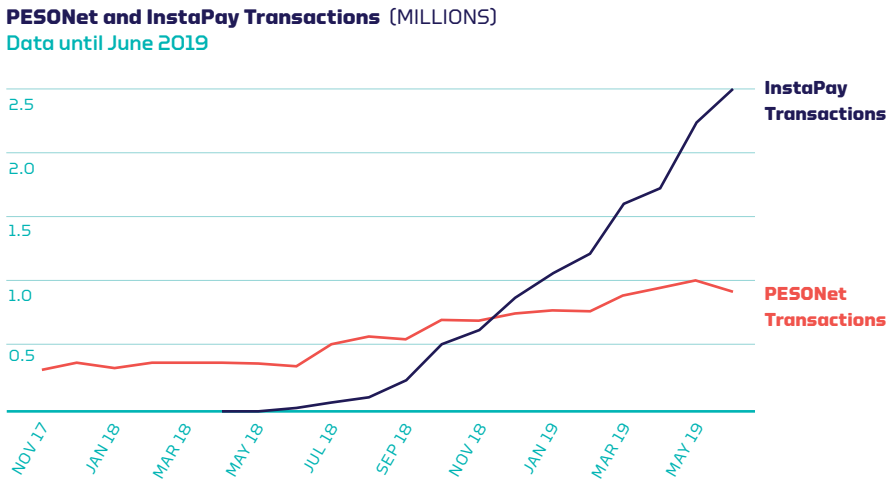


To establish a scalable infrastructure, the BSP in 2015 issued the NRPS framework in 2015. The NRPS was the BSP's flagship initiative launched in 2015, and is designed to be safe, efficient, reliable, and affordable. Built on the principles of interoperability, inclusivity, and coopetition,[51] it provided a framework to improve the governance of payments in the Philippines. This resulted in two key shifts:

1. **Separation of governance from clearing operations.** Under the NRPS, BSP mandated the formation of an industry-led payment system management body (PSMB), demarcating governance from clearing operations.[52] The management body was formed in August 2017, with the creation of Philippine Payments Management, Inc. (PPMI), composed of members from banks from all categories (i.e., universal, commercial, thrift, and rural) along with non-bank e-money issuers. It oversees the creation of automated clearing houses (ACHs) between its members, while the CSOs execute the clearing and settlement rules of the ACHs. The settlement of the net clearing obligations of ACH participants is done via the country's real-time gross settlement system – the Philippine Payments and Settlements System (PhilPaSS).
2. **Two new automated clearing houses (ACHs) were launched.** PESONet, the first batch electronic funds transfer facility under the NRPS, was launched in 2017. Subsequently, InstaPay, a platform for real-time low-value transactions between accounts (bank and e-money accounts), was launched in 2018. Payment service providers (PSPs) are mandated to participate in these ACHs. Thus, this paved the way for interoperability between accounts. Account holders can now transfer funds from one PSP to another. As of June 2019, the two ACHs clear 3.5 million transactions a month worth USD 2.2 billion (PHP 110 billion). Although this constitutes only 0.06% of total transaction volumes and 0.75% of all digital transactions, the volumes continue to grow month-on-month and offer potential to increase the penetration of digital payments even further.

FIGURE 9

Growth of PESONet and InstaPay since inception



Source: Presentation/Dashboard shared by Payment System Oversight Department, BSP (data until June 2019, shared in September 2019)

The interoperability mandated by NRPS has increased competition in the financial services industry and encouraged innovation. Before the BSP implemented the NRPS, retail consumers were captive to specific banks, and the financial institutions had limited incentives to innovate and meet their payment needs. The NRPS helped level the playing field among PSPs as new entrants could now offer an improved experience to the consumers and force the incumbent banks to innovate and improve their payment services.

For this reason, the NRPS is a landmark initiative that will likely continue to accelerate digital payments in the country. Because of this disruption, the financial services industry could become more dynamic and consumer centric.

More recently, the National Payment Systems Act (NPSA) established the BSP's authority to oversee all payment system operators and participants. This comprehensive legislation was signed into law in October 2018 and became effective in December of that year, providing a legal framework for oversight, regulation, and supervision of payment systems.

Prior to NPSA, other types of payment providers, such as money service businesses (i.e., remittance services, money changing, foreign exchanges, pawnshops, and e-money issuers) were covered by different regulations. With the introduction of the NPSA, all types of payment system operators are now required to register with the BSP. Under the NPSA, the BSP has the power to enforce the law to ensure the smooth functioning of the payment systems in the country. The implementation of the NPSA is under way.

The BSP has a pipeline of initiatives to further improve the payment ecosystem in the country. The key initiative planned is the interoperability of the QR code through the adoption of a national standard. PPMI, in consultation with the BSP, is in the process of creating a national QR code

standard that is slated to be launched in 2019-2020. All new and existing QR code providers will have to comply with the new standard. In addition, consumers will be able to use any existing account that allows payments through the national QR code standard. In the short term, this requirement may create additional costs for PSPs who have already started using QR codes. However, in the long run, the interoperability will lead to greater volume transacted as well as promote a healthy competition between traditional and new PSPs.

Additionally, two ACHs – a government bill payment ACH and a direct-debit ACH – are planned. The former will allow direct payment of government bills through QR codes, mobile PIN or transfer from PSPs that accept PESONet transactions. The direct-debit ACH will allow collection of regular payments, such as monthly interest payments or mortgage loans, through the issue of an electronic debit authority. This would remove the need for provision of multiple postdated checks, as is the norm currently, and allow for a more seamless experience for all parties involved.

In addition to ACHs, the Philippines recently saw the rollout of the National ICT Ecosystem Framework (NICTEF), which aims to catalyze the ecosystem for ICT applications and includes digital payments as one of the focus areas.[53] The framework supports the digital payment ecosystem through improvements in infrastructure and connectivity, promotion of participatory e-Governance, and creation of user protection and information security norms, among other aims.

The government's efforts in related areas, especially national identity and privacy, will establish the necessary environment for more Filipinos to transact digitally. The Philippine Statistics Authority (PSA), with support from BSP, is aiming to roll out the national digital ID project, PhilSys, by the end of 2019. PhilSys will provide a proof of identification, thus potentially reducing know-your-customer barriers for those who are currently without a bank account.

Similarly, the Data Privacy Law will provide a sound backbone to the digital payments ecosystem and extend necessary consumer protection. Under the law, consumers not only need to provide consent for their data to be used, but they also have a right to know the scope and purpose of data collection, correct and withdraw their personal data, and have access to grievance redressal from the National Privacy Commission, if needed.[54] This will further increase consumers' trust in digital payments – an important factor in the transition.

In conclusion, new entrants, rising consumer buying power, regulatory reforms, and the government's development of backend infrastructure have transformed the payment ecosystem over the past few years. This has already led to increased digitization of payments, a trend that is likely to only accelerate. Chapter 3 quantifies the progress so far and analyzes key barriers to be overcome to unlock further growth.

3. WHERE WE ARE TODAY

- About 1 in 10 payments in the Philippines is digital today.
- The largest shift has come from payments made by individuals (P2X), which have grown from less than 1% (2013) to an estimated 9-12% (2018).
- Increased usage of prepaid and debit cards at merchants is driving this growth. The number of prepaid and debit cards in circulation has doubled to 70 million each and the number of merchants that accept digital payments has increased from 35K to 180K. Mobile money ownership improved from 4% to 5% between 2014 and 2017 (it was negligible in 2011).
- Among individual users, women are leading the way on adopting digital payments, similar to gender trends in financial inclusion and financial activity.
- Government remains the most cash-lite player and has further improved by about 11 percentage points.
- On the other hand, growth in digital payments by businesses (B2X) has remained sluggish by volume, although payments have significantly increased by value. Businesses continue to prefer checks as there is a lack of awareness and an ambiguity regarding acceptance of electronic Official Receipts (eOR).

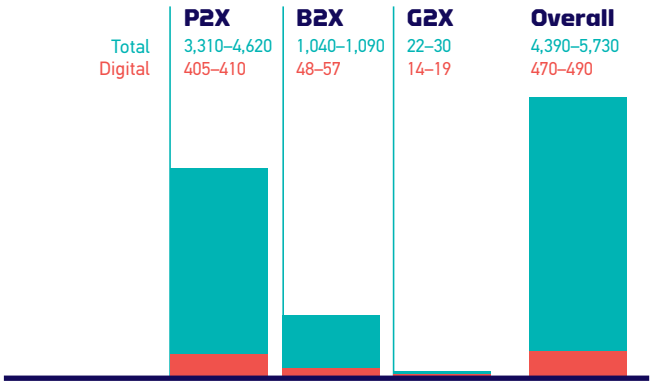
The government's transformation of the policy and regulatory environment, along with increased financial sector competition and innovation have contributed significant growth in the use of digital payments over the last few years. The share of digital payment by volume in 2018 is estimated to be at 8-11% by volume and 18-21% by value. In absolute terms, this translates to 470-490 million digital transactions per month, worth USD 21-25 billion, out of an estimated 4.6-6 billion transactions per month. The previous diagnostic estimated the share of digital payments in 2013 to be less than 1% by volume and 8% by value, equating to 26 million digital transactions worth USD 6 billion. This rate of growth (27%) is higher than the average growth rate among emerging Asian countries (25%), as well as globally.[55,56]

FIGURE 10

Shift in and share of digital payments in the Philippines BY VOLUME

Classified by the payer and overall

All numbers are in millions



Share of digital payments	2018	9-12%	4-5%	59-64%	8-11%
	2013	0.3%	1.3%	53.9%	1%

All numbers have been rounded off.

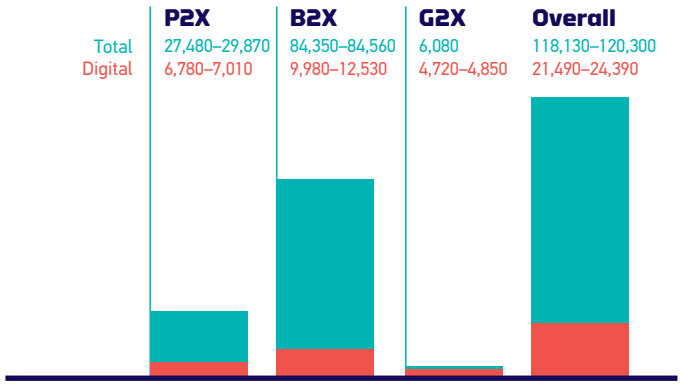
Source: Dalberg estimates, The Better Than Cash Alliance Country Diagnostic Philippines (2015)

FIGURE 11

Shift in and share of digital payments in the Philippines BY VALUE

Classified by the payer and overall

All numbers are in USD millions



Share of digital payments	2018	23-25%	12-15%	78-80%	18-21%
	2013	5%	5.6%	38.2%	8%

All numbers have been rounded.

Source: Dalberg estimates, The Better Than Cash Alliance Country Diagnostic Philippines (2015)

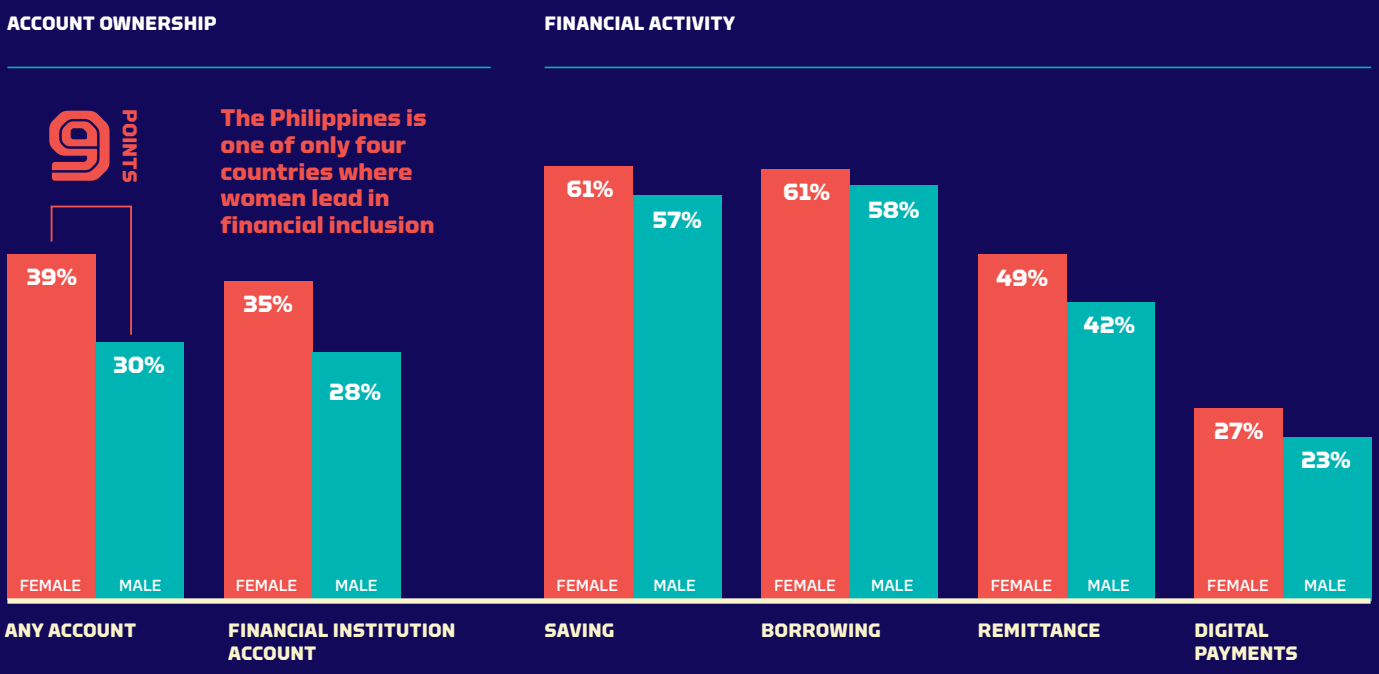
The growth in digital payments has been remarkably gender inclusive. The Philippines is one of the few countries in the world where more women than men use digital payments and financial services. A higher proportion of Filipino women (39%) hold formal accounts than men (30%), a gender gap of nearly 9 percentage points.[57]

BOX 1

How does the Philippines buck the trend of the gender gap in formal financial services?

Access to financial services in the Philippines, through a gender lens

Globally, women are still disproportionately excluded from the formal financial system and make up more than half of the world's population without bank accounts. According to the Global Findex of 2017, 72% of men and 65% of women have a formal financial account, a gender gap of 7 percentage points. The gender gap is similar in developing economies, with 67% of men but only 59% of women having an account.



Women's access to and use of financial services in the Philippines has established a solid foundation for their economic participation

- A higher proportion of Filipino women hold accounts than men; 39% of adult women hold accounts, as opposed to 30% of adult men, showing a gender gap of 9 percentage points in favor of women.
- Filipino women are also more active savers and borrowers than men, through both formal and informal channels; women save more (61% of all adult women) than men (57% of all adult men) through formal or informal channels. Moreover, a larger proportion of women save through formal financial institutions: there is a gap of 4 percentage points.
- More women participate in transactional activities, such as remittance, bill payments, and purchases; 49% of all women receive and send domestic remittances, compared to 42% of men. Although card ownership is marginally higher for men, more women are making digital transactions.

The key drivers behind women's favorable rates of access to and use of financial services in the country include:

1. Cultural norms that favor the agency of women in household financial matters,[58] and higher financial capability of women.[59]
2. Microfinance institutions that largely cater more to women than other countries.[60]
3. Government transfers that target women.

Further research could help to identify actionable learning from the Philippines to improve access to and use of financial services, including digital payments, for other countries.

KEY FACTORS UNIQUE TO THE PHILIPPINES

Cultural norms according to which women make financial decisions

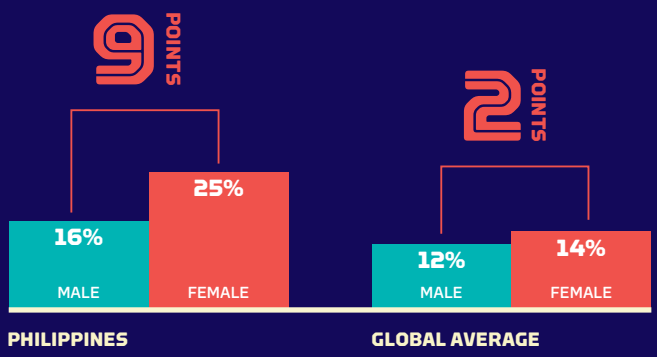
- Traditionally, Filipino women are in charge of managing household finance.
- Hence, women are the ones who hold accounts, and make more transactions like bill payments and purchases.

Higher financial capability of women than men

- Filipino women show higher levels of financial literacy than men.
- For example, women are 4 percentage points more likely than men to understand insurance products.
- This contributes to higher account ownership among women.

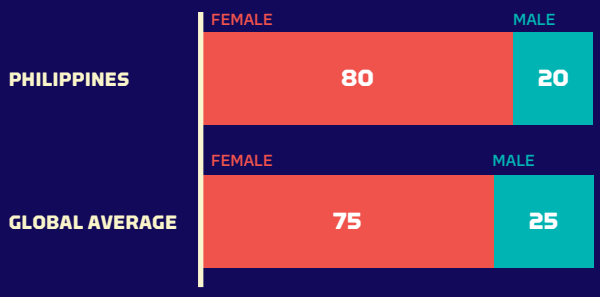
FACTORS COMMON ACROSS COUNTRIES

Government transfers directed toward women



Microfinance institutions that mainly serve women

% of MFI loans to females and males, 2017



Filipino women are also more active in transacting digitally (by 4 percentage points), even though ownership of cards and mobile money accounts is marginally higher for men. This greater use of digital payments by women is driven by sociocultural norms as well as government policy. Traditionally, Filipino women have been responsible for budgeting and managing household finance, which helps build knowledge, capability, and confidence. Further, government transfers and microfinance products have been directed more toward women compared with global peers.

Growth in digital payments has been driven by payments made by individuals (P2X), whereas not much change has been seen in payments made by businesses (B2X). It is estimated that 9-12% of all P2X payments are made digitally, as of 2018. This is an increase of at least 8 percentage points over the baseline in 2013. In absolute terms, the number of digital payments in the P2X stream is estimated to be 400 million; comprising 85% of total digital payments in the country.

On the other hand, businesses payments are still predominantly check-based with only 4-5% of payments by volume, and 12-15% by value, conducted digitally. This share has only marginally edged upward over the past few years.

Government remains the most cash-lite player; 59-64% of government payments are digital, by volume, up by at least 5 percentage points over the last few years. The following sections quantify the progress made in payment streams by payers – P2X, G2X, and B2X.

Person payments (P2X)

P2X payments have shown the largest shift. It is estimated that the share of digital P2X payments by volume is 9-12%. P2X payments form about 80% of all transactions in the Philippines. These include payments made by individuals in the form of fees and taxes to the government, payments for utilities, airtime top-ups and merchant payments, and payments between individuals such as remittances and person-to-person lending. Merchant payments form the largest share of all P2X transactions, at 3-4.4 billion per month, of which about 400 million are digital.

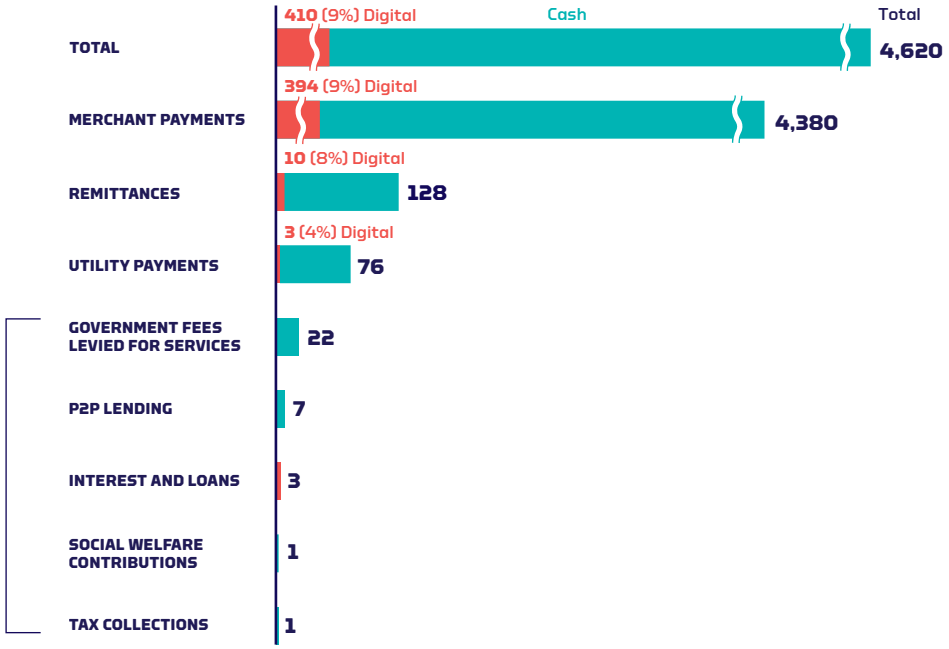
In fact, nearly all, or 95%, of payments by individuals are made to merchants. In all, about 3.3-4.6 billion transactions are made by individuals every month, valued at USD 27-30 billion. Of these, about 400-410 million transactions occur digitally. These purchases include fast-moving consumer goods (FMCGs), airtime loads, utility bill payments, and other household consumptions.

This is also where P2X payments are growing. Merchant payments are estimated to be at least 8-11 percentage points higher than in 2013. However, progress in other payment use-cases, such as remittances, utility

FIGURE 12

Share of digital payments by use-cases, by volume (P2X)

Millions, conservative figures only



Less than 1% of the total in each use-case are digital, except interest and loans, which are 100% digitized

payments, and taxes, has remained sluggish; less than 4% of remittances and utility payments, and less than 1% of taxes, were paid digitally in 2018.

A strong supply-side push to increase penetration of debit and prepaid cards as well as merchant acceptance is driving the rise in digital payments. The number of debit cards in the country has almost doubled from 38 million (2013) to 71 million (2018). The number of prepaid cards has also doubled from 35 million (2013) to 70 million (2018), while that of credit cards has increased marginally from 7.5 million (2013) to 9 million (2018).[61]

Of late, prepaid cards have also been a popular instrument of digital payment; the monthly transaction volumes stood at around 286.5 million in 2018, compared to 54 million transactions through debit cards and 24 million transactions through credit cards in 2018. Prepaid cards can be open or closed, and reloadable or reward-driven. An example of a closed, reward-driven prepaid card would be loyalty/rewards cards issued by SM malls and shopping centers, which cannot be used for payments other than to the merchant that issued them. Open, reloadable prepaid cards, such as those issued by PayMaya/BDO/BPI/GCash, can be used for payments to all types of PoS-equipped merchants.

The acceptance of digital payments among merchants has increased steeply; almost 120K merchants accepted payments by cards in 2018, compared with only 35K merchants a few years ago.[62] Around 60K merchants have also started to accept the use of QR code for payments; a remarkable growth given that QR code-enabled payment was nonexistent in the country a few years ago.

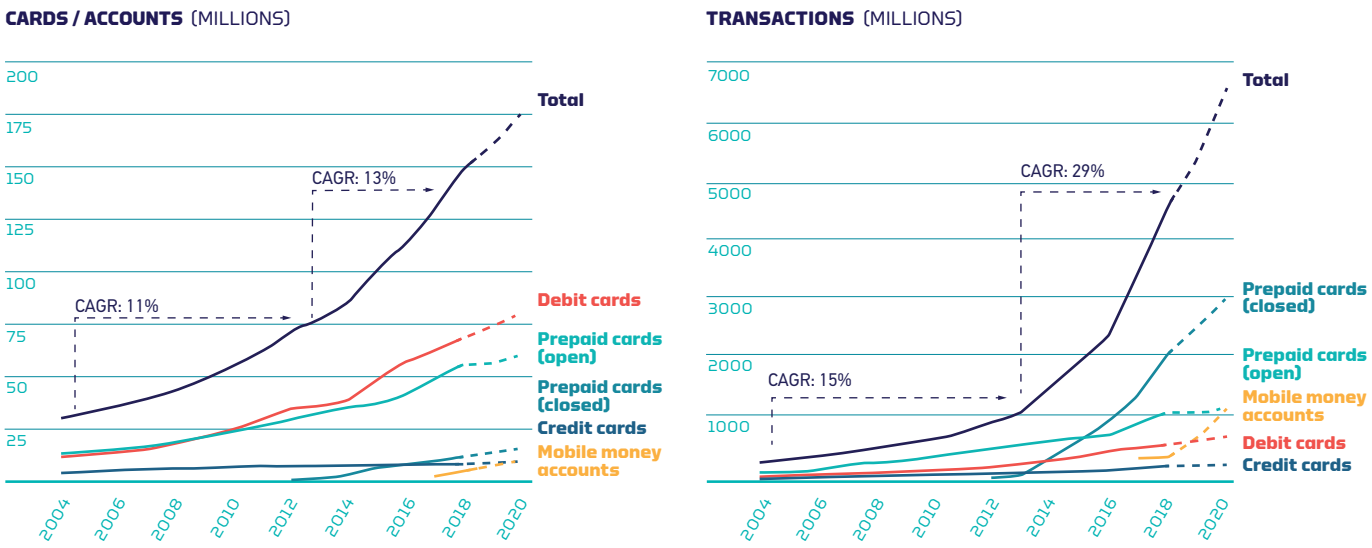
The increased penetration of cards and improved acceptance infrastructure has resulted in an increase in digital payments in these channels. Cards contribute to around 360 million transactions. Interestingly, prepaid cards make up 47% of total cards but contribute over 78.5% of total transactions. This trend may be attributable to the promotions and cashbacks/discounts offered by leading malls and shopping complexes to increase customer retention.

Increasing use of mobile wallets has complemented the growth in use of cards. As of 2018, at least 5 million Filipinos own an active mobile money account, more than doubling from 2.2 million in 2017.[63] In comparison, 15.5 million people hold a debit card (2017). The growth observed so far has resulted from a push by GCash and PayMaya.

FIGURE 13

Access to and use of digital payment instruments

Euromonitor. Dashed lines are estimates



CAGR = compound annual growth rate

E-commerce has also grown considerably in the Philippines and will further increase the use of digital payments. The e-commerce industry recorded an annual revenue of USD 840 million in 2018 and is slated to grow about 10% annually to soon become a billion-dollar market.[64] Cash-on-delivery remains the primary form of payment, up to 85% of all sales are estimated to be through cash.[65] However, the share of digital payments has grown from negligible to over 10% in the last few years and is expected to increase further as people explore the convenience and ease. This change follows the growth of digital payments in several other developing countries, including India and China.

BOX 2

Unlocking digital opportunities for merchants – user perspective

Mildred Gonzales (above-right) is the owner of three small clothing boutiques in different bazaars and shopping malls of Metro Manila. She is a small business owner and entrepreneur, and single mother, who hopes to ensure a better life for her children. As she puts it: "As a single mother and part of the middle class, I need to work hard to sustain my family."

Mildred has been a user of a mobile wallet for over a year, and appreciates how it has helped her save time and money, increase her revenue, and expand and manage her business.

"Transacting with my mobile has been great for my business. Transactions are not only fast and convenient, they are also very easy to use, safe and secure. The mobile wallet has also helped me better manage my business. I have established QR payments in all my shops and online stores, so I can monitor my earnings remotely. It is of great help since I cannot be in three places at once. I can then transfer those earnings to a bank account. It makes me feel so technologically advanced, but in reality it's so easy! (...)

"Not only has my mobile wallet allowed me to better manage my stores, it has also helped increase my revenue. I have some clients who have made large orders of uniforms using digital credit granted by our provider!"

Shen Martínez (not pictured), a fellow merchant at the Market! Market! bazaar points out that digital transactions make life easier for everybody at the bazaar.

"Transactions are faster and you don't have to worry about change. There are no ATMs nearby and pickpockets frequent the bazaar, so cash is always a problem. Fortunately, most of my clients prefer to use mobile payments (...)"

"What's really great for me is that now I can pay my taxes or other services using my mobile, or even send money to my parents in the provinces, without leaving my store. It's really challenging when you're a solo entrepreneur. No one will manage my store or take care of my business if I have to go run errands."

Source: Primary research

On the other hand, digital payments in remittances and utility payments have seen sluggish growth. One in three Filipino adults send or receive remittances in the Philippines. Most remittances are made over-the-counter (OTC) (over 80%); the share transferred digitally was low (between 4% and 8%) in 2018. Channels such as InstaPay have helped digitize the use-case, but its numbers remain small in absolute terms. Similarly, utility payments continue to be made in cash or OTC; only 4% of all utility payments by volume were made digitally in 2018, a marginal increase over 2014 (2%).

Low awareness of, and poor incentives to shift to, digital payment modes hinder digitization of remittances and utility payments.

- **Low awareness.** Nearly half of the population is estimated to be unaware of any digital channel for payment. Moreover, among individuals who were aware of the different channels, 11% did not know that they could use e-money platforms to make utility or remittance payments.[66]
- **Poor incentives.** Financial incentives remain weak. It costs an average of USD 37.50 to USD 50 to remit USD 250 (average value) internationally, and USD 2.50 to remit USD 50 (average value) domestically via OTC.[67] So far, the cost of transacting digitally is at par with the other means, and the banks charge similar commission fees as the OTC agents.
- To make matters more complex, banks may charge up to six different types of fees when using their services.[68] Further, cash and OTC are deeply entrenched. There are more than five OTC payment centers per 10,000 adults in the country, which is high; as a comparison, there are three ATMs per 10,000 adults in the country.[69,70] Thus, the existing channels are perceived to be more accessible and convenient.

However, a few upcoming aggregators can offer a slightly discounted commission to incentivize digital transfer.

FIGURE 14

Perceived cost of cash/OTC/checks versus digital means

	Average transaction size	Cash/OTC/checks	PESONet/Instapay	Cards	E-wallets
MERCHANT PAYMENTS	Ranges from USD 3.7 to USD 5.5	Zero*	Zero to USD 2 for InstaPay	2–4% MDR for the merchant	Zero
REMITTANCES	USD 50 for domestic remittances	Zero* to USD 2.5	Zero to USD 2 for InstaPay	N/A	Zero to 2%
UTILITY PAYMENTS	Ranges from USD 10 to USD 30	Zero*	N/A	4% MDR passed on to the customer for online payments	Less than USD 1
SUPPLIER PAYMENTS	USD 30 to USD 50 for informal enterprises USD 500+ for formal merchants	Zero* to USD 0.1	Zero to USD 50 per transaction for PesoNet	N/A	N/A

** The "perceived" cost of cash/OTC/checks to the users does not take into account the costs linked to personnel, transportation, material, and time*

BOX 3

Why going digital brings us closer together – user perspective

Taking care of family is ingrained in the Filipino culture. The Philippines is the fourth largest remittance destination internationally. It also has an extremely dynamic domestic remittance market. One in three Filipino adults send or receive remittances. Remittances, however, remain largely cash-based and OTC transactions. These tend to be slower, more expensive, and require the user to incur additional costs in the form of travel and time.

Fortunately, the digitization of payments is opening up new pathways to help Filipinos to look after their own. For instance, **Melanie Modesto** (above), the young owner of a sari-sari store, tells us:

"Since I adopted digital payments, it is much easier to send money to my mother back in the provinces. I don't have to go and line up at money transfer offices, me and my husband can just send money directly from the PoS device. I can also pay for her bills and utilities remotely. It just makes life a lot easier for us."

This is not an isolated story. **Mark Tuazon**, a small merchant in Metro Manila, says:

"Using a mobile wallet has not only helped my business, it allows me to support my loved ones, particularly my mother and father. They worked very hard for me and my siblings. It is now my turn to take care of them, and digital payments make it very easy. I can also pay for their mobile loads, or their bills, and it's done instantly. It's a way of being close to them from afar."

Source: Primary research

Another use-case that has been a laggard is the payment of taxes and fees to the government. On average, Filipinos make 15-21 million payments in a month toward fees and taxes. While taxes are straightforward, fees constitute payments toward contributory schemes and pensions, and services such as passports, birth certificates, and so on. Despite long queues at payment centers, costs of transportation and loss of wages, less than 1% of payments, by volume, made to local governments are currently made through digital channels.

Poor acceptance at local government units (LGUs) and a lack of a fully digital process continue to deter uptake of digital payment modes for P2G payments. Most LGUs do not have the capacity to accept payments through digital channels, except for LGUs in metropolitan and highly urbanized areas, such as Metro Manila. In fact, there are a few LGUs that mandate payment only by cash (and not even checks). Further, there has been a limited push from the LGUs to transition to a digital system, as this would require digitization of the entire backend process, which continues to be paper-based. Lastly, low frequency of these payments also lowers the incentives for the consumers to shift to digital means.

Overall, the steep growth in merchant payments compensates for the limited growth in other P2X use-cases. As noted above, payments to merchants form a large majority of all payments made by individuals. Thus, the impressive gains made in this use-case contribute to the overall gain in the P2X payment stream. The sluggishness in other use-cases, especially utility and remittance, is unusual. Utility payments by nature are many-to-one. Many-to-one payments typically lead the digitization curve in an economy.

Similarly, remittance is a high-frequency use-case that is often relevant for a very large segment. The value proposition of going digital is usually strong because of higher convenience and lower fees. Finally, it is unsurprising that P2G payments have been slower to transition to digital. Earlier studies point out that four necessary conditions must be met: (i) strong levels of buy-in from within the government and across business partners; (ii) reliable infrastructure; (iii) an enabling policy environment; and (iv) indications of consumer readiness.[71] All of these, especially the last, are difficult to come by in a nascent environment such as The Philippines.

It is expected that the digitization of P2X payments will continue to grow given the shallow penetration of digital modes. There are 15-20 million Filipinos who can, but do not actively, transact digitally. This segment will power the next phase of digitization. Increasing merchant adoption (likely powered by QR codes) and the proliferation of products and services that leverage the current payment infrastructure, combined with increasing internet and smartphone penetration, will continue to drive the growth.

Government payments (G2X)

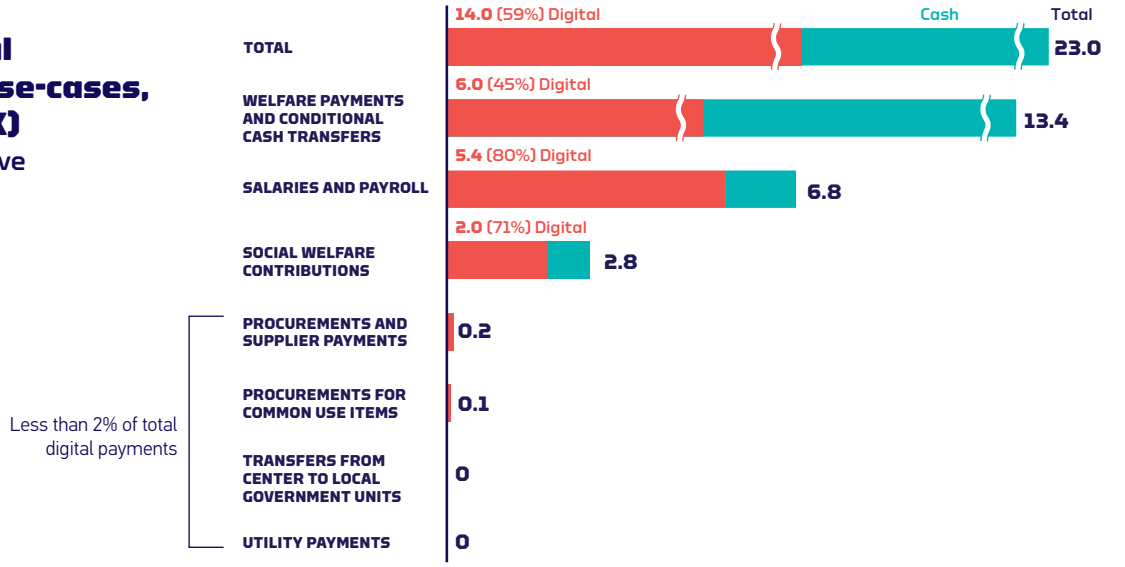
Government remains the most 'cash-lite' actor in the Philippines, with two in three payments made digitally, by volume. G2X payments range from internal revenue allotments to LGUs, payments to businesses for supplies and other expenses, and salary and social welfare payments. Overall, it is estimated that the national agencies make 23-30 million payments in a month, valued at USD 6.1 billion. Of these, 14-19 million payments are made digitally. Salary payments and cash transfers form the largest portion of payments by the government (88% of the total volume), as well as the share digitally (86%). This is a terrific advantage that could lead to broader digitization, because government payments – although small in absolute terms by volume and value – are often the primary source of a digital store of value for people with no bank account or insufficient banking.

National agencies, such as the Department for Social Welfare and Development (DSWD), Pag-IBIG, and Social Security Service (SSS), have done well to drive digitization of government-to-people (G2P) payments. Almost 58% of transfers made by the DSWD for the Pantawid Pamilyang Pilipino Program (4Ps) were transferred digitally in 2018, increasing from around 50% in 2013.[72] In addition, although smaller than the 4Ps program in volume of transfers, Pag-IBIG has strived to transition to digital payments; almost 94% of the transfers from Pag-IBIG for small-ticket lending were digital in 2018. Although 60% of the larger-sized housing loans from Pag-IBIG remain check-based, this is a result of limitations in withdrawals from the ATMs, which usually have a maximum withdrawal of USD 1000, compared to the average housing loan size of USD 20K.

FIGURE 15

Share of digital payments by use-cases, by volume (G2X)

Millions, conservative figures only



The government has also set the groundwork for digitization of further G2X payments. The Department of Budget and Management (DBM) and the Bureau of Treasury have started piloting the Budget Transparency and Management System (BTMS) that will provide a clearer view of the government's finances. Allowing banks and non-bank electronic money issuers (EMIs) to offer payment service through PESONet integration with the BTMS will enable direct transfer of payments to suppliers (G2B). In addition, the government procurement portal, PhilGEPS, is online and growing quickly. Nearly 400K bids were awarded through the portal in 2018, up from 180K in 2013. Integrating PhilGEPS further with PESONet, along with existing plans to introduce e-money wallets within the system, will be the drivers for digitization within the G2B channel.

However, on the G2P side specifically, more attention is required to expand financial inclusion. The government has an opportunity to achieve this in two ways; firstly, by improving the quality of payments made to welfare beneficiaries. Approximately one in three social benefits payments are made using cash cards, which are non-reloadable and are used primarily for taking out cash. For example, 4Ps, which is arguably the largest user of cash cards for cash transfers, did not improve financial inclusion, even though the majority of its transfers are paid digitally.[73] Moving these cash cards to formal accounts, or incentivizing their usage, would increase the use of digital financial services. Secondly, the government could accelerate provision of no-frills accounts for the majority without a bank account or with insufficient banking through partnerships with financial institutions. Taken together, these initiatives would have knock-on effects on driving financial inclusion; the number of formal account owners is estimated to have increased by 16%.[74,75]

Different government agencies must learn from each other to ease their readiness to accept digital payments. Several of the hurdles faced by each national agency in digitizing payments are fundamentally the same – questions around merchant fees in accepting card payments, the need to upgrade systems to accept payments, and reskilling a large number of employees to match the systems upgrades. Agencies such as the Bureau of Internal Revenue (BIR) and Pag-IBIG have clearly taken the lead and successfully digitized large portions of their collections or transfers. Their example should be adopted widely in the near future.

BOX 4

How digital payments are putting users at the center of social protection in the Philippines - user perspective

There is good evidence that conditional cash transfers (CCTs) result in lower monetary poverty, and improvements in health and educational indicators that seek to break the poverty cycle. This explains why CCT programs have become a central element of poverty reduction and social protection strategies.

However, how the funds and benefits of CCT programs are transferred is a crucial feature that has a powerful impact on the lives and well-being of beneficiaries. Disbursing social benefits over the counter is expensive, not only for the social programs, but also for the beneficiaries who incur substantial expenses in the form of transportation and waiting time.

Grace and Nina (above), two beneficiaries of the Pantawid Pamilyang Pilipino Program (4P), the CCT program of the Philippines, speak about their experience:

"The benefits used to be disbursed in cash. The benefits are paid quarterly and there are a lot of beneficiaries. We had to leave the house very early in the morning to collect our payments and would still have to stand in lines the whole day." – Grace

"We would have to pay for transportation and bring food for the day. We are all housewives and have many things to do. Many of us have small children to take care of. We also heard many stories of women being robbed after they left the facilities." – Nina

The Philippine Department of Social Welfare and Development (DSWD) is using digital payments to make life easier for beneficiaries. The 4P program has transitioned from OTC to cards for the delivery of benefits. The use of cards not only saves time and money for beneficiaries, but also protects their sense of dignity. As Grace puts it:

"The cards have made it easier for us and save us a lot of time and effort. We now have more time to take on our responsibilities and take care of our families. With the cards we can easily purchase school materials, groceries and other items, and I also feel more secure."

These testimonials show how the digital delivery of social transfers in the Philippines has materially improved the lives of millions. Yet there is room for more. DSWD can build on this success to move toward delivery mechanisms that facilitate the financial inclusion of beneficiaries, which could have substantial multiplier effects on digitizing payments in the economy, and driving a more inclusive and sustainable growth.

Source: Primary research

Business payments (B2X)

Business payments (B2X) have seen the slowest adoption in the use of digital payments; less than 1% of B2X transactions were digital in 2013, and the share is still under 5% at best. B2X payments constitute tax and fee payments made by businesses to the government, supplier payments and to other businesses, and salary and payroll payments among others. Businesses make about 1 billion transactions per month, together worth approximately USD 84 billion. These payments form only 19-20% by volume of all the transactions, but over 70% of all payments in the country by value. Of these only 48-57 million transactions worth USD 10-13 billion are made digitally.

About 80% of B2G payments (by value) were digital in 2018, up from slightly over 48% in 2013; consistent lowering of the threshold for online filing is the key driver. The use of the Electronic Filing and Payment System (EFPS) has driven the adoption of digital payments for taxes. With the EFPS, businesses earning above USD 0.02 million (PHP 1 million) in sales have been mandated to pay online since 2015. Since the mandate, the volume of digital payments for taxes has risen from 2 million in 2014 to 5 million in 2018.[76] Moreover, the threshold for mandatory online filings has been consistently expanded, increasing the number of businesses required to pay digitally. However, this is still limited to only a small share of businesses overall, making up 43% of tax payments, by volume.

In addition, 18-28% of salary payments (volume) were digital in 2018, growing from 7% in 2013. This has increased at a faster rate than the rate of improvement in financial inclusion in the country, which increased by 4 percentage points. However, only large and formal industries currently pay digitally. A few players are working with fintech companies to directly make salary payments through an account. Further details on the drivers of digitization of salary payments were not covered as part of this study.

However, supplier payments, which represent almost 83% of all business payments by value, continue to be made using checks or cash. Of about USD 70 billion in supplier payments, only USD 1-3 billion are made digitally, growing only marginally from about USD 1.3 billion in 2013. The use of digital payments has also been limited to only select formal sector enterprises; the vast majority of supplier payments by industries, and practically all supplier payments from informal sectors and micro, small and medium enterprises (MSMEs), remained dependent on cash and checks.

Businesses cite audit requirements for paper trails, and a preference for checks, to be the key barriers in digitizing the space further. The Commission on Audit (CoA) allowed the use of e-receipts in 2004.[77] However, the prevalence of checks for supplier payments has remained sticky. Only a few businesses – limited to the large FMCG players – are aware of, and transitioned to, an eOR system for a very small fraction (less than 2-4%) of their supplier payments. Some of the slow adoption can be

BOX 5:

Salary disbursement through GCash

GCash, one of the leading e-money issuers in the country, has added a service vertical for corporate partners/clients across industries. It has launched PowerPay+ System, a robust self-service disbursement platform, which allows for salary and bonus disbursements into employees' e-money accounts.

The platform enhances the partners' experience by enabling them to:

- streamline their payroll processes across employees and type of payments (salary, commissions, allowance, and any other off-cycle payments),
- execute payments in an efficient, secure, and convenient manner, and
- save on administrative costs that accompany the disbursements through handling checks and cash.

On the recipients' side, receiving employer payments through this platform allows for:

- instant access to funds (compared to a few days of delay and risks in payments through checks and bank transfers), and
- a seamlessly integrated experience – recipients can both save with GCash as well as make regular purchases (airtime loads, bills/ utility payments, remittances, merchant purchases, etc.) without having to worry about maintaining multiple accounts and incurring transaction costs in that process.

Currently, around 600 companies are using this platform to disburse various payments to over 420,000 payees. As a leading example, one of the largest business process outsourcing companies in the Philippines uses the PowerPay+ System to provide digital rewards for its employees. Initially, the physical gift certificates were given to employees for their incentive program, but with this platform, the company can provide rewards instantly and easily. The knock-on effects are notable too – instant rewards help to sustain team motivation, and the perceived value of the reward is much higher because the awardees are free to choose how and where they want to use the reward.

Looking ahead, GCash aims to onboard 1,000 companies and 1,000,000 corporate recipients by the end of 2019. In addition to this, it is looking into strategic partnerships with payroll providers to further strengthen the product by developing an all-in-one solution from payroll computation to payouts.

Source: Adapted from a case study provided by GCash team

traced to a natural inertia in shifting systems, but the uncertainty regarding the requirements that an eOR must match, including the location of payment, also hinders wider take up. Meanwhile, paper receipts are widely accepted for record-keeping and auditing.

In addition, an inherent preference for checks because of their flexibility and the option for legal recourse among payees have prevented further take up of digital payments. Given that PESONet has no restriction on transaction amount and allows receipt of funds on the same banking day, it is well-positioned to facilitate the B2X transition to digital payments, once the barriers to issuing and accepting e-OR are overcome.

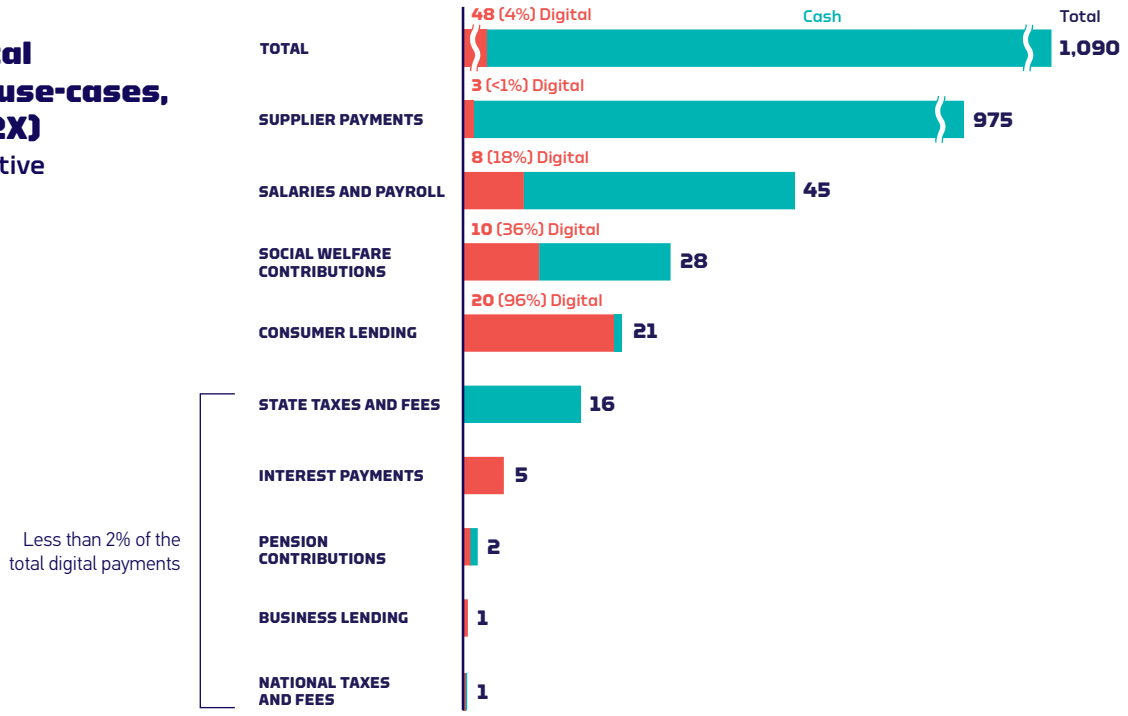
Overall, only a few businesses have started to transition to digital payments. Large e-commerce firms, such as Lazada, and FMCG companies have led the digitization of supplier payments. This is also visible in the slow growth of PESONet transfers, a suitable digital alternative for large-value and low-volume transactions. Since its inception in November 2017, the volumes on PESONet have grown from 330K to 920K as of June 2019, leading to a 5% monthly compound annual growth rate.

Future growth in digitization of B2X payments will come from enabling digital supplier payments. Businesses face an inherent pull toward digital payments as the use of digital payments reduces costs for compliance and unlocks efficiency gains for businesses. In the near term, supplier payments can be digitized through a clearer directive from the CoA with support from BIR and other national agencies (such as the Departments of Finance, and Trade and Industry). The authors of this report also suggest that these agencies lead campaigns to improve awareness among enterprises.

FIGURE 16

Share of digital payments by use-cases, by volume (B2X)

Millions, conservative figures only



4. CONCLUSION

As this payer-by-payer analysis shows, overall, progress in the Philippines has been great. The share of digital payments has risen from less than 1% of payments by volume, and 8% by value, to 8-11% and 18-21%, respectively, as of 2018. This translates into a growth rate of at least 27% since 2013.

As the Philippines continues to work toward its goal of increasing the adoption of digital payments, five payment use-cases offer the most promise: (1) merchant payments, (2) supplier payments by businesses, (3) remittances, (4) utility payments, and (5) social benefit transfers.

These use-cases account for 97% of all transactions in the country and even a small shift toward digital payments in these use-cases can translate to a large change overall. Secondly, these use-cases can help onboard larger sections of individuals and businesses on to digital payments. It is estimated that less than 5% of Filipinos regularly make and thus gain from digital payments. Similarly, the proportion of businesses that benefits from digital payments also remains very small. The transition to digital payments should also provide social benefits such as financial inclusion across a wider segment of the population, technical innovation, efficiency, and lower costs. Recommendations to catalyze these five use-cases are included in Chapter 6.

The following two chapters deep-dive on merchant payments and consumer behavior. Merchant payments form the bulk of transactions in the Philippines, but acceptance of digital payments remains low.

Chapter 4 explores the barriers, as well as opportunities, in driving digital payments acceptance among merchants.

On the flip side, it is equally important to understand the drivers of payments among consumers, and fundamental behavioral challenges limiting greater adoption of digital payments, explored in **Chapter 5**.

5. DEEP-DIVE: MERCHANT PAYMENTS

Merchant payments contribute the most to the share of the overall and digital payments in the country. This use-case has seen significant growth – estimates suggest that the share of digital payments has risen by 8–11% by volume as of 2018. This increase is because of rising acceptance of digital payment instruments, such as prepaid, debit, and credit cards, and QR codes. Despite the gains, there is headroom to grow.

Barriers to accept digital payments vary by the type of retailer and the type of payment processed. The segment comprising large branded outlets with high-value transactions has the highest acceptance rate overall. Higher margins and transactions volumes in this segment make digital payments affordable for merchants. The segment of branded but low-value transaction outlets (e.g., convenience stores) and more importantly, the segment of small retailers such as standalone sari-sari stores, witness low demand from consumers to pay digitally. Further, their transaction value and volume are not high enough to justify the upfront or recurring costs.

Despite the challenges, acceptance is expected to continue to grow because of a low baseline of digital payments. To truly accelerate digital payments to merchants, value-added services must be offered. This is a win-win opportunity for both – the merchants benefit from additional product offerings, which the industry can monetize.

Three in every four payments in the Philippines are merchant payments, which represents a large potential to drive digitization in the economy. Merchant payments include all purchases toward grocery, apparel, footwear and other types of consumption expenditure, mobile and internet load, bills/ utility payments, and loan repayments. These purchases are made across all types of retailers – large enterprise merchants to small informal merchants, commonly referred to as sari-sari stores and carinderia in the Philippines.

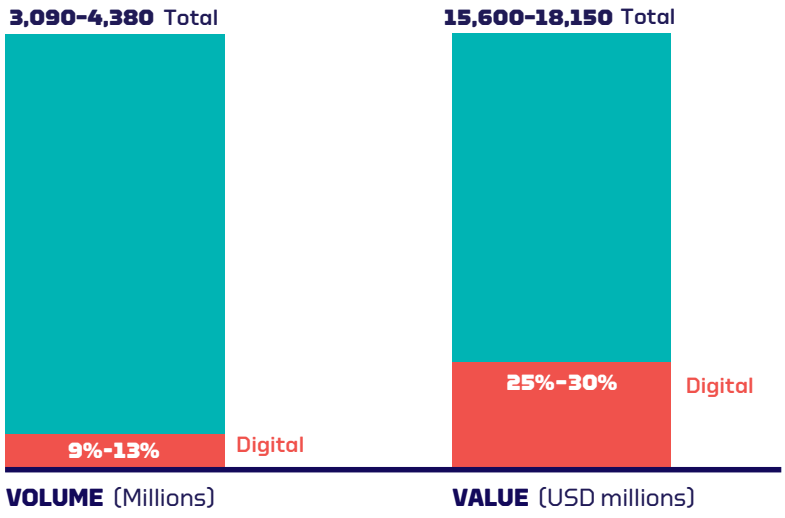
Over 3-4.4 billion transactions per month worth USD 16-18 billion are made toward merchants in the country. Although they form the single largest use-case by volume, merchant payments make up 13-15% by value (second only to B2B – supplier payments). Hence, monitoring of this stream is critical as even the smallest shift from cash to digital payments in this category leads to a significant gain overall.

In undertaking the deep-dive, this study sought to understand (a) the drivers of growth in acceptance of digital payments among merchants, and (b) the barriers to adoption for different segments. To do so, the approach was to refer to more than five different quantitative surveys conducted with merchants over the past few years; engage with merchant acquisition teams at banks and non-bank EMIs; and analyze more than 10 publicly available reports and studies on merchants.

A. Drivers of growth in acceptance of digital payments among merchants

The number of merchant payments made digitally (by volume) has grown by 8-11% over the past few years. The volume of merchant transactions made digitally ranges between 388 and 400 million per month (out of nearly 3-4.4 billion transactions) in 2018, up from a meagre 5.25 million per month in 2013. In value terms, approximately USD 4.6 billion of products and services were transacted digitally out of a total payment of USD 16-18 billion, up from USD 56.5 million in 2013.

FIGURE 17
Share of digital payments made by individuals to merchants, by volume and value



The growth in merchant payments is driven, in part, by the increasing number of merchants that now accept digital payments. Up to 180K can accept one or more digital payment instruments (such as debit, prepaid, and credit cards, or QR codes) in 2018, up from only about 35K a couple of years ago.[78] Most of this growth took place in the last two to three years, as fintechs and banks turned their attention to improving the uptake of digital payments among both consumers and merchants. Banco de Oro Unibank, Inc., Gcash, and PayMaya are estimated to have acquired about 70% of all merchants that accept digital payments. Acquirers have invested in building awareness, subsidizing the capital cost of PoS terminals and providing rebates on merchant discount rate (MDR).

As mentioned in Chapter 3, the Philippines is also witnessing an increasing penetration of cards and mobile wallets among consumers. Given that merchant payments are a two-sided market, increasing access to and use of digital payment instruments among consumers have also contributed to the overall growth in merchant payments.

The growth in merchant acceptance is likely to continue with increasing adoption of QR codes. Penetration of QR code is increasing at a faster rate than of PoS terminals. The number of PoS terminals grew by 100K between 2013 and 2018; however, in the past one or two years, the number of merchants that now accept QR codes has ballooned from negligible to 120K.[79] Most of this growth has come from investments made by mobile wallet players. QR code-enabled payments have lowered merchant acquisition costs for acquirers because of the lower hardware costs (USD 100-150 for QR codes compared to USD 400-800 for PoS terminals).[80] Further, QR codes reduce the time to onboard a merchant as they require less hand-holding. Given the relative ease of merchant acquisition with QR codes (as compared to PoS terminals), it is likely that QR codes will drive more merchant acceptance, as shown in Figure 7 (page 24). This is in line with the aggressive targets of mobile wallet players, expected to double QR code penetration in the next one to two years alone.

B. Incentives and barriers to adoption for different segments

Barriers to adoption vary based on the needs of different merchant segments. Merchants in the Philippines can be classified into three segments based on the nature of their clientele, their expectations and needs from a payment system, and their challenges in transitioning to digital means of accepting payments. The three segments are as follows.

Segment A: comprises large, urban retailers primarily housed in metropolitan malls and shopping complexes. SM Prime has 70+ malls across the Philippines, and Robinsons and Ayala Malls are other major players, all three of which fall in this category. Although the clientele of these malls is representative of all income groups, and spending depends on the type of purchase (appliance/apparel/groceries, etc.), the average transaction amount is reported to be in the range of USD 20-30 (PHP 1000-1500).[81] This indicates prevalence of purchases by high-income clients who are likely to own one or more digital payment methods, e.g., debit/credit cards and loyalty/rewards cards.

Segment B: this category includes branded outlets but those that process relatively low-value transaction ticket sizes. Key examples would be convenience store chains such as 7-11s, which face high footfall and require quick transaction processing. The average transaction value for these merchants is estimated to be about USD 1-4 (PHP 50-200).

Segment C: includes micro and small merchants; standalone grocery retailers such as sari-sari stores would be the key example. Average transaction size is estimated to be less than USD 1 (PHP 50).

Among the three segments, segment A merchants form at least half of all merchants that accept digital transactions (based on anecdotal evidence). Most of these merchants are located in large malls, which often have exclusive tie-ups with banks and non-bank EMIs, making them easier to acquire. In addition, healthy transaction values and profit margins allow these merchants to absorb the cost of the MDR. Transitioning to digital payments has helped these early adopters cut down on cash handling expenses and improve the consumer experience.

Despite the benefits, most segment A merchants expect the acquirer to subsidize the upfront cost. Most segment A merchants expect acquirers to subsidize the hardware cost (ranging between USD 400 and 800 for a traditional PoS). It is expected that any hesitance, in part, stems from a perceived low rate of return on transitioning to digital payments, limiting the potential scale and type of merchants that acquirers can reach.

FIGURE 18

Merchant segments at a glance

	 **SEGMENT A** Large branded outlets with high value transactions (USD 20 or PHP 1000+), like at SM, Robinsons, etc.	 **SEGMENT B** Branded outlets but process relatively low-value transactions (USD 1-4 or PHP 50-200), like convenience store chains and drugstores	 **SEGMENT C** Standalone retail outlets like sari-sari and carinderia owners (most of which are informal establishments)
CURRENT ACCEPTANCE RATES	**High** Merchants acquired by large banks and fintech combined	**Low** Even the larger convenience store chain is not acquired yet	**Negligible** Only MSME merchants in urban areas have been acquired through QR (4-5% of the total)
UNDERLYING REASONS/ BARRIERS TO DIGITAL PAYMENTS	• Value reduced costs of cash handling and improved consumer experience • Expect acquirers to subsidize the cost of hardware	• Willing to shift to digital payments, but face low uptake from customers, small transaction amounts, and increased transaction times	• Cannot afford the MDR or the hardware costs to accept payments. The demand for digital payments from consumers is inherently low • Face additional challenges of internet connectivity, and cash flow management when transitioning
	"Want to focus more on quality merchants. Merchants who can bring more customers" - Merchant Acquisition team at a payments provider	"We have closed wallets for monetizing rewards, but only 1% of sales happen through the wallet" - Head of digital strategy at a large convenience store chain	"Small merchants exhibit low risk of cash handling which is why the value proposition for them is different" - Head of financial service provider

Weak consumer demand and poor latency of digital payment modes deter the uptake of digital payments among segment B merchants. Merchants in segment B include the large, urban retailers with high-volume, medium-value transactions, such as at convenience stores. Given the wide footprint and traction at each store, these merchants are willing to transition to digital payments, but face unique challenges such as weak demand from their customers, slower transaction time compared to cash – particularly in non-metros with weak internet connectivity, and small value per transaction (that attracts higher rates of MDR). As of the first half of 2019, even the largest merchants within the segment remain unacquired, and less than 1% of their transactions are estimated to be made digitally. A few merchants have tried in-house wallets but have seen a low uptake.

Acceptance of digital payments among segment C merchants remain negligible; high costs relative to income deters uptake of digital solutions. Most segment C merchants see no benefit of accepting digital payments. They can afford neither the hardware cost nor the MDR, as their margins are wafer-thin, and the cumulative value of transaction is not high enough to warrant switching to digital payment channels. Further, the demand for paying digitally from their consumers is inherently low, thereby limiting its adoption.

Further, going digital can pose additional problems that segment C merchants do not face when dealing with cash. It is difficult to stay connected to the internet, as is needed, particularly in non-metropolitan areas in the Philippines. The intermittent internet connectivity acts as a drag on transaction times as well, deteriorating the experience for merchants and consumers alike. Finally, accepting digital payments reduces the amount of cash a merchant has on hand. This simple reality can make business more difficult for merchants that operate in a heavily cash-based ecosystem. As one convenience store owner in the Philippines put it, "I need today's income in cash to pay for tomorrow's deliveries; I can't afford to have my money tied up in an account."[82] As a result, many segment C merchants prefer not to accept digital payments as doing so would require them to make frequent ATM withdrawals and, in extreme cases, face working capital crunches as they wait for access to their cashless income. For digital payments to appeal to this segment, both the upstream and downstream value-chains must be transformed. This would include paying their suppliers through digital means, disbursing salaries digitally, and paying digitally for their own utility purchases – which is a long-term scenario.

To truly accelerate digitization of merchant payments, radical new products will be needed to serve the largest segment, i.e., segment C merchants. The financial services industry will need to build value propositions beyond simply payments for these merchants. These value-added-services (VAS) could include access to additional revenue streams (including cashback, bill payments etc.), access to credit line, access to business tools such as digitized financing and accounting, customer relationship management, support with marketing, training, and handholding merchants in digital payments among others. Industry players must look to the future where they can monetize the value proposition, and not the payment itself. More detailed recommendations are provided in Chapter 6.

In conclusion, driving acceptance among merchants represents a significant opportunity for not only increasing the share of digital payments but also social impact. Given the large base of merchant payments, even a small shift toward digitization results in a significant increase in the share of digital payments by volume. Driving merchant acceptance coupled with proper consumer education will, in turn, drive the propensity to pay using digital means among consumers. It will also help prospective users become familiar with the process and start establishing trust.[83] Thus, merchant acceptance will result in a positive knock-on effect. Further, digital payments among merchants result in creation of data trails that allow financial service providers to tailor financial products to their needs.

6. DEEP-DIVE: CONSUMER BEHAVIOR

Consumers account for more than three-quarters of all payments in the country. But, only about 9-12% of these payments are made digitally - all of which are limited to only 5% of Filipinos who are active users (3.4 million). Beyond this, there are 15-20 million people who have have transaction accounts and payment instruments but do not yet transact digitally. Even today, a large majority of Filipino adults (46-53 million out of 68 million) remain financially excluded.

The feedback from active users suggests that convenience of use and quick transaction time are the drivers of continued use of digital payments. This is encouraging in the long run as it ensures stickiness. Hence, to convert more prospective and excluded segments into active users, mistrust needs to be resolved through consumer protection initiatives and awareness programs, as well as providing excluded populations with better access.

Payments made by consumers (P2X) form 77-80% of all transactions in the country. These include all types of merchant payments, payments to governments for taxes and fees, domestic remittances, and peer-to-peer lending among others. An estimated 3.3-4.6 billion payments are made by consumers every month. Of these, payments to retailers form the majority (3-4.4 billion payments per month). Given the large base, even a small shift can lead to large gains overall. Thus, it is important to understand the drivers of payments among consumers, and fundamental behavioral challenges limiting greater adoption of digital payments.

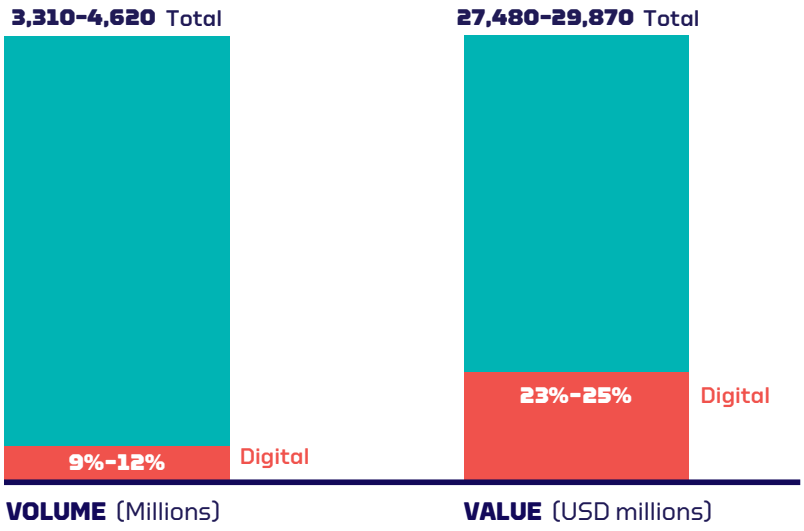
In undertaking the deep-dive, this study sought to understand the (A) drivers of growth in consumer payments and (B) consumer behaviors that drive as well as deter the uptake of digital payments for different segments. To do so, the study primarily relied on the Financial Inclusion Survey (2017) and World Bank Global Findex (2017). The emerging insights were refined by analyzing over 10 existing studies from the Philippines and other developing countries. The study acknowledges the lack of primary research with consumers to understand the behavioral drivers. It is hoped that the findings below will serve as a starting point for stakeholders in the country interested in exploring the behavioral dimension further through qualitative work.

Drivers of growth in consumer payments

As stated previously in Chapter 3, 9-12% of consumer payments (P2X) by volume are digital. Out of the 3.3-4.6 billion payments, about 410 million transactions occur digitally. This translates to about USD 7 billion in digital payments.

FIGURE 19

Share of digital payments made by individuals by volume and value (P2X)



Increasing acceptance is powering the growth in digital consumer payments. The number of cards (prepaid, debit, and credit) has nearly doubled to 153 million in 2018, from 80 million in 2013. Similarly, it is estimated that over 5 million Filipinos had mobile money accounts in 2018; in 2013, the penetration of mobile wallets was negligible. As a result, an average Filipino makes five to six digital transactions a month, valued at USD 16-17. The estimated share of digital payments made by individuals has increased by at least 8 and 19 percentage points by volume and value, respectively.

Consumer behaviors that drive as well as deter the uptake of digital payments for different segments

Three key segments emerge based on the usage of digital payment modes among consumers – active users, prospective users, and financially excluded. Less than 5% of the population are active users of digital payments. This translates to 0.6-3.5 million adults. Beyond the active users, there are an estimated 15-20 million who have access to a transaction account but are not using it actively to make digital payments – prospective users. And finally, there are 45.5-53 million adults who are financially excluded.

Active users are likely to have a high income, be based in urban areas, and spread across age groups. The average transaction value of a digital payment made by an individual lies between USD 16 and USD 17, suggesting that most payments are being made by those on the top of the income pyramid. Indeed, the top 60% of the population by income are more likely to be transacting digitally than the rest. Further, the use of digital payments has mostly been limited to urban areas and among the educated.

Surprisingly, fewer youth below 25 years of age use digital channels for payment (3.6%), compared to those above 25 years of age in the Philippines (4%). Promotion and awareness initiatives, as elaborated later in this chapter, would help deepen the engagement with this segment.

Active users use digital modes to pay merchants for goods and services and airtime loads. Anecdotal evidence suggests that payments at merchants (offline and online) through use of cards (prepaid, debit, and credit), and airtime loads through mobile wallets are the primary use-cases for digital payments by individuals.

Convenience of use and quick transaction time are cited as key benefits to switching to digital payments. 74% of e-money users cited convenience as the key driver to switch to digital payments, alongside faster checkouts and low processing fees. In addition, between 44% and 53% of individuals who have either a bank or e-money account cited "fast transaction time" as a major point of satisfaction with their accounts, compared to 28% who use cash or traditional channels of payments.[84,85]

FIGURE 20

Adoption of digital payments among Filipinos

Millions

Source: World Bank Global Findex (2017); BSP Financial Inclusion Survey (2017)

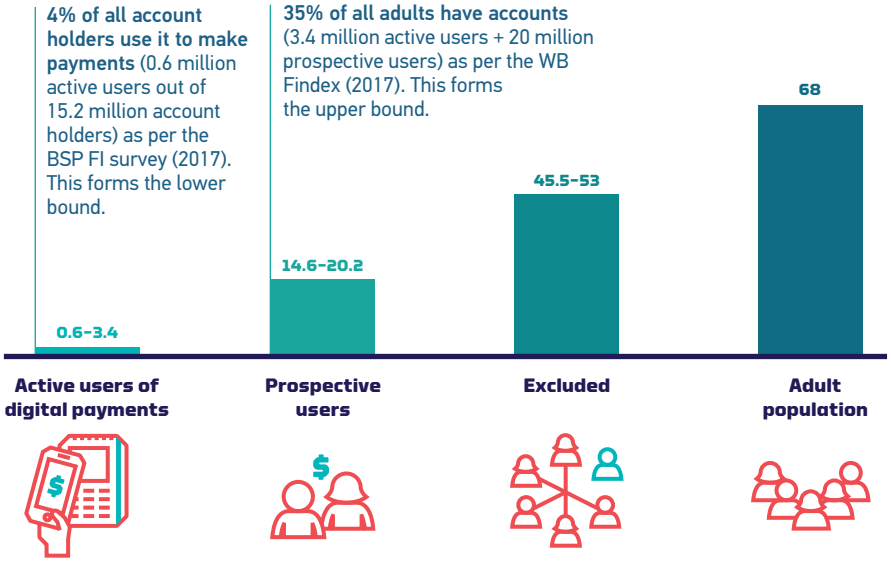


FIGURE 21

Demographic characteristics of active users

Source: BSP Financial Inclusion Survey (2017)

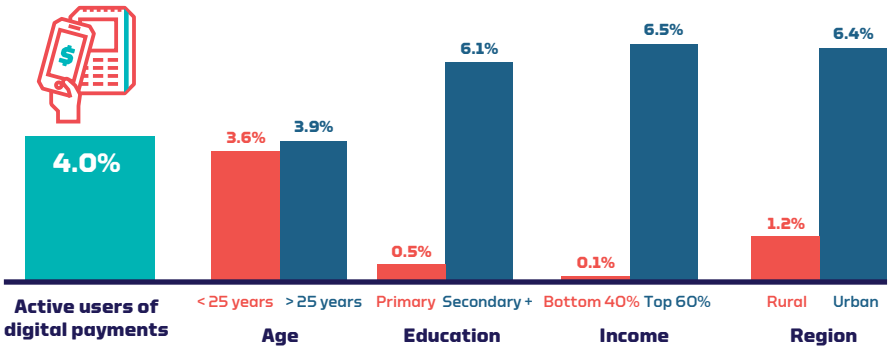


FIGURE 22

Benefits of going digital for active users

(n=500 consumers)

Source: PayPal Philippines Digital Payments Report, 2017; BSP Financial Inclusion Survey, 2017

Note: Results are based on a non representative survey sample

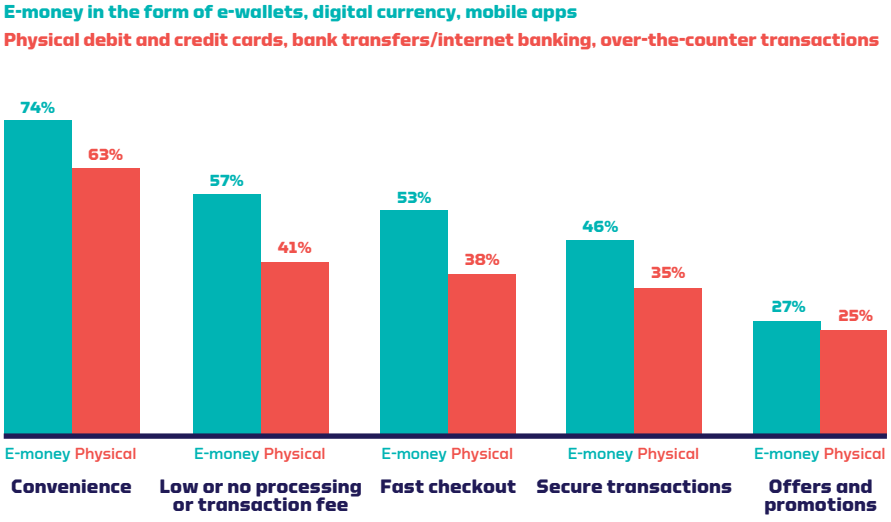
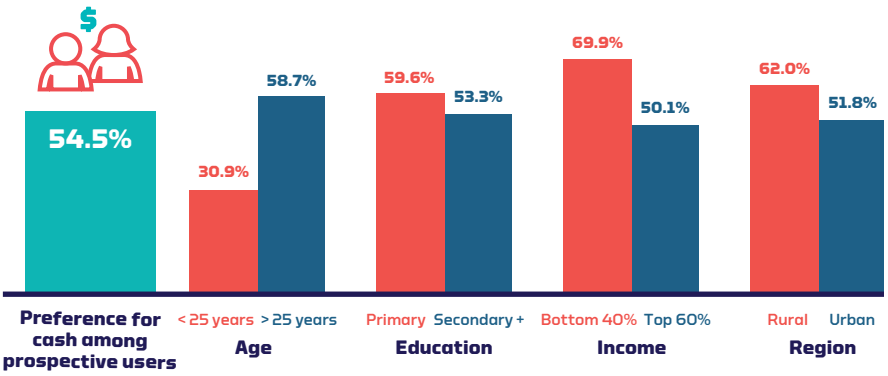


FIGURE 23

Preference for cash over digital among those who have access to an account but do not actively use it to make digital payments, by demographic segments

Source: BSP Financial Inclusion Survey (2017)



Among prospective users, over half the population is estimated to prefer cash over digital. Out of the 14.6-20 million adults who have an account but do not actively use it, 54.5% prefer to use cash. This preference for cash is highest among the bottom 40% of the population by income (nearly 70% of the poor stated that they preferred cash for payments), and lowest among the youth (just over 30%).

Qualitative evidence in other developing countries suggests that low preference for digital payments often results from the perception that banking is only for large ticket transactions, and a lack of ability to understand financial services because of heavy usage of financial service jargon.[86]

"You see all of these reports in the media about credit card theft/stolen identities – it makes us Filipinos less likely to use cards, even if we have them."

– SMALL BUSINESS OWNER IN THE PHILIPPINES[87]

Further, mistrust in digital payments is high in this segment. Anecdotal evidence suggests that a large majority of prospective users are ambivalent about using digital payments because of perceived security concerns. General mistrust is often spread through peer-to-peer exchanges and popular media that cover such frauds (e.g., fraudulent and unauthorized transactions, incorrect deductions, merchant identity fraud). When asked, many consumers admit that it has never happened to them, but they have either heard about incidents of fraud from trusted associates or seen reports in the news. The mistrust is amplified by the poor reliability of telecommunications connectivity. Wavering telecommunications connectivity in the Philippines has led to a perception of unreliability of digital payment channels. These concerns could be resolved through product innovations for low-resource environments combined with stronger consumer protection guidelines.

Lastly, the formal financial system will have to actively include 45.5-53 million Filipino adults who are currently without a bank account to allow them to transact digitally. Between 66% and 78% of adult Filipinos do not have access to an account, and the current formal financial system will need to regear itself to serve them. Access to a financial account has improved over the past six years; however, the rate of growth has been modest. Financial inclusion improved by 7 percentage points in the Philippines over six years,[88] which is a slower shift compared to the gains made by its peers (11 percentage points for East Asia and Pacific countries). Thus, it is imperative that the country works toward accelerating financial inclusion.

Beyond segment-specific challenges, poor user-experience and low awareness of use-cases deter further uptake of digital payments.

1. **Poor user-experience on smartphone applications can overwhelm consumers, leading to errors.** Qualitative research in developing countries suggests that consumers are simply overwhelmed by complex interfaces, especially during the first few transactions as they lack confidence in entering personal details (such as account or PIN number) and fear losing money.[89,90] It is often believed that a simpler interface leaves little room to make a mistake. Anecdotal evidence suggests that the websites of traditional banks often require navigation through multiple menus and options to transfer funds digitally in the Philippines.
2. **Overall awareness of use-cases of digital payments modes is low.** Nearly half of the population are still unaware of the different e-payment platforms.[91] Even those who are aware lack knowledge about use-cases and benefits of various digital payment instruments.[92] Promotion for digital modes of payments has been limited, especially for fund transfers by financial institutions. It is an accepted view that most banks disincentivize transfer of money outside the bank, through a combination of limited marketing and a suboptimal user experience.

In conclusion, it is important to understand the barriers and respond to consumer behavior toward digital payments. Payments made by individuals are the most significant by volume, which presents a huge opportunity to scale up the adoption of digital payments. In the short term, this means more attention is required to respond to the needs of prospective users and convert them into active digital payment users. At the same time, targeted initiatives are required to give more people the means to transact digitally.

As an outcome, bringing more consumers into the fold of digital payments opens up opportunities to have a nationwide impact on people's lives, especially for the majority of those who are financially excluded and underserved.

Chapter 7 identifies actionable steps to accelerate adoption of digital payments in the Philippines based on barriers identified in this as well as previous chapters.

7. THE PATH FORWARD

As noted in the earlier chapters, the Philippines has made tremendous progress in digitizing payments over the past few years. The share of digital payments is estimated to have improved from approximately 1% in 2013 by volume to 8-11% of all transactions in 2018.

This chapter identifies five priorities that will help drive digital payments in a way that is sustainable and inclusive. Finally, the chapter shares the impact that these priorities can have for the sector and the economy at large.

RECOMMENDATIONS

A. Improve trust in digital payments

Mistrust in digital payment systems remains high – anecdotal evidence suggests that issues (or their perception) such as hacking, personal security breaches, and unsafe access deter potential users from using digital payments. The drivers of this mistrust need to be understood, and all stakeholders should work together to improve trust in digital payments.

1. **Run information campaigns to build trust in digital payments among payers (BSP-led with the support of PPMI).** The BSP and the private sector need to work together to drive awareness among consumers as well as businesses. Communication efforts should focus on use-cases, benefits as well as risks, and safety features of digital payments. Payers must also be made aware of their rights, and the importance of protecting their data and privacy. PPMI is strategically suited to devise its own communication strategy to support the BSP with its ongoing efforts. Lastly, the impact of such programs must be measured by the BSP. The requirement of such programs and the impact can both be measured through periodic surveys.
2. **Monitor transaction failures (PPMI-led).** PPMI could regularly monitor failed transactions across all PSPs and modes (mobile money, InstaPay, e-banking, etc.), and provide appropriate solutions on how to address the issues. Further, payment providers can consider voluntarily presenting their targets, and plan to bring down these failure rates every year. PPMI could keep the BSP informed through regular check-ins and seek guidance, as necessary. The BSP could help to diagnose the nature of transaction failures and work with other bodies to issue guidelines for strengthening the payments ecosystem.

3. **Design payment solutions that overcome unreliable connectivity, offer security, and error-proof experience (PSP-led).** PSPs can help drive trust by investing in building solutions that work in environments with unreliable connectivity. Further, the industry should invest in creating simple user interfaces that make it easier to use and minimize the risk of mistaken transactions.

   For example, studies on the user experience with mobile money applications found that users preferred apps that allowed easy and independent navigation of the application. Such steps build trust in the mobile money app, and allow for the inclusion of low-income, remotely based users.

BOX 6

Innovation in Tanzania to enable offline digital payments

Africa's first offline, real-time payment app, Nala, was launched in Tanzania.[93] The app provides a user-friendly alternative to USSD-based transactions (unstructured supplementary service data). Beyond the data requirement to download the app for the first time, it works entirely independently of a data connection. Nala uses a USSD automator tool to send requests over existing USSD channels.

Nala also offers two significant benefits over USSD: (i) it provides a seamless user experience (akin to top-performing payment services) and reduces the number of steps to just a single tap, and (ii) it provides value-added services such as collating transaction history across various mobile money accounts of a single user.

4. **Promote responsible practices and proactively invest in privacy and consumer protection norms (PPMI-led).** It is important to recognize that increasing the share of digital payments in an economy comes with risks. One of the most common and the most overlooked risks is to privacy and consumer protection. As more innovative products and services are introduced and digital payment becomes a seamless experience, the government and providers should also strike a balance with respecting privacy and consumer rights.

   It is indeed a responsibility of the payment industry to follow best practices toward privacy and consumer protection. PPMI, as a body that represents the interests of the PSPs, can initiate this process by creating a checklist of responsible practices, inspired and adapted from the Better Than Cash Alliance's compilation of global consultations on this topic – Responsible Digital Payments Guidelines.[94] Another relevant source is the Smart Campaign's Consumer Protection Standards for Digital Credit.[95] The BSP must track user perception through attitudinal surveys, usage data, grievance redressal data, and so on.

5. **Establish a consumer redress mechanism (PPMI-led).** PPMI can lead the formulation of a consumer redressal mechanism with a clear escalation matrix. As part of its information campaign outlined above, the PPMI should also inform users on how they can get redress for any problems faced while transacting digitally.

B. Innovate to create a hard-to-refuse value proposition for both the payer and the merchant

Although a small fraction of payers are transacting digitally, the vast majority prefer to use cash and checks. This is driven by limited benefits and an inconvenience to going digital. It is important to create a compelling value proposition for the payer as well as the merchants who can be promoters of increased usage.

1. **Launch a seamless P2P payment interface (PPMI along with CSOs).** PPMI and the CSOs could invest in building a common P2P payment interface as a public good. The interface could be smartphone-first and allow for a seamless three-click transfer (e.g., select beneficiary, enter payment instructions, authenticate the transaction). At the backend, the system could integrate with the InstaPay ACH. The software development kit could be open source so that any payment provider could integrate the white label interface within their mobile ecosystem or as a standalone app. This would, in turn, lower development costs for the PSPs and lead to a proliferation of PSPs offering a seamless interface for P2P transfer. The BSP is well-positioned to oversee the development and uptake of such a P2P payment interface, and to monitor stability of the payment-processing infrastructure.

BOX 7
Bharat Interface for Money

The Philippines can seek inspiration from the unified payments interface (UPI)-based Bharat Interface for Money (BHIM) application in India. Through the app, individuals can make real-time transfers to the bank account of any individual who has also enabled UPI. As it connects to multiple banks, the national bill payment interface, and includes a QR code scanner, users of the BHIM app can use the application for use-cases ranging from remittances (P2P), to merchant and utility payments (P2B). The app is also interoperable, allowing banks and payment providers to link into UPI using the white label interface.

2. **Innovate to offer value-added services to small merchants (PSP- and aggregator-led).** Experiences in several emerging economies suggest that focusing on value-added services is key to improving the value proposition of digital over cash for merchants. These services include solutions that provide greater business intelligence and improved access to financial services, especially working capital. Business intelligence could be offered in a visually intuitive manner to allow merchants to readily draw conclusions on performance and take the necessary steps to improve. In addition, working capital could be offered by providing a credit line based on the value of sales. The collection may be automated by deducting a percentage from all sales, giving the perception that the loan pays itself.

Beyond PSPs, aggregators could play a key role in bringing small merchants onboard. The small number of aggregators functioning in the country at present have been able to support sari-sari stores and other small merchants through these services, such as training support, access to credit, access to additional revenue streams, and others. Lastly, businesses with large distribution network (e.g., FMCG businesses) are also well positioned to offer value-added services within their supply chains, to further spur digitization of B2B payments.

BOX 8

Value-added services for merchants in Kenya, offered by Kopo Kopo

Kopo is a merchant aggregator in Kenya that offers value-added services to merchants. Set up in 2012, Kopo has built its services on top of a payment platform that allows merchants to make real-time payments via bank transfers or mobile money. In addition to payments, merchants can also gain access to working capital credit (called GROW loans within the platform) as well as business intelligence (such as purchase trends and customer loyalty).

Through GROW loans, merchants can access unsecured loans of up to USD 50,000. Merchants are not charged an interest rate, but rather a fixed fee based on the time spent on the platform, the transaction volume of the merchant, and the prior repayment rates. The repayments themselves are made as a percentage of each transaction, chosen by the merchant at the time of availing the credit.

Such value-added services have proven to be successful, both in increasing adoption of digital payments as well as building a platform of engaged users. Merchants that used GROW loans showed a 42% increase in digital transaction volumes compared to merchants that did not take out a loan.[96] Merchants also preferred the speed, efficiency, and flexibility of the product, as well as the automatic and continuous repayment of credit. As a result, repeat usage is high; the median time between GROW advances for repeat merchants was just three days.

3. **For supplier payments, build awareness of acceptance of eORs and create a digital invoicing system (BIR in close cooperation with CoA, and national agencies).** The BIR would need to lead the work to overcome the lack of awareness of acceptance of eOR among businesses. The BIR, supported by various government agencies, also needs to issue a clarification on whether certain provisions, such as location, are mandatory for an eOR. Further, the coordinating agency could consider creating a subgroup that would lead efforts to digitize invoices. The subgroup could support the private sector to create solutions that better link accounting systems and payment transactions. The solution should issue an eOR in response to a successful payment transaction in a manner that allows for easy reconciliation of the books.

BOX 9

Open Pan European Public Procurement Online

Singapore implemented a national e-invoicing system using the Open Pan European Public Procurement Online (OpenPEPPOL) framework in early 2019. Under the system, businesses can use an open and standardized messaging protocol to seamlessly exchange payment invoices, along with electronic orders, shipping notes, and catalogues, regardless of the country of origin. In addition, businesses can also validate the identity of an enterprise sending/receiving invoices on its system through the PEPPOL e-signature and e-attestation infrastructure. The system is expected to reduce payment-processing timing for businesses, reduce errors associated with manual processing, and allow easier cross-border trade and transactions.[97] The subgroup created to digitize invoices could be the lead authority for PEPPOL in the Philippines, establishing rules and managing standards under the framework.

4. **Lower set-up costs for digital payment acceptance at merchants (PSP- and merchant acquirer-led).** PoS terminals are the most common form factor for accepting digital payments. As in other territories, it is likely that these will continue to remain significant in the near term, despite the rising penetration of QR codes. Hence, the payments industry must continue innovating to drive down the hardware cost of the terminals.

   One of the ways in which this can be done is by leveraging smartphones owned by merchants. Mobile PoS devices allow merchants to accept digital payments and cards from their phones, reducing the cost of merchant acquisition, for the merchant as well as the acquirers. The acquirers could also consider proactively promoting QR codes, which are inherently less capital-intensive in comparison to PoS terminals. This is particularly true for small merchants, which find PoS terminals costlier to acquire, especially when disintegrated and remotely based.

5. **Rethink the MDR structure to encourage low-value transactions (PSP-led, supported by BSP and PPMI).** Digital payment providers must work together to create a tiered MDR structure that strikes a balance between encouraging low-value transactions and incentivizing acquirers to continue to onboard merchants. This structure may incorporate lowering (or eliminating for a limited duration) fees for large-volume and small-margin transactions to allow market-building.[98] M-Pesa, for example, introduced Kadago tariffs in 2016 that removed all charges for small-value transactions. The pricing structure was well received; the number of merchants registered on the platform nearly doubled from 58,000 to 102,000 within a year.[99]

   As an immediate next step, we recommend that PPMI works closely to crowdsource perspectives from the PSPs and acquirers, tests the appetite for tiered MDR pricing, and works with the BSP to model and test suitable pricing structures.

C. Strive for ubiquity of the digital payment acceptance network

Digital payments compete with cash and checks, which are well entrenched in the system. For payers to prefer digital payments, the digital payment acceptance network should be within reach and ubiquitous. Otherwise, the payer will switch back to cash.

1. **Drive merchant acceptance (PSP-led, supported by BSP).** Only a small fraction of merchants currently accept any form of digital payments (cards or QR codes), and most of these are in Metro Manila. PSPs must continue driving the penetration and use of digital channels. The BSP may closely track the rollout and work with the PSPs to accelerate adoption of payments if needed. We also recommend that the BSP conducts information seminars and awareness campaigns building up to the actual rollout.
2. **Launch a national bill payment platform (PPMI-led).** The payments industry could invest in building a common bill payment platform. PPMI in consultation with the CSOs is well suited to drive consensus and conceptualize and launch such an initiative. The bill payment platform could offer interoperable and accessible bill payment services to customers for electricity, telecommunications, direct-to-home services, gas, water, and so on, through a single window. It should accept multiple payment modes (cards, mobile wallets, internet banking, InstaPay, and PESONet among others) and should provide instant payment confirmation.

   For billers, it should have low entry barriers and offer standardized reports that allow easy reconciliation. Such a platform will allow many new billers to start collecting their payments digitally, thus expanding the range of services for which payers can now pay digitally. The BSP could oversee the design of the system, including key systemic risks and governance structures.

BOX 10
Global examples of national bill payment platforms

BPAY is an Australian electronic bill payment platform introduced in 1997. Held by a consortium of Australian banks, the platform allows users to pay over 45,000 businesses across Australia. The system has seen considerable success; the platform is used by two in three adult Australians, conducting over 1.5 million payments each day.[100]

In 2017, an automated online biller called PesaLink was launched in Kenya for utility payments and P2P payments. Three things were instrumental in unlocking success on this front: (i) seeking help from the Kenyan Bankers Association to quickly onboard 22 banks and expand nationwide, (ii) being compatible with various payment modes, and (iii) offering high-quality fraud management. As a result, in less than year, more than 3 million (of about 40 million) people started using PesaLink.

3. **Create digital payment readiness scorecards for LGUs and government agencies and track progress (led by the Department of Finance with support from BSP, in coordination with government agencies such as the Bureau of Local Government Finance [BLGF]).** Government agencies and LGUs must ensure that all payers (individuals and businesses) have options to pay digitally for all government services, taxes, fees, and so on. In doing so, the payers should have a range of payment instruments to choose from. As electronic receipts will result in significant savings to the government by way of faster collection of funds, the government has an opportunity to lead by example, and pay the costs for these services, without passing them to the consumers in the form of convenience fees.

   To do so, the readiness of the government agencies and the LGUs in adopting digital payments could benefit from a nudge. We recommend creation of a 'Citizen digital convenience scorecard', which would assign scores for regulations or processes that allow payments to be accepted digitally, systems availability to offer a front end to payers and a backend to integrate with the accounts, and for user experience. The scorecard should be updated yearly and publicly shared.

   The European Commission, for example, tracks the performance of its members in digitizing their respective economies. The scoreboard is public and allows monitoring of progress of members over a variety of indicators – ranging from access and availability of telecommunications and broadband connectivity, the growth of e-commerce, and the availability of government services through online channels.[101] The Department of Finance in coordination with the BSP, could consider creating similar scorecards for the LGUs, focused on digital payments. The BLGF could ensure data collection, identify targets for LGUs, and monitor their progress.

4. **For payments from and to the government, the established technical working group (TWG) under the Public Finance Management Committee could continue to promote the use of electronic payments across government agencies.** Different government agencies are at different points in their trajectory to adopt digital payments. The TWG could provide a discussion platform for coordinated and synchronized decisions among relevant stakeholders. Discussions for the TWG may include allowing the government to contract vendors and solutions after conducting comprehensive due diligence, this would enable seamless accounting and budgeting for DBM and allow all agencies to weigh in on decisions related to the transference/absorption of (NRPS) transaction fees for digital payments to suppliers and individuals. This would be an important step in the direction of formulating a unified strategy for the Philippines government to adopt digital payments.

D. Leverage the rollout of PhilSys to expand financial inclusion

Fifty-two million Filipinos remain financially excluded and cannot access, or benefit from the use of, digital payments. Further, a large majority of those who are excluded remain hard to reach and are usually from low-income segments. These two factors lower the incentives of the industry to serve them. Thus, the government and the BSP should accelerate their existing work on financial inclusion.

1. **Leverage the rollout of the Philippine Identification System (PhilSys) to solve for the foundational challenge of financial exclusion (led by the PSA with support from the BSP and other government agencies).** The government is spearheading rollout of the national ID system PhilSys. We recommend prioritizing the rollout for those who are currently financially excluded. The efforts might benefit from BSP and PSA continued collaboration on identifying priority segments for PhilSys. As of 2019, the BSP and the PSA have planned to roll this out to Pantawid Pamilyang Pilipino Program (4Ps)/SSS/Government Social Insurance Service (GSIS), which currently receive payments in cash, cheques, or limited use cash cards. The ID would help provide much-needed documentation. This would enable BSP to leverage the implementation process to invite interested financial service providers to allow consumers to open accounts as part of this process.
2. **Phased transition away from cash, checks, and limited-purpose cash cards to bank or mobile money accounts for collection and disbursement of all social benefit payments (led by DSWD, GSIS, SSS).** Some national agencies, such as Pag-IBIG, have already been successful in this regard by incentivizing such payments in parts; from simply introducing online collections to promoting their benefits among consumers, to finally transitioning the business process design to disincentivize cash/OTC payments.

   The reconfiguration of business process design for a digital environment could mean several things – it could be scaling down the physical space and tellers to nudge people into paying digitally, investing in digital transaction systems upfront, and taking up behavioral reinforcements such as the tellers consistently nudging the customers to pay digitally. Other government agencies, such as the SSS and the DSWD, could embark on a similar journey. The BSP is right to continue its ongoing efforts to promote digital payments among government agencies.

E. Track progress

Although many stakeholders recognize that the payments industry is working toward increasing the penetration of digital payments, insight into quantifying progress made is blurry. This naturally limits the ability to determine when to press the accelerator further or even to recognize and celebrate the successes.

1. **Track the absolute number of digital payments for easy progress monitoring (BSP-led).** In addition to monitoring a percentage target, we recommend that the BSP track the absolute number of digital transactions. The BSP already recognizes this is as important and has initiated early discussions to execute on this. It will also complement the percent target well – the percent target will provide a deep-dive into the progress made and provide basis for the absolute target; the absolute target helps assess progress on the go.
2. **Launch a public dashboard to be the source of accurate and consistent data on digital payments (BSP-led).** The BSP has the opportunity to become the champion and the source of accurate and consistent data on digital payments. We recommend that it launches a public dashboard that monitors the following:
   a. Total number of digital payments aggregated across players but disaggregated across payment mode (debit cards, credit cards, mobile wallets, etc.)
   b. Lead indicators such as number of active cards, number of active mobile wallet accounts, number of unique individuals and businesses with an account and penetration of PoS machines or QR codes. Lead indicators should be tracked nationally, initially, but then be able to disaggregate numbers at an appropriate regional level.

Impact

Sustaining the momentum toward digital payments by adopting the recommendations above would have an outsized impact for the stakeholders, as substantiated in Box 11.

BOX 11: IMPACT OF PROMOTING DIGITAL PAYMENTS

We believe that sustaining the momentum toward digital payments by adopting these recommendations will have an outsized impact for the stakeholders

1. **USD 20-45 billion in annual savings from digitizing supplier payments.** Previous studies have found that e-invoicing and digitizing supplier payments produce cost savings of up to 4-8% of the transaction amount. We estimate that the formal sector in the Philippines makes payments worth approximately USD 44.9 billion monthly. This translates into savings worth USD 1.8 billion monthly, or USD 21.5 billion annually.

2. **USD 0.1 billion in annual savings on G2P payments.** Previous studies that mapped the cost of a G2P payment estimated that the cost of cash is 1.5%, higher than that of digital means (estimated at 0.7%).[102] Of the USD 2.6 billion in G2P payments per month, over USD 1 billion is paid non-digitally. This translates to annual savings of USD 100 million for the government in G2P payments alone.

3. **An additional 11 million accounts from digitizing government welfare payments and 86.5 million additional monthly digital transactions from the unbanked.** We estimate that digitizing welfare payments and converting cash cards to basic accounts, would provide up to 11 million individuals with their first digital store of value. Assuming that these consumers newly having a bank account comprise half of the number of transactions of those who are currently with a bank account, this is equivalent to nearly 86.5 million additional digital transactions.[103]

APPENDICES

APPENDIX A

Methodology

The first holistic diagnostic of digital payments in the Philippines, Country Diagnostic: Philippines (2015) supported by the Better Than Cash Alliance, was published in 2015 and used data from the period 2010-2013. This study builds on the previous diagnostic and aims to present evidence of on-the-ground uptake of digital payments in the country, as of 2018.

The key objective of this study is to generate an evidence pack on the state of digital payments in the Philippines and put forth actionable recommendations and a learning agenda for the payments industry. Additionally, the study is positioned to provide different actors – the regulator, PSPs, supporting service providers, and global stakeholders – with a common reference point on the current state and enable smoother liaising.

To that end, this study focused on three core activities.

1. Identifying the largest and most relevant payment use-cases to arrive at an estimation of the total and digitized monetary transactions in the country.
2. Run a robust estimation exercise for each use-case to arrive at an overall understanding of the uptake of digital payments.
3. Uncover the why and how behind key estimations, and provide a narrative on drivers and challenges, as well as opportunities for further improvement.

1. Identifying the largest and most relevant payment use-cases to arrive at an estimation of the total and digitized monetary transactions in the country

For (1), the payer-payee grid formed the backbone. The study considered payments to and from government bodies, businesses, and people. Across each of these payer-payee interactions, key use-cases were identified based on two criteria: (i) size of payments for the particular use-case, and (ii) relevance from a digitization standpoint. Figure 24 below depicts the 25 use-cases that were analyzed as part of this diagnostic.

FIGURE 24
Payment grid with focus use-cases

PAYER \ PAYEE	GOVERNMENT	BUSINESS	PERSONS
GOVERNMENT	• Transfers from national government to LGUs • Social welfare contributions • Common use item procurements	• Procurements and supplier payments • Utilities	• Social welfare contributions • Salaries and wages
BUSINESS	• National and local taxes • National and local fees • Social welfare contributions	• Supplier payments • Business lending • Interest payments	• Salaries and wages • Social welfare contributions • Consumer lending
PERSONS	• National and local taxes • Government fees levied for services • Social welfare contributions	• Utilities • Monthly merchant transactions • Interest and loan repayments	• Domestic remittances • International remittances • P2P lending

2. Run a robust estimation exercise for each use-case to arrive at an overall understanding of the uptake of digital payments

This study analyzed both volume and value of digital payments for each of the 25 payment use-cases above. Four key metrics were required:

- Total volume of transactions in this category
- Total value of transactions
- Volume of digital transactions (or % share)
- Value of digital transaction (or % share).

There was a huge variability in data availability and quality of these 25 use-cases. Whereas some use-cases were direct (e.g., taxes paid to the government), others were more complex – e.g., merchant payments - which required breaking down into numerous sub use-cases before the estimation exercise could be initiated. **To navigate this complexity, the study used a mixed-methods approach and ensured rigor of analyses through triangulations and scenario tests** (conservative and aggressive estimates).

Broadly speaking, there were three types of use-cases:

1. **Use-cases for which consolidated, credible data on all payment indicators were available**

   For example, most G2X use-case calculations were based on consolidated data accessed through respective agencies (such as BIR providing all data on corporate and individual taxes).

   Use-cases that primarily leveraged this approach were: G2G (transfers from center to LGUs, common use item procurements), G2B (procurements and supplier payments, utilities), B2G (taxes and fees paid to national agencies, taxes and fees paid to LGUs), B2B (business lending, interest payments), B2P (social welfare contributions), P2G (tax collections, government fees levied for services, voluntary SSS contributions), and P2B (utilities, interest and loans).

2. **Use-cases for which some quantitative data were available from disaggregated sources and critical assumptions were made to fill in the gaps**

   Merchant payments illustrate this point well. There was a couple of ways to approach the estimation of merchant payments. One was to estimate payments made by consumers toward various type of purchases using data on household consumption and expenditure. This could have given an overall estimate of value but not the volume of transactions. The second approach was to estimate revenues of different types of merchants/retailers based on their market size, average transaction amount, and footfall. This could have worked for enterprise merchants (such as convenience stores and quick service restaurants), but not the majority informal merchants (e.g., sari-sari stores).

   Given the limitations of both to yield the indicators of interest, the study employed a mixed-methods approach, which included:

   - Using data on merchant payments processed by digital payment instruments (debit card, credit card, prepaid card) – Euromonitor Consumer Finance report triangulated with BSP Financial Inclusion Dashboard and Credit Card Business Activity Report
   - Using data on household expenditure for merchant purchases – PSA dashboard and Euromonitor Consumer Finance report
   - Average transaction value at merchants was based on studies on retailers, stakeholder consultations, and benchmarking from other countries and using a ±10% range to account for the uncertainty in the data.

   Use-cases that primarily leveraged this approach were: G2P (salaries and wages, welfare payments, and conditional cash transfers), B2B (supplier payments, utilities), B2P (salaries and wages, consumer lending), and P2B (merchant payments)

3. Use-cases for which little quantitative data were available; relied on anecdotal evidence from sector experts

For example, data on remittances (particularly, domestic) are very sparse. The study used survey data from World Bank Global Findex (2018) to provide directional guidance, but relied on data ranges reported by various stakeholders – digital payment providers (Ayannah, Multisys, TrueMoney), OTC agents (Cebuana and DA5), global actors (World Bank, Good Financial Limited) and others – to arrive at volume of transactions, value of transactions, and probable uptake of digital means.

Use-cases that primarily leveraged this approach were: B2G (social welfare contributions) and P2P (remittances, peer-to-peer lending).

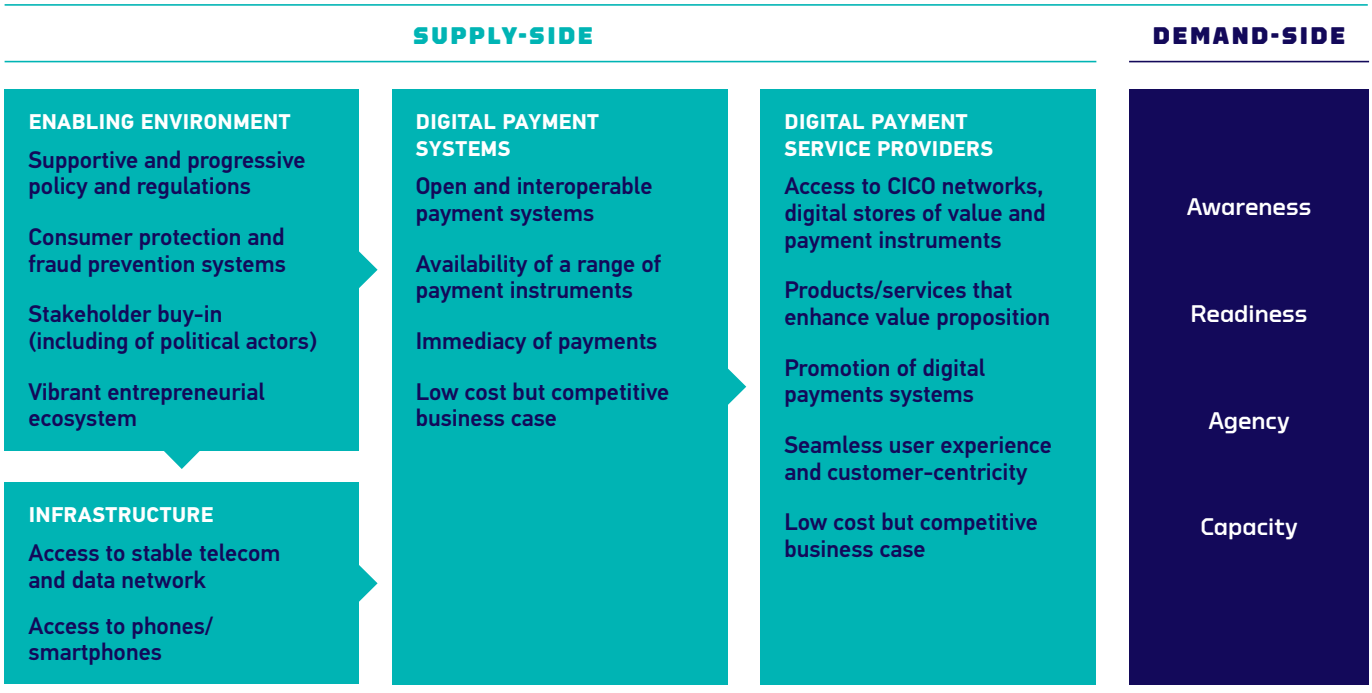
For more details on references used in the estimation methodology, please refer to Appendices D-F.

3. Uncover the why and how behind key estimations, and provide a narrative on drivers and challenges, as well as opportunities for further improvement

In parallel with the estimation exercise, the study used a four-pillar framework to uncover drivers, challenges, and opportunities of the country's digital payment ecosystem. The research carried out on this framework was informed by a combination of literature review (Appendix D) and stakeholder interviews (Appendix F).

This also applies to the deep-dives on merchant payments and consumer behavior (Chapters 4 and 5).

FIGURE 25
Four pillars of the digital payment system diagnostic framework



Comparability with the previous diagnostic (based on 2010-2013 data, published in 2015)

The state of digital payments is comparable across time for most use-cases, allowing the study to draw a trajectory of shifts. Particularly, the direction and magnitude of shifts can be compared across all 19 use-cases, which are common across the two diagnostics. This was important to allow the BSP and wider payment industry a better view of the country's journey toward digital payments. It is hoped that this will also ensure continuity of efforts toward actioning some of the recommendations, to which BSP and others are already committed. Having said that, two methodological differences should be noted.

1. The 2018 study added six new use-cases to be reflective of the current digital payment ecosystem.

PAYER \ PAYEE	GOVERNMENT	BUSINESS	PERSONS
GOVERNMENT	• Transfers from national government to local government units • Social welfare contributions • Common use item procurements	• Procurements and supplier payments • Utilities	• Social welfare contributions • Salaries and wages
BUSINESS	• National and local taxes • National and local fees • Social welfare contributions	• Supplier payments • Business lending • Interest payments	• Salaries and wages • Social welfare contributions • Consumer lending
PERSONS	• National and local taxes • Government fees levied for services • Social welfare contributions	• Utilities • Monthly merchant transactions • Interest and loan repayments	• Domestic remittances • International remittances • P2P lending

New additions to this diagnostic

2. For the same use-cases, the 2018 diagnostic uses multiple high-quality sources that have recently become accessible or available.

The previous diagnostic found that less than 1% of all payments were digital. Notably, the 2013 diagnostic used a primary survey for computing figures, especially on merchant payments and supplier payments. On the other hand, the 2018 study relied on expansive datasets available from the BSP's Financial Inclusion Survey (2017), the Philippine Statistics Authority's Annual Survey of Industries and Survey of Overseas Filipino Workers, from the World Bank (Global Findex), and from Euromonitor's data on consumer finance and retailing in the Philippines. As a result, the study covered a wider base – estimating that the total number of transactions is 5.7 billion compared with 2.5 billion estimated in 2015. Although some part of this can be attributed to an increase in number of transactions over the period, we expect the change in data sources and methodology also to have contributed.

To summarize, the 2018 analysis paints an accurate and holistic picture of the current state of digital payments in the country. Despite the two methodological differences, the share of digital payments in 2018 (8-11%) can be compared with the 2013 analysis (less than 1%) in its direction and magnitude. This implies that the difference is, indeed, reflective of actual gains over time. Furthermore, even at a use-case level, comparability holds true within a narrow range of ±3 percentage points.

Limitations of the methodology

1. **Comparability of absolute figures is difficult, especially for use-cases such as merchant payments and supplier payments in which consolidated datasets could not be used.** While the share of digital payments can be compared throughout, the absolute numbers (total as well as digital payments) can vary in size – especially for merchant payments and supplier payments for which a much wider base was used in the 2018 analysis. Having said that, as the quality of data collected and produced by various bodies improves over time, it will be possible to track the absolute values over the next few diagnostics.
2. **In principle, this diagnostic provides a holistic understanding of retrospective trends, but is not enough for forecasts.** More rigorous datasets are needed to conduct time series analysis and scenario mapping, which will help to set out forecasts and predictions on the growth of digital payments.
3. **The deep-dives on merchant payments and consumer behavior rely on secondary research and semi-structured stakeholder conversations; more rigorous primary research is needed to uncover the nuanced narratives on these segments.** The available literature provides a good starting point to deep-dive into the two topics, but given the unique cultural context of the Philippines, more on-the-ground research is needed to get to the bottom of what does and does not work for different (potential) users of digital payments. Given the resource and time constraints, the analysis presented under the deep-dives relied mostly on secondary sources so is limited in the extent of its problem identification.

APPENDIX B

Data tables

Conservative estimate only

USE CASE	MONTHLY VOLUME OF TRANSACTIONS TOTAL (millions)	DIGITAL (millions)	% OF TOTAL	MONTHLY VALUE OF TRANSACTIONS TOTAL USD (millions)	DIGITAL USD (millions)	% OF TOTAL
Total volume and value of digital payments in the Philippines	**5,734.80**	**471.69**	**8.23%**	**120,298.35**	**21,489.05**	**17.86%**
GOVERNMENT TO X (G2X)	**23.285**	**13.633**	**58.55%**	**$6,084.80**	**$4,716.10**	**77.51%**
Government to Government (G2G)	**2.891**	**2.061**	**71.30%**	**$1,621.05**	**$1,481.17**	**91.37%**
Transfers from center to local government units	0.004	0.004	100.00%	$654.36	$654.36	100.00%
Social welfare contributions	2.81	1.99	70.76%	$216.69	$151.81	70.06%
Procurements for common use items	0.08	0.07	90.00%	$750.00	$675.00	90.00%
Government to Businesses (G2B)	**0.187**	**0.168**	**90.00%**	**$1,851.35**	**$1,666.21**	**90.00%**
Procurements and supplier payments	0.18	0.16	90.00%	$1,814.10	$1,632.69	90.00%
Utility Payments	0.004	0.003	90.00%	$37.24	$33.52	90.00%
Government to People (G2P)	**20.208**	**11.404**	**56.43%**	**2,612.400**	**1,568.720**	**60.05%**
Salaries and payroll	6.79	5.43	80.00%	$1,433.48	$1,146.79	80.00%
Welfare payments and conditional cash transfers	13.42	5.97	44.50%	$1,178.92	$421.93	35.79%
BUSINESSES TO X (B2X)	**1,092.938**	**48.298**	**4.42%**	**$84,345.76**	**$9,989.06**	**11.84%**
Businesses to Government (B2G)	**18.148**	**0.860**	**4.74%**	**$4,172.74**	**$3,312.70**	**79.39%**
National taxes and fees	0.52	0.27	52.68%	$3,397.87	$3,139.35	92.39%
State taxes and fees	15.85	0.16	1.00%	$158.48	$1.58	1.00%
Social welfare contributions	1.78	0.43	24.04%	$616.39	$171.76	27.87%
Businesses to Businesses (B2B)	**980.848**	**8.983**	**0.92%**	**$73,102.46**	**$3,970.28**	**5.43%**
Supplier payments	974.54	2.68	0.27%	$70,048.12	$915.95	1.31%
Business lending	1.00	1.00	100.00%	$1,992.36	$1,992.36	100.00%
Interest payments	5.31	5.31	100.00%	$1,061.98	$1,061.98	100.00%
Businesses to People (B2P)	**93.942**	**38.455**	**40.93%**	**7,070.561**	**2,706.075**	**38.27%**
Salaries and payroll	44.76	8.06	18.00%	$4,989.85	$898.17	18.00%
Consumer lending	21.25	20.30	95.53%	$1,819.73	$1,713.57	94.17%
Social welfare contributions	27.93	10.10	36.14%	$260.98	$94.33	36.14%

USE CASE	MONTHLY VOLUME OF TRANSACTIONS TOTAL (millions)	DIGITAL (millions)	% OF TOTAL	MONTHLY VALUE OF TRANSACTIONS TOTAL USD (millions)	DIGITAL USD (millions)	% OF TOTAL
PEOPLE TO X (B2X)	**4,618.577**	**409.758**	**8.87%**	**$29,867.78**	**$6,783.89**	**22.71%**
People to Government (P2G)	**23.234**	**0.311**	**1.34%**	**$364.36**	**$30.96**	**8.50%**
Tax collections	0.70	0.09	12.15%	$142.21	$28.74	20.21%
Government fees levied for services	21.79	0.22	1.00%	$217.89	$2.18	1.00%
Social welfare contributions	0.74	0.01	1.00%	$4.26	$0.04	1.00%
People to Businesses (B2B)	**4,460.799**	**399.626**	**8.96%**	**$20,791.23**	**$5,378.50**	**25.87%**
Merchant payments	4,381.64	393.84	8.99%	$18,146.73	$4,580.62	25.24%
Utility payments	76.43	3.06	4.00%	$2,470.14	$623.52	25.24%
Interest and loans	2.73	2.73	100.00%	$174.36	$174.36	100.00%
Businesses to People (B2P)	**134.545**	**9.820**	**7.30%**	**8,712.194**	**1,374.436**	**15.78%**
Remittances	127.50	9.75	7.65%	$8,325.00	$1,372.50	16.49%
P2P lending	7.04	0.07	1.00%	$387.19	$1.94	0.50%

APPENDIX C

List of figures

APPENDIX D

List of literature references

Barquin S., HV V. and Yip, H., 2015, Digital Banking in ASEAN: Increasing Consumer Sophistication and Openness, New York: McKinsey & Company

BBC (2010) M-Pesa: Kenya's mobile wallet revolution

BIR (2015), Revenue Memorandum Circular No. 2 - 2015, Online Submission of Certain Annual Income Tax and Excise Tax Returns

Blog: Digital payment companies seek compensation from govt for losses due to zero merchant fee (2019), Economic Times

BPay, Facts on BPAY

BSP (2000, 2008 updated), Manual of Regulations for Banks, Section X701

BSP (2009), Circular 649

BSP (2017), Circular 980

BSP, 2017, Financial Inclusion Survey, Manila: BSP

BSP, Primer on National Retail Payment System (NRPS) Framework

Better Than Cash Alliance, 2014. Philippines Country Diagnostic Measurement Report, New York: Better Than Cash Alliance

Better Than Cash Alliance, 2016, Responsible Digital Payments Guidelines, New York: Better Than Cash Alliance

Better Than Cash Alliance, 2016. Country Diagnostic Bangladesh. Building Digital Bangladesh: The Way Forward for Digitizing Payments, New York: Better Than Cash Alliance

Better Than Cash Alliance, 2017. Country Diagnostic Ghana. Building an Inclusive Digital Payment Ecosystem: The Way Forward, New York: Better Than Cash Alliance

Better Than Cash Alliance, 2018. Country Diagnostic Senegal. Numérisation des paiements: des gisements de croissance et de développement inclusif, New York: Better Than Cash Alliance

Capgemini and BNP Paribas, 2018, World Payments Report 2018, Paris: Capgemini and BNP Paribas

Carlberg, T., Lien, Y., Gomez, M., Nayar, A., Dougherty, J., Gugelev, A., and Boll, E, 2016, Small Merchants, Big Opportunity, Washington DC: Global Development Incubator, Dalberg Advisors, Visa Inc.

Castri, Simone and Gidvani, Lara (2013) The Kenyan Journey to Digital Financial Inclusion. GSMA

CGAP (2010) Notes on Regulation of Branchless Banking in the Philippines

CGAP (2016), Smartphones & Mobile Money: Principles for UI/UX Design (1.0)

CGAP (2017), Digitising merchant payments: What will it take?

CGAP and Dalberg DIG, 2017, Merchant payments: VAS playbook, Washington DC: CGAP and Dalberg DIG

Chen, G., Fiorillo, A. and Hanouch, M., 2016, Smartphones & Mobile Money: Principles for UI/UX Design (1.0), Washington DC: CGAP

Commission on Audit, 2004, Guidelines and Principles on the acceptability of the evidence of receipt of payment for disbursements, Quezon City: Commission on Audit

Commission on Audit, 2013, for the use of Electronic Official Receipts to acknowledge collection of income and other receipts of government, Quezon City: Commission on Audit

Commission on Population, 2017, Philippine Population Management Program Directional Plan 2017-22, Manila: Commission on Population

Data Privacy Philippines; Primer on Data Privacy

Demirgüç-Kunt, A., Klapper L., Singer, D., Ansar, S. and Hes, J., 2017, The Global Findex Database, Washington DC: World Bang Group

Department of Economic Statistics, 2014, Consumer Finance Survey, Manila: BSP

Department of Trade and Industry and Department of Finance, 2006, Guidelines implementing R.A. 8792 on Electronic Payment and Collection System (EPCS) in Government, Manila: Department of Trade and Industry and Department of Finance

DICT (2019), National ICT Ecosystem Framework

Digital Payments (126), Budget 2019-20, Government of India

DSWD (2014) Keeping children healthy and in school: Evaluating the Pantawid Pamilyang using regression discontinuity design

Ernst & Young, 2018, ASEAN FinTech Census 2018, London: Ernst & Young

Euromonitor (2018), Raw dataset: Consumer Finance in the Philippines

European Commission, Digital Economy and Society Index

Faster Payments Effectiveness Criteria' (2016), The Federal Reserve (US)

Financial Inclusion Global Initiative, 2019, Electronic Payments Acceptance Toolkit: Assessment Component, Washington DC: World Bank Group

Fintech Singapore News, 2018, Philippines Fintech Start-up Report, Singapore: Fintech Singapore News

Gamer M, 2017, Building Electronic Payment Acceptance at the Base of the Pyramid to Advance Financial Inclusion, Toronto: MasterCard Foundation

Ganchero, ELvie (2008) Smart Communications: Low-cost Money Transfers for Overseas Filipino Workers, Growing Inclusive Markets, UNDP

Global Partnership for Financial Inclusion (GPFI), 2016, G20 High-Level Principles for Digital Financial Inclusion, Seoul: GPFI

GSMA (2009), Mobile Money in the Philippines – The Market, the Models and Regulation, London: GSMA

GSMA (2016), Merchant Payments: Choosing the right pricing model

Hokans, S., 2017, Leaving money on the table: Corporate and SME experiences of digitizing business payments in the Philippines, New York: Better Than Cash Alliance

IDC Financial Insights, 2018, Ready for Open Banking?, Framingham: IDC

JAKPAT, 2018, Mobile Payment in Indonesia: JAKPAT Free Survey Report, Yogyakarta: JAKPAT

Karandaaz-CGAP-Dalberg (June 2016), Global landscaping study on digitizing P2G payments

Klapper. L., and Singer, D., 2014, The Opportunities of Digitizing Payments, Washington DC: World Bank, Bill and Melinda Gates Foundation, Better Than Cash Alliance

MDR rationalisation: A big impact on small merchants, PwC India

Milken Institute, 2019, Asia Summit, Singapore: Milken Institute

Oliver Wyman and Asian Development Bank, 2008, Accelerating Financial Inclusion in South-East Asia with Digital Finance, Manila: Asian Development Bank and Oliver Wyman

Oliver Wyman, 2018, Winner-Takes-All in the battle for e-wallet supremacy, New York: Oliver Wyman

Omidyar Network (2016), Currency of Trust

Pasti, F., 2019, State of the Industry Report on Mobile Money 2018, London: GSMA

PayPal, 2017, Digital Payments: Thinking Beyond Transactions, The Philippines Country Report, San Jose: PayPal

PayPal, 2018, Beyond Networking: Social Commerce as a Driver of Digital Payments, Asia Report, San Jose: PayPal

Philippine Statistics Authority, 2017, Annual Poverty Indicators Survey, Quezon City: Philippine Statistics Authority

PSA (Q1 2019), Household Final Consumption Expenditure

Reserve Bank of India, 2019, Report of the Committee on Deepening of Digital Payments, Delhi: Reserve Bank of India

Safaricom. 2018 Sustainable Business Report. Link here.

Saxena, A., 2014, Electronic Payment Systems 101, Washington DC: USAID

Schellhase, J. and Garcia, A., 2018, FinTech in the Philippines: Assessing the State of Play, Singapore: Milken Institute

Schellhase, J. and Warden, S., 2018, Framing the Issues: The Future of Finance in Thailand, Singapore: Milken Institute

Statista (2019), eCommerce in the Philippines

Statista, 2019, Digital Economy Compass, Hamburg: Statista

Sterling Commerce, 2016, The Business Value of e-Invoicing, New York: IBM

TechCrunch blog (2019), Nala has built a hassle-free, offline mobile money payment platform for Africa

Traxcn 2016, FinTech - South-East Asia, Bangalore: Traxcn

United Nations (2013) The Philippines: Mobile Money

USAID, 2016. E-Peso Individual Payments Baseline Survey: Tracing the shift from a cash-based to a cash-lite economy among Filipinos, Washington DC: USAID

Visa (2015) Stakeholder Interview Summary – Philippines, San Francisco: Visa

Villa, V., 2018, Fostering Responsible FinTech Innovation – The BSP Approach, Manila: BSP

Voyager Innovation and FINTQnologies, 2017, Inclusive Digital Finance Report: Reaching the Bottom 40% of Philippine Provinces, Mandaluyong City: Voyager Innovation and FINTQnologies

World Bank Global Findex (2017)

World Bank Global Findex (2017), Opportunities for expanding financial inclusion through digital technology

Zetterli, P. and Pillani, R., 2017, Digitizing Merchant Payments: What will it take?, Washington DC: CGAP

Zimmerman, J., Bohling K., and Parker S. 2014, Electronic G2P Payments: Evidence from Four Lower Income Countries, Washington DC: CGAP

APPENDIX E

Sources of data points

USE-CASE	SUB USE-CASE	DATA SOURCE
Government to Government (G2G)	**Transfers from center to local government units**	PhilStar, Internal Revenue Allotments of LGUs hiked to P575.5 billion this year (2019) Bureau of Local Government Finance, Value of inflow and outflows from LGUs (2018) Stakeholder interview
	Social welfare contributions	Stakeholder interview
	Common use item procurements	BSP, Data on inflow and outflows from government banks in PESONet (2018) Stakeholder interview
Government to Business (G2B)	**Procurement and supplier payments**	BSP, Data on inflow and outflows from government banks in PESONet (2018) Stakeholder interview
	Utility payments	BSP, Data on inflow and outflows from government banks in PESONet (2018) DBM, Maintenance and other operating expenses, by department/agency/special purpose fund (2018) Stakeholder interview
Government to People (G2P)	**Salaries and wages**	PSA, Annual labour and employment statistics, (2018) International Labour Organization, Labour Code of the Philippines Stakeholder interview
	Welfare payments and conditional cash transfers	Social Security System, Value and frequency of social security payments made (Jan to March 2019) PSA, Decent work in the Philippines: Statistics on Social Security (2018) Government Social Insurance System, Value and frequency of payments made (2018) DSWD, Program Implementation status of 4Ps (2018) PhilHealth, Stats and Charts (2017) Stakeholder interview
Business to Government (B2G)	**Taxes and fees paid to national agencies**	Bureau of Internal Revenue, Tax collections by the agency (2018) Bureau of Treasury, National Government Cash Operation Report (2018) Philippine Check Clearing House Corporation, Volume and value of checks cleared (2018)
	Taxes and fees paid to LGUs	Bureau of Local Government Finance, Value of inflow and outflows from LGUs (2018)
	Social welfare contributions	PhilPad, Data on PhilHealth contribution tables (2019) Stakeholder interview
Business to Business (B2B)	**Supplier and utility payments**	Philippine Check Clearing House Corporation, Volume and value of checks cleared (2018) PSA, Informal sector contribution to the GDP (2017) Stakeholder interview
	Business lending	BSP, Loans outstanding for Production and Household Consumption (2018) Stakeholder interview
	Interest payments	BSP, Loans outstanding for Production and Household Consumption (2018) Stakeholder interview

USE-CASE	SUB USE-CASE	DATA SOURCE
Business to People (B2P)	**Salaries and wages**	PSA, Number of employed persons by class of workers (2018)
		PSA, Average daily basic pay of wage and salary workers (2018)
		International Labour Organization, Labour Code of the Philippines
		BSP, Financial Inclusion Survey (2017)
		World Bank, Global Findex (2017)
	Consumer lending	BSP, Loans outstanding for Production and Household Consumption (2018)
		BSP, Credit Card Business Activity report (2018)
		BSP, Financial Inclusion Survey (2017)
		Stakeholder interview
	Social welfare contributions	Social Security System, Value and frequency of social security payments made (Jan to March 2019)
Person to Government (P2G)	**Tax collections**	Bureau of Internal Revenue, Tax collections by the agency (2018)
	Government fees levied for services	Bureau of Local Government Finance, Value of inflow and outflows from LGUs (2018)
	Voluntary SSS contributions	Social Security System, Value and frequency of social security payments made (Jan to March 2019)
Person to Business (P2B)	**Merchant transactions**	Euromonitor, Data on value of prepaid, debit, credit, electronic and cash payments made in the Philippines (2018)
		PSA, Data on Household Final Consumption expenditure (2018)
		BancNet, Data on volume and value of transactions (2018)
		BSP, Monthly reports from Electronic Money Operators (2018)
		Stakeholder interview
	Utility payments	BSP, Monthly reports from Electronic Money Operators (2018)
		World Bank, Global Findex (2017)
		PSA, Data on Household Final Consumption expenditure (2018)
		Euromonitor, Data on value of prepaid, debit, credit, electronic and cash payments made in the Philippines (2018)
	Interest and loans	BSP, Loans outstanding for Production and Household Consumption (2018)
Person to Person (P2P)	**Remittances**	BSP, Financial Inclusion Survey (2017)
		Stakeholder interview
	P2P lending	BSP, Financial Inclusion Survey (2017)

APPENDIX F

List of organizations and persons interviewed

GOVERNMENT DEPARTMENTS AND AGENCIES

ORGANIZATION	NAME	DESIGNATION
Bangko Sentral ng Pilipinas (BSP)	Lilia C. Guillermo	Technical Advisor and Chief Information Advisor
Bangko Sentral ng Pilipinas	Maria Almasara "Cyd" Tuaño Amador	Deputy Governor
Bureau of Internal Revenue	Anian Salazar	Director II (Information Technology)
Bureau of Internal Revenue	Carolyn Ann Reyes	Director II, Information Systems Project Management Service
Bureau of Internal Revenue	Maria Olivia Bernardo	Chief
Bureau of Local Government Finance	Jose Arnold M. Tan, CESO V	Acting Deputy Executive Director
Bureau of Local Government Finance	MA. Pamela P. Quizon	OIC Director, Local Fiscal Policy Service
Bureau of Small and Medium Enterprise Development, Department of Trade and Industries	Alicia M. Opeña	Assistant Director
Bureau of Treasury	*Confidential upon request*	*Confidential upon request*
Center for Learning and Inclusion Advocacy (CLIA)	Pia Bernadette Roman-Tayag	Managing Director
Consumer Empowerment Team, BSP	Homer A. Hipona	Bank Officer IV
Consumer Empowerment Team, BSP	Maria Veronica A. Ilagan	Bank Officer II
Consumer Empowerment Team, BSP	Miriam Liza 'Ria' V. Rigor	Bank Officer II
Department of Budget and Management	Clarito "Toto" Alejandro Magsino	Assistant Secretary
Department of Budget and Management	Elisa May Arboleda-Cuevas	Executive Director, Procurement Service (PhilGEPS)
Department of Finance	Angelica Sarmiento	Director IV
Department of Information and Communications Technology	Albert Salvador	Officer-In-Charge
Department of Information and Communications Technology	Rachel Gabador	Project Development Officer
Department of Information and Communications Technology	Teresa Garcia	Director
Department of Social Welfare and Development (DSWD)	Noel Macalalad	Assistant Secretary, Standards
Department of Trade and Industries	Ireneo Vizmonte	Undersecretary
Financial Supervision Sector, BSP	Chuchi G Fonancier	Deputy Governor
Financial Technology Sub-Sector, BSP	Vicente "Vitri" de Villa III	Senior Director & Officer-In-Charge
Pag-IBIG	Reynaldo "Rey" M. Malaya	Vice President
Pag-IBIG	Voltaire M. Dela Rosa	Officer-In-Charge, Information Technology Services Sector
Payments and Settlements Office, BSP	Eleonor Turaray	Director
Payment Systems Oversight Department, BSP	Raymond Estioko	Director
Philippine Clearing House Corporation	Emmanuel Barcena	President and CEO
Philippine Clearing House Corporation	Nico Paulo Mendoza	Project Manager
Philippine Payments Management, Inc.	Carmelita "Melit" R. Araneta	General Manager
Social Security System	Guillermo Urbano, Jr.	Vice President, Treasury Division
Technology Risk and Innovation Supervision Department, BSP	Maria Emelia "Mel" Cube	Member, IT Supervision Group

FINANCIAL INSTITUTIONS (BANKS AND PAYMENT SERVICE PROVIDERS)

ORGANIZATION	NAME	DESIGNATION
Asia United Bank	Wilfredo "Wil" E. Rodriguez	Head, IT
BancNet, Inc.	Aristeo "Aris" P. Zafra, Jr.	Executive Vice President and COO
BancNet, Inc.	Emmie S. Reyes Teresa	Vice President – Comptroller
BancNet, Inc.	Natalie "Pinky" Uy	Head of Business and Relationship Management Division
Banco De Oro (BDO Unibank)	Luis Reyes, Jr.	Executive Vice President
Bankers Association of the Philippines	Benjamin "Ben" P. Castillo	Managing Director
Bank of the Philippine Islands	Manuel "Noel" C. Tagaza	Senior Vice President, Financial Products & Services
BDO Unibank	Rogel A Raya	Senior Vice President of Merchant Partnerships
Coins.ph	Lisa Keinzle	COO
Credit Card Association of the Philippines	Alex Ilagan	Executive Director/Consultant
Credit Card Association of the Philippines	Rolando "Rolly" P. Ebreo	President
Development Bank of the Philippines	Ricardo "Jun" Josef S. Bandal	Vice President
GCash/ Mynt (Globe Fintech Innovations)	Ana S. Pascual	Head of Offline Payments for Merchant Solutions
GCash/ Mynt (Globe Fintech Innovations)	Anthony Thomas	President and CEO
GrabPay	Laurice Rachelle Arguelles-Lupisan	Head of Strategic Partnerships
GrabPay	Mia Jose	Programs and Partnerships Manager
ING Bank	Consuelo "Zondy" D. Garcia	Special Initiatives Ex-Country Manager and Head of Clients
Land Bank of the Philippines	Randy Montesa	Vice President for Cards and Electronic Banking
Multisys Corp	David Almirol	Founder and CEO
PayMaya (Voyager Innovations)	Paolo Azzola	COO and Managing Director
Paynamics	Mylene Chua-Magleo	CEO
Paynamics	Ronald P. Magleo	Founder and Chairman
Philippines Retailers' Association	Attorney Paul Santos	Chairman
Rizal Commercial Banking Corporation	Dennis Bancod	Senior Executive Vice President
Rizal Commercial Banking Corporation	Lito Villaneuva	Executive Vice President and Chief Innovation and Inclusion Officer
Union Bank	John Cary L. Ong	Executive Vice President
UnionPay International	Samuel Tan	Country Manager
VISA	Alexandra Stuart	Senior Director, Government Relations, Southeast Asia
VISA	Arif Qayyum	Social Impact
VISA	Dan Wolbert	Country Manager, Philippines and Guam
World Council of Credit Unions	Anatoly "Jing" Gusto	Former Consultant

SUPPORTING SERVICE PROVIDERS

ORGANIZATION	NAME	DESIGNATION
A large FMCG company in the Philippines	*Confidential upon request*	APAC IT Distributor
AsiaKredit	Andrey Kuzukov	QA Engineer
AsiaKredit	Katrina Bianca Cruz	Chief Marketing Officer
AsiaKredit	Michael "Mike" Singh	Founder and CEO
AsiaKredit	Sandeep Suryavanshi	Chief Operating Officer
Ayannah	Miguel "Mikko" Perez	Chairman and CEO
Bayad Center	Francispito "Pit" P. Quevedo	Senior Vice President and COO
Bayad Center	Isryn Piah D.R. Beltran	Head, Strategic Innovations Office
Cebuana (P.J. Lhuillier)	Arwen P. Fabro	Department Head, Corporate Sales Department
Direct Agent 5, Inc.	Attorney Mary Rose Rebadulla	Legal Advisor
Direct Agent 5, Inc.	John "Chris" Sarabia	Vice President for Business Solutions
Direct Agent 5, Inc.	Raymond Babst	President and CEO
FirstCircle	Benedict Caradang	Vice President for External Relations
Hapinoy	Mark Ruiz	CEO
Philippine-Seven Corporation	Philips Yu	Managing Director for eWallet
TrueMoney	Charles Foster	Head, Remittance Business Unit
TrueMoney	Jenilyn Valdez	Chief Financial Officer and Acting CEO
TrueMoney	Richmond Tong	Marketing Manager
TrueMoney	Xavier Marzan	Founder and Board Director

GLOBAL EXPERTS

ORGANIZATION	NAME	DESIGNATION
Asian Development Bank	Kelly Hatte	Senior Financial Sector Specialist
Australian Embassy, Manila	Nardia Simpson	Counsellor and Third Secretary
Australian Embassy, Manila	Sophie McPhate	Third Secretary, Economic
CGAP	Myra Valenzuela	Financial Sector Specialist
Chemonics International (USAID E-PESO project)	Bernadette Ramos	Senior Enabling Environment Advisor
Chemonics International (USAID E-PESO project)	Mamerto "Mert" Tangonan	Chief of Party
Chemonics International (USAID E-PESO project)	Vicente "Vice" Catudio	Digital Finance Advisor
Dalberg Advisors	Joe Dougherty	Partner and Global Practice Area Lead for Financial Inclusion and Services
Dalberg Advisors	Modou Fall	Project Manager, Senegal
Good Financial Limited, Hong Kong	Dr. Joy Tadios-Arenas	Co-Founder
International Finance Corporation	Lowell Campbell	Global Digital Finance Specialist
International Labour Organization	Hideki Kagohashi	Enterprise Development Specialist
Philippine Statistics Authority	Maria Celeste Dl. Balanza	Officer-in-Charge, Accounting Division
Women's World Banking	Karen Miller	Vice President of Knowledge and Communications
Women's World Banking	Nithyasri Sharma	Specialist, Strategy
World Bank	Isaku Endo	Senior Financial Sector Specialist

APPENDIX G

Glossary of terms[104]

TERM	DEFINITION
Automated clearing house (ACH)	A payment clearing network through which payment service providers are enabled to provide clearing and settlement services using deposit and e-money accounts. Many countries today have at least one ACH in operation to service their domestic payment industry. An ACH handles either or both credit push and debit pull (also called direct debit) payments. Most banks in the country will typically belong to the ACH, either directly or through intermediary banks. The ACH allows the movement of transactions from one participating institution to another, and either provides or interfaces with a net settlement system.
Check/cheque	A paper payment instrument that allows a payer to pay a payee with monies drawn against the payer's bank account
Clearing house	An organization formed to handle payments in an open loop bank transfer system. A clearing house may handle transaction switching or facilitate clearing and interbank settlement. The term is most typically used for check or ACH systems
Clearing switch operator (CSO)	Provides clearing switch services. In the Philippines, a CSO can extend services to multiple ACHs but cannot participate in the governance of the payment system.
Credit card	A card payment instrument through which the cardholder's account with the issuer features a line of credit against which payments can be credited.
Debit card	A card payment instrument through which the cardholder's account with the issuer features a funded account against which payments can be payments can be credited.
Digital payment (or e-payment)	A monetary transaction between two parties (individuals, businesses, or government) whereby the payer and the payee electronically initiates and receives, respectively, funds transfer with the use of digital payment instruments (such as cards, mobile wallet etc.) and other electronic media.
E-money account	A transaction account that is primarily accessed using a mobile phone, where the stored value is issued by an e-money issuer. In some jurisdictions, e-money accounts may resemble conventional bank accounts, but are treated differently under the regulatory framework because they are used for different purposes (e.g., as a surrogate for cash or a stored value that is used to facilitate transactional services).
Interoperability	The ability of an end-user dealing with one payment service provider to exchange a transaction with an end user who is dealing with a different payment service provider. Interoperability may be achieved either through participants all using the same system, or through inter-system networking arrangements.
Local government unit (LGU)	Institutional units whose fiscal, legislative and executive authority extends over the pre-identified geographical areas or their territorial jurisdictions, distinguished by law for administrative purposes.
Merchant	Generally used in the payments industry to describe receivers of funds representing payments for goods and services. Said recipients are a broad group, and include stores, service providers, billers, not-for-profit enterprises, and government agencies.
Merchant discount rate (MDR)	The rate charged to a merchant for payment processing services on digital transactions.

TERM	DEFINITION
Merchant payment	A payment made to a retail or online merchant in exchange for goods or services. Airtime loads have been considered a part of merchant payments in this study
Mobile money or electronic money (e-money)	Monetary value that is: • available to a user to conduct transactions through a mobile device; • accepted as a means of payment by parties other than the issuer; • issued on receipt of funds in an amount equal to the available monetary value; • electronically recorded; • mirrored by the value stored in an account(s) usually open in one (or more) bank(s); and • redeemable for cash
Micro, small and medium enterprises (MSME)	MSMEs are defined as establishments that have assets worth less than USD 0.3 million (PHP 15 million) and employ fewer than 100 employees
Non-bank electronic money issuer	A non-prudentially regulated institution licenced to issue electronic money in the form of a stored value on cards, mobile number, mobile number-linked wallet, and other virtual instruments
Payment service provider	In this report, a payment service provider is understood to be an entity that does not participate directly in a payments system but specializes in managing payment transactions for the public
Pantawid Pamilyang Pilipino Program or 4Ps	Pantawid Pamilyang Pilipino Program or 4Ps is a human development program of the national government that invests in the health and education of poor households, particularly of children aged 0-18 years
Point-of-sale (PoS) terminal	An electronic device used by merchants to capture payment transaction data from a payer device, and transmit and receive related authorization and clearing data to and from payment networks. Commonly used methods for PoS terminals to communicate with payer devices include reading of the magnetic stripe, chip, QR code, or barcode on a payment card or mobile device. Communications with the payment network take place across a fixed-line or wireless network.
Prepaid card (closed loop)	Closed loop prepaid cards are restricted to a closed network of predefined acceptance points. The closed loop prepaid category includes merchant-issued gift, transportation, parking and toll.
Prepaid card (open loop)	Open loop prepaid cards are network-branded cards and do not possess any acceptance point restrictions other than those of the network brand. The open loop prepaid card category contains general-purpose reloadable (including electronic purse), payroll, travel, remittance, and network-branded gift, insurance, government benefits, healthcare, and employee benefits cards.
Quick response (QR) code	QR code payment is a contactless payment method where a payment is performed by scanning a QR code from a mobile app. This is an alternative to doing electronic funds transfer at a PoS terminal.
Remittance	Refers to money that is sent or transferred to another party, both domestically and internationally.
Value-added services	Services offered by payment service providers in addition to payment services, which may include, for instance, receipts, loyalty cards, coupons, or financial services such as merchant cash advance.

APPENDIX H

List of acronyms and abbreviations

ABREVIATION	EXPANSION
4Ps	Pantawid Pamilyang Pilipino Program
ACH	automated clearing house
ASEAN	Association of Southeast Asian Nations
B2B	business-to-business
B2G	business-to-government
B2P	business-to-person
B2X	business payments
BDO	Banco de Oro Unibank, Inc.
BHIM	Bharat Interface for Money
BPI	Bank of the Philippine Islands
BSP	Bangko Sentral ng Pilipinas
BTMS	Budget Transparency and Management System
CAGR	compoiund annual growth rate
CoA	Commission on Audit
CSO	clearing switch operator
DBM	Department of Budget and Management
DSWD	Department of Social Welfare and Development
DTI	Department of Trade and Industry
EFPS	electronic filing and payment system
EMI	electronic money issuer
eOR	electronic official receipt
fintech	financial technology
FMCG	fast-moving consumer goods
G2B	government-to-business
G2G	government-to-government
G2P	government-to-person
G2X	government payments

ABREVIATION	EXPANSION
IFC	International Finance Corporation
K	thousand ('000)
LGU	local government unit
MDR	merchant discount rate
MFI	microfinance Institution
Mbps	Megabits per second
MSMEs	micro, small and medium enterprises
NPSA	National Payment Systems Act
NRPS	National Retail Payment System
OTC	over-the-counter
P2B	person-to-business
P2G	person-to-government
P2P	person-to-person
P2X	person payments
PhilGEPS	Philippine Government Electronic Procurement System
PhilSys	Philippine Identification System
PHP	Philippine peso
PoS	point-of-sale
PPMI	Philippine Payments Management, Inc.
PSA	Philippine Statistics Authority
PSP	payment service provider
QR code	quick response code
SSS	Social Security System
TWG	technical working group
UPI	unified payments interface
USD	United States dollar
USSD	unstructured supplementary service data

Endnotes

1 The full report also considers a scenario with more conservative assumptions, and estimates are presented as a range. In the Highlights chapter, only one number (rounded up to the nearest 10) is advanced for simplicity.

2 World Bank Global Findex (2017).

3 Mojica, M. B. (2017). Gender Gap and Financial Inclusion in the Philippines. Alliance for Financial Inclusion.

4 World Bank. (2015). Financial Capability Survey; BSP. (2017). Financial Inclusion Survey.

5 BSP. (2017). Financial Inclusion Survey.

6 InstaPay is an electronic funds transfer service that allows customers to transfer funds almost instantly. PESONet is a batch electronic fund transfer credit payment stream that provides an electronic alternative to the paper-based check system.

7 BSP (2017), Circular 980.

8 BSP gives banks until June 2020 to use standard QR codes for e-payments, CNN Philippines.

9 World Bank Global Findex (2017).

10 BSP (2018), Financial Inclusion in the Philippines [Dashboard Q4 2018].

11 State of the Industry Report on Mobile Money: Decade Edition: 2006-2016.

12 BSP (2018), Financial Inclusion in the Philippines [Dashboard Q4 2018].

13 Capgemini and BNP Paribas (2018), World Payments Report.

14 World Bank Global Findex (2017).

15 Active accounts making at least one transaction per month.

16 Better Than Cash Alliance. (2018). Igniting SDG Progress Through Digital Financial Inclusion. New York: Better Than Cash Alliance.

17 Data shared during interviews with financial institutions; World Bank Global Findex (2017).

18 Formal businesses contribute to over an eighth of the supplier payments by volume and two-thirds by value.

19 Data shared during interviews with financial service providers, and aggregators.

20 BSP (2017), Financial Inclusion Survey.

21 PoS terminal costs between USD 400 and 800. The cost of acquisition, documentation, know-your-customer for the merchant etc., can be up to USD 500.

22 Circular: 'Guidelines for the use of electronic official receipts (eORs) to acknowledge collection of income and other receipts of government' (2013) Commission on Audit.

23 BTCA (2016), Responsible Digital Payments Guidelines.

24 BSP (2017), Financial Inclusion Survey.

25 USAID, 2016. E-Peso Individual Payments Baseline Survey: Tracing the shift from a cash-based to a cash-lite economy among Filipinos, Washington DC: USAID.

26 BSP (2017), Financial Inclusion Survey.

27 Blog: Will Philippine tower plan narrow density gap? Joseph Waring, Mobile World Live.

28 Zetterli, P. and Pillani, R., 2017, Digitizing Merchant Payments: What will it take?, Washington DC: CGAP.

29 Visa and Dalberg, Small Merchants, Big Opportunity.

30 Under the NRPS, BSP mandated the formation of an industry-led PSMB, demarcating governance from clearing operations. The management body was formed in August 2017, with the creation of PPMI, composed of members from banks from all categories (i.e., universal, commercial, thrift, and rural) along with non-bank e-money issuers.

31 CGAP (2014), Electronic G2P Payments: Evidence from Four Lower-Income Countries.

32 These transactions will overlap with remittances, utility bill payments, and merchant payments.

33 Ganchero, Elvie (2008) Smart Communications: Low-cost Money Transfers for Overseas Filipino Workers, Growing Inclusive Markets, UNDP.

34 CGAP (2010) Notes on Regulation of Branchless Banking in the Philippines.

35 United Nations (2013) The Philippines: Mobile Money

36 BSP (2000, 2008 updated), Manual of Regulations for Banks, Section X701.

37 BSP (2009), Circular 649.

38 BBC (2010) M-Pesa: Kenya's mobile wallet revolution.

39 Castri, Simone and Gidvani, Lara (2013) The Kenyan Journey to Digital Financial Inclusion. GSMA.

40 World Bank Global Findex (2017).

41 Speech by Mr Nestor A Espenilla Jr, Governor of Bangko Sentral ng Pilipinas at the "Providing a Safer, More Efficient and More Inclusive Philippine Payments and Settlements System" Conference, Manila (July 2018).

42 BSP, Primer on National Retail Payment System (NRPS) Framework.

43 PSA (Q1 2019), Household Final Consumption Expenditure.

44 Note: The penetration of credit cards has remained stagnant (8-9 million) over the past four to five years, as per BSP's Financial Inclusion dashboard (Links available here and here).

45 Euromonitor (2018), Raw dataset: Consumer Finance in the Philippines.

46 Euromonitor (2018), Raw dataset: Consumer Finance in the Philippines.

47 BSP (2018), Financial Inclusion in the Philippines [Dashboard Q4 2018].

48 BSP (2017), Financial Inclusion Survey.

49 World Bank Global Findex (2017).

50 Euromonitor (2018), Raw dataset: Consumer Finance in the Philippines.

51 Coopetition refers to collaborative competition approaches, where natural competitors cooperate to create or grow a market while preserving the advantageous competitive features of the market itself.

52 BSP (2017), Circular 980.

53 DICT (2019), National ICT Ecosystem Framework.

54 Data Privacy Philippines, A Primer on the Data Privacy Act (Republic Act No. 10173).

55 Capgemini and BNP Paribas (2018), World Payments Report.

56 Note: 'Emerging Asia' includes Bangladesh, Indonesia, Pakistan, Philippines, Malaysia, Sri Lanka, Taiwan, Thailand.

57 World Bank Global Findex (2017).

58 Mojica, M. B. (2017). Gender Gap and Financial Inclusion in the Philippines. Alliance for Financial Inclusion.

59 World Bank. (2015). Financial Capability Survey; BSP. (2017). Financial Inclusion Survey.

60 BSP. (2017). Financial Inclusion Survey.

61 Euromonitor (2018), Raw dataset: Consumer Finance in the Philippines.

62 Information on the exact number of merchants acquired in 2013 is not available. While it is established that none of the small, informal merchants was acquired in 2013, the study uses anecdotal evidence to estimate that ~30% of the enterprise merchants were acquired in 2013. Stakeholder consultations suggest this is on the higher side and safe to assume.

63 BSP (2018), Financial Inclusion in the Philippines [Dashboard Q4 2018].

64 Statista (2019), eCommerce in the Philippines.

65 Interviews with industry players.

66 BSP (2017), Financial Inclusion Survey.

67 Note: OTC commission for remittances is 15-20% for international transfers and 4-5% for domestic transfers.

68 BSP, How to save on bank fees and charges.

69 Stakeholder interviews (2019).

70 BSP (2018), Financial Inclusion in the Philippines [Dashboard Q4 2018].

71 Karandaaz-CGAP-Dalberg (June 2016), Global landscaping study on digitizing P2G payments.

72 Some of these payments are made to limited purpose cash cards, i.e. transfer to a card which the recipient then withdraws.

73 DSWD (2014) Keeping children healthy and in school: Evaluating the Pantawid Pamilyang using regression discontinuity design.

74 World Bank Global Findex (2017).

75 World Bank Global Findex (2017), Opportunities for expanding financial inclusion through digital technology.

76 BIR (2015), Revenue Memorandum Circular No. 2 - 2015, Online Submission of Certain Annual Income Tax and Excise Tax Returns.

77 CoA (2004), Circular 2004-006, Guidelines and Principles on the Acceptability of the Evidence of Receipt of Payments for Disbursements.

78 The information on the exact number of merchants acquired in 2013 is not available. While it is established that none of the small, informal merchants was acquired in 2013, the study uses anecdotal evidence to estimate that ~30% of the enterprise merchants were acquired in 2013. Stakeholder consultations suggest this is on the higher side and safe to assume.

79 Note: Of merchants that are currently acquired through QR, approximately 50% are MSME merchants that initially did not have a PoS terminal. The other 50% are enterprise merchants that have both PoS and QR facilities.

80 Data obtained during interviews with financial service and payment providers.

81 Data shared during interviews with merchants and sector experts.

82 Visa and Dalberg, Small Merchants, Big Opportunity.

83 USAID, E-Peso Individual Payments Baseline Survey: Tracing the shift from a cash-based to a cash-lite economy among Filipinos, 2016.

84 BSP (2017), Financial Inclusion Survey.

85 PayPal, Digital Payments: Thinking beyond transactions - Philippines country report.

86 Omidyar Network (2016), Currency of Trust.

87 Karandaaz-CGAP-Dalberg (June 2016), Global landscaping study on digitizing P2G payments.

88 World Bank Global Findex (2011, 2017).

89 Omidyar Network (2016), Currency of Trust.

90 CGAP (2016), Smartphones & Mobile Money: Principles for UI/UX Design (1.0).

91 BSP (2017), Financial Inclusion Survey.

92 USAID, 2016. E-Peso Individual Payments Baseline Survey: Tracing the shift from a cash-based to a cash-lite economy among Filipinos.

93 Blog: Nala has built a hassle-free, offline mobile money payment platform for Africa (2019), TechCrunch.

94 Better Than Cash Alliance (2016), Responsible Digital Payments Guidelines.

95 https://www.smartcampaign.org/about/smart-microfinance-and-the-client-protection-principles/digital-credit-standards

96 CGAP (2017), Digitising merchant payments: What will it take?.

97 Infocomm Media Development Authority (2018), Nationwide E-Invoicing framework.

98 PwC India (2018), MDR rationalisation: A big impact on small merchants.

99 Safaricom (2018), Sustainable Business Report.

100 BPay, Facts on BPAY.

101 European Commission, Digital Economy and Society Index.

102 CGAP (2014), Electronic G2P Payments: Evidence from Four Lower-Income Countries.

103 These transactions will overlap with remittances, utility bill payments, and merchant payments.

104 The definitions in the Glossary of Terms may not be the same as provided under Bangko Sentral ng Pilipinas regulations.

The Better Than Cash Alliance Research Series

Our case study and country diagnostic series seeks to highlight specific examples of shifts from cash to digital payments by governments, companies, and international organizations. Each case study and country diagnostic aims to provide insights for a wide audience on the factors that have helped or hindered the digitization process, and also present key results and benefits of the transition away from cash. We hope that readers will be able to adapt the lessons from these cases to their own contexts and local conditions.

Acknowledgements

This report would not have been possible without the contribution of the Bangko Sentral ng Pilipinas (BSP), various agencies of the Government of the Philippines, the broader financial services industry, and the global experts who informed the framing, research, and analysis.

We want to extend our sincerest gratitude to the BSP. We especially thank Governor Benjamin E. Diokno for his remarkable leadership in pushing this study forward. We would also like to thank Deputy Governor Chuchi G. Fonancier for her kind guidance. Likewise, we deeply appreciate the impressive determination of Managing Directors Vicente T. De Villa III and Pia Bernadette Roman Tayag, to go the extra mile in order to facilitate the diagnostic study. Of course, we particularly acknowledge the indispensable contributions of the Payment System Oversight Department (PSOD) under the leadership of Director Raymond O. Estioko, to the success of this study. Moreover, we wish to thank Deputy Director Mary Rose A. Contreras of the PSOD for making herself always available to attend to our requests. Finally, we would like to thank Ms. Maria Christina S. Masangkay and the rest of the PSOD team for their generous assistance throughout the study.

This report benefited from the strategic guidance of Dr. Ruth Goodwin-Groen, Managing Director of the Better Than Cash Alliance. Camilo Tellez-Merchán was an equal member of the team, joining us in the field country missions, and helping gather data. In addition, we are grateful to Angela Corbalán for supporting in stakeholder engagement, including developing advocacy messages on the results of this assessment.

We are also thankful for the thorough technical review and the thoughtful insights shared by Kelly Hattel, Senior Financial Sector Specialist at the Asian Development Bank, and Nilima Ramteke, Senior Financial Sector Specialist at the World Bank. The team would also like to express its sincere appreciation to the members of the Editorial and Publications Committee of the Alliance. Their guidance, steering, and insights helped significantly improve this report.

The Alliance would like to thank Dalberg, a critical technical partner commissioned by the Better Than Cash Alliance (the "Alliance") to help conduct the diagnostic study – particularly Malavika Bambawale, Swetha Totapally and Vineet Bhandari, technical authors of this report. The Alliance also thanks Akanksha Agarwal and Devvart Poddar, who contributed with their insights, research, analysis, and writing to the diagnostic study.

WWW.BETTERTHANCASH.ORG

SCAN ME

About The Better Than Cash Alliance

The Better Than Cash Alliance is a partnership of governments, companies, and international organizations that accelerates the transition from cash to digital payments to help achieve the Sustainable Development Goals. Based at the United Nations, the Alliance has over 75 members, works closely with other global organizations, and is an implementing partner for the G20 Global Partnership for Financial Inclusion.

Bill & Melinda Gates foundation

Citi Foundation

citi

flourish

mastercard

Norad

vipps

Sida

USAID
FROM THE AMERICAN PEOPLE

VISA

UNCDF

ISBN 978-1-946173-33-1

9 781946 173331 90000>