2020

The Refugee Economy in Jordan

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Financial Inclusion: The Implementation of Mobile Money in Jordan

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CISLA Senior Integrative Project
Economics 492
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May 14th, 2020

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GLOSSARY

Terms taken from GIZ-CGAP report Paving the Way for Digital Financial Services in Jordan, June 2017[1]	Agent-level Interoperability, Cash-In, Cash-Out, Cross Platform Level Interoperability, Digital Financial Services, Digital Payment, E-money, Exchange House, KYC, Mobile Money, MNO, Mobile Payment, MPSP, Mobile Wallet, PSP, Remittances, Switch, USSD
Terms taken from Mercy Corps report Making Mobile Money Work for All, June 2019[2]	JoMoPay, Merchant
Terms taken from GSMA Mobile Money for the Unbanked, July 2010[3]	Agent

Agent:
A person or business that is contracted to facilitate transactions for users. The most important of these are cash-in and cash- out (i.e. loading value into the mobile money system, and then converting it back out again); in many instances, agents register new customers too. Agents usually earn commissions for performing these services. They also often provide front-line customer service—such as teaching new users how to initiate transactions on their phone.

Agent-level Interoperability:
Refers to agents of one service provider offering services to customers of another service provider.

Cash-In, Cash-Out:
Cash exchanged for e-money; e-money exchanged for cash.

Cross Platform Level Interoperability:

1 Boakye-Adjei, Nana Yaa. Leon Isaacs, and Gemma Robson. "Paving the Way for Digital Financial Services in Jordan." CGAP, DMA Global and GIZ. Working Paper. 2017. https://www.cgap.org/sites/default/files/Working-Paper-Paving-the-Way-for-Digital-Financial-Services-in-Jordan-Jun-2017.pdf.
2 Barkawi, Ben, Sasha Muench, and Max Nichols. “Making Mobile Money Work for all: A Review of the Jordan Mobile Payment System.” Mastercard Center for Inclusive Growth. 2019.
3 “Mobile Money for the Unbanked: Mobile Money Definitions.” GSMA. July 2010. https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2012/06/mobilemoneydefinitionsnomarks56.pdf.

Refers to Customers' ability to undertake money transfers between two accounts held with different commercially and technically independent services providers participating within different platforms (e.g. mobile wallet to bank account).

Digital Financial Services:
The broad range of financial services accessed and delivered through digital instruments, including payments, credits, savings, remittances, and insurance.

Digital Payment:
A form of digital financial service where the financial service is a payment.

E-money:
A type of monetary value electronically recorded. It is generally understood that e-money: (i) is issued upon receipt of funds in an amount no less in value than the value of the e-monet issues.

Exchange House:
Usually refers to a type of business unique to the Middle East. These businesses are licensed as money changers and are often family owned. Many have expanded to provide a wide variety of payment services, particularly cross-border, and form a vital part of the remittance market.

JoMoPay:
Jordan Mobile Payments. Jordan's public -private mobile payments switch, operated by JoPACC (Jordan Payment and Clearing Company). JoMoPay processes and records all mobile money transactions. It also accesses all information about mobile wallet account holders.

Know Your Customer (KYC):
A set of due diligence measures undertaken by a financial institution to identify a customer and the motivations behind his or her financial activities. KYC is a key component of anti-money laundering and combating the financing of terrorism regime.

Merchant:
Any business selling a product or service.

Mobile Money:
A form of e-money, accessed through a mobile phone.

Mobile Network Operator (MNO):
A company that has a government issued license to provide telecommunications services through mobile devices.

Mobile Payment:
A form of mobile financial services in which payments are initiated through a mobile phone (both smartphones and digital feature phones).

Mobile Payment Service Providers (MPSP):
An MPSP is an e-money issuer licensed by the Central Bank of Jordan to issue e-money and connect the JoMoPay national payment switch. Also referred to as a payments service provider.

Mobile Wallet:
A type of e-wallet which is accessed through a mobile phone. Often used synonymously with a mobile money account.

Payment Services Provider (PSP):
An entity providing services that enable funds to be deposited into an account and withdrawn from an account; payment transactions (transfer of funds between, into, or from accounts); issuance and/or acquisition of payment instruments that enable the user to transfer funds (e.g., checks, e-money, credit cards, and debit cards); and money remittances and other services central to the transfer of money.

Remittances:
A person-to-person international payment of relatively low value.

Switch:
A computer-based software system where transactions are routed. Generally, this occurs for the transaction to be rerouted to a different PSP and/or product, enabling interoperability. In Jordan, transactions by the same mobile services providers are also routed through the JoMoPay switch.

Unstructured Supplementary Service Data (USSD):
A global system for mobile communication technology that is used to send text between a mobile phone and an application program in the network. Applications may include prepaid roaming or mobile chatting.

I. INTRODUCTION:

This research outlines the factors inhibiting the implementation of mobile money in Jordan, and proposed solutions to overcome such issues. Further, the study will cover the potential impacts that mobile money could have on the economy, both positive and negative. Specifically, this research will cover how to circumvent unfavorable consequences, and whether or not these potential adverse effects outweigh the benefits. As stated in the Glossary, mobile money is a "form of e-money accessed through a mobile phone."[4] Mobile money does not necessitate the existence of a bank account. It is rather an individual account on a mobile platform regulated by the Central Bank, in which money is sent or received. Unlike Venmo, or Chases' Quick Pay app Zelle, an agent takes the place of the bank in terms of facilitating transactions. The uptake of mobile money in Jordan is essential in assisting the largely unbanked population, including the sizable number of refugees. Yet, the adoption of mobile money has occurred at a very slow pace, with many obstacles hindering its development along the way. However, if enacted successfully, mobile money can help combat the extremely low levels of financial inclusion within Jordan. With regards to refugees, mobile money could be used as a replacement for cash transfers or humanitarian assistance. Along with refugees, women and young adults could particularly benefit from the technology, as they comprise a large percentage of the unbanked population. In addition, mobile money could prove vital in supporting the high number of international remittances in and out of the country. Finally, the study of the implementation of mobile money has become crucial in order to understand successful tactics, and to learn from the faults of countries with more established mobile money infrastructures.

[4] Boakye-Adjei, Isaacs, and Robson. "Paving the Way for Digital Financial Services in Jordan." 2017. pp.xii.

II. METHODOLOGY:

I study literature that focuses on implementation challenges within Jordan, and theories on mobile money uptake in general. The analysis of countries where mobile money has been implemented successfully, like Kenya, play a helpful role in proposing solutions to these issues. An exploration of the countries where mobile money has prospered will also provide insight into some of the adverse effects of this technology in regard to debt. Due to recent developments of COVID-19, this paper will include an analysis of mobile money during the Ebola outbreak. Specifically, I will analyze literature that explains the role of the technology in terms of public health, and the resilience of the technology in the face of a health crisis.

III. ANALYSIS

i. Background

Mobile phones are highly common throughout the world. The prevalence of mobile devices has provided a pathway for the use of mobile money even amongst poorer communities. In Jordan, in particular the "number of cell subscriptions exceeds the number of the population."[5] Hence, access to a cellular device has not been a main barrier to the adoption of mobile money. In addition, mobile money is a valuable tool in increasing financial inclusion in lower income communities because mobile money does not require a bank account. Considering that only 24.6% of "Jordan's adult population has a bank account," this type of technology is a suitable

[5] Khraim, Hamza, Y.E. Shoubaki, and A.S. Khraim. "Factors Affecting Jordanian Consumers' Adoption of Mobile Banking Services." International Journal of Business and Social Science. Vol. 2. 2011.

option or solution to financial inclusion in a place where many do not have access to bank accounts. [6] In the absence of bank accounts people have turned towards informal exchanges. This is illustrated by a Mercy Corps study that reports that while more than half the population in Jordan borrowed money in 2017, only 17% "borrowed from a formal financial institution." [7] If given another option to access financial services, this unbanked population can dramatically increase its financial inclusion through the use of mobile money. Through the mobile money, users can make transactions from person to person or they may purchase items at a store (POS terminal), all via their mobile device.[8] However, it is essential that all parts of the financial ecosystem are integrated and supportive of mobile money uptake in order for it to be successful. It is necessary that implementation is coordinated amongst all actors.

Lastly, before delving deeper into the discussion of mobile money and the goal of successful implementation to increase financial inclusion, it is first necessary to define what it means to be financially included. The World Bank Groups states that "financial inclusion means that individuals and businesses have access to useful and affordable financial products and services that meet their needs- transactions, payments, savings, credits and insurance- delivered in a responsible and sustainable way."[9] In other words, having access to financial services elicits financial inclusion. Yet, many examples provided in this paper challenge this notion, and push the definition of financial inclusion to require financial literacy in addition to financial access. A study conducted by the Organization for Economic Co-operation and Development, supports this idea by demonstrating the correlation that exists between financial literacy and financial

[6]Scharwatt, Claire and Anant Nautiyal. "The Long Road to Interoperability in Jordan: Lessons for the Wider Industry" GSMA. 2016.
[7]Barkawi, Ben, Sasha Muench, and Max Nichols. "Making Mobile Money Work for all: A Review of the Jordan Mobile Payment System." Mastercard Center for Inclusive Growth. 2019.
[8]Khraim, Shoubaki and Khraim. "Factors Affecting Jordanian Consumers." pp. 99.
[9] "Financial Inclusion." The World Bank Group. 2018.

inclusion.[10] Financial literacy is a key pillar in conducting certain financial services. The knowledge of how services like savings, credits, and loans function and work, are necessary to carry out such transactions, or utilize the services. Further, financial illiteracy drives the mistrust of financial services. As explained by the Alliance for Financial Inclusion, a common reason people are excluded from financial services "is that banks use jargon, or even fail to provide marketing and product information in local languages. People do not understand what is on an offer, and what they do not understand they do not trust." [11] Thus, without the proper education of financial services, although people may have access to the services, they may be both unwilling or unable to conduct transactions or other services. Concluding from these definitions, financial inclusion requires that people both have access to financial services and that these services are actively used and understood by the user.

ii. History of Mobile Money in Jordan:

The main guiding document for mobile money in Jordan is the National Financial Inclusion Strategy, which provides a detailed outline for coordinated effort amongst stakeholders.[12] Following the lead of other countries like Kenya, Jordan seeks to obtain financial inclusion through the development of mobile money. The governor of the Central Bank of Jordan (CBJ) has even noted the importance of paying close attention to countries like Kenya in crafting successful mobile money implementation strategies in Jordan.[13] In 2011 and 2012 mobile money first entered Jordanian society, under two popular telecom companies, Zain and

[10] "Financial Literacy as a Means to Financial Inclusion." Bank of Indonesia. 2011.
[11] Boletawa, Eliki. "Financial Literacy: An Important Tool for Financial Inclusion." Alliance for Financial Inclusion (Global).last modified Jan 23 2015.
[12] Barkawi, Muench, and Nichols. "Making Mobile Money Work for all." pp.13.
[13] Ibid. pp. 13.

Orange. However, the technology did not thrive due to the high level of restrictions. Thus, in 2013 the Central Bank of Jordan issued a new regulatory framework. In addition, the CBJ "introduced Jordan Mobile Payments, enabling the interoperability between mobile money services."[14] The interoperability established under JoMoPay worked to create a connection between different service providers. JoMoPay is under control of the Central Bank of Jordan, and all mobile services in the kingdom travel through this switch. This change intended to correct some of the previous difficulties in implementing the technology, but it came with its own issues. It is likely that Jordan attempted to adopt interoperability too soon, before the mobile money infrastructure could support it. Interoperability must be enacted "as the mobile money market matures."[15] At the very early stages if the government focuses too much energy on interoperability, it takes money away from investment, and it can "disadvantage leadership by any one mobile network operator or bank."[16] This is one of the exact dilemmas that occurred during the implementation of JoMoPay in Jordan.

Implementing this interoperability too early proved to be slow, ineffective, and took away funding from more appropriate investments for mobile money development at the time. [17] At the time of implementing interoperability, the mobile money infrastructure in Jordan still needed a great deal of investment and further growth. This development included the need for a focus on strong distribution networks, positive customer experience, and "dialogue between providers and regulators."[18] In terms of customer experience, work needed to be done in order to better the overall user experience. However, the incentive to sign contracts with large humanitarian

[14]Scharwatt and Nautiyal. "The Long Road to Interoperability in Jordan." pp. 5
[15] Ibid. pp.8.
[16] "10 Ways to Accelerate Mobile Money: USAID-Citi Mobile Money Accelerator Alliance." Citibank. https://www.citibank.com/icg/sa/digital_symposium/docs/mobile_10ways.pdf. pp.5.
[17]Scharwatt and Nautiyal. "The Long Road to Interoperability in Jordan." pp. 19.
[18]Ibid. pp. 5.

organizations in order to increase profit created a system that focused solely on pleasing the humanitarian organizations, rather than the individual consumer. As a result, investments that are channeled into areas other than interoperability often focus on building "bulk payment products, and robust reporting mechanisms required by some international organizations."[19] Additionally, the implementation of interoperability payment service providers must compete for the same agents, "one agent must sign up for each of their networks."[20] This creates a significant waste in resources. Ideally, with agent interoperability one agent could register with one payment service provider (PSP), and then be eligible to work with any other PSP. In order for Jordan to realize successful adoption of mobile money the interoperability and investment concerns must be addressed and altered.

iii. Integration with Financial Ecosystem

As mentioned previously, in order for adoption to be widespread, JoMoPay must be integrated with the rest of the "financial ecosystem," and expand to greater reaches of society.[21]This includes a union of JoMoPay with exchange houses. Since many people have a lack of trust in more formal financial institutions, a large portion of the population leans on these exchange houses, "who have well-developed branch networks around the country."[22] These houses encourage and facilitate cash-based transactions. In order to transition from this system to mobile money it is essential that exchange houses become part of the mobile money ecosystem. Exchange houses are also a very significant part of the remittance economy in Jordan. Since they

[19] Ibid. pp. 17.
[20]Barkawi, Muench, and Nichols. "Making Mobile Money Work for all." pp. 18.
[21] Ibid. pp. 7.
[22] Boakye-Adjei, Isaacs, and Robson. "Paving the Way for Digital Financial Services in Jordan." 2017. pp.xvii.

are regulated by the law and are licensed institutions, the environment around them has become very competitive. In order to change the high volume of cash transfers in and out of the country, remittances must be connected to the country's switch JoMoPAy, in order to create a market that is still competitive and sound.[23]

There have been efforts to create a more inclusive ecosystem. This includes the development of "the national-level forum for digital financial services stakeholders called the Digital Financial Services Council that holds regular meetings," to work with the Central Bank of Jordan around "policy and regulatory issues around digital financial services in Jordan."[24] Exchange houses, PSPs, banks, and operators all contribute to this council. However, a vital component that is missing from this council, is a mechanism that can gain intel on users and merchants, their needs and experiences. Mercy Corps has found that there are lower than about 9,000 monthly users across the country. The lack of strong adoption, the connection between the product, and the needs of the consumer into question.[25] The issues pertaining to user friendliness will be discussed later on with proposed improvement methods.

iv. Technological Issues

Another central issue surrounding the adoption of mobile money relates to technological issues. In particular it concerns the inability of operators to launch interoperable services onto non-smartphones. This has to do with the USSD or Unstructured Supplementary Service Data. This service data is a form of technology used for mobile money specifically to conduct transactions. The USSD technology "works on any mobile device, unlike banking apps that need

[23] Ibid.pp.xviii.
[24] Barkawi, Muench, and Nichols. "Making Mobile Money Work for all." pp. 17.
[25] Ibid. pp. 17.

internet access and smartphone functionality."[26] However, due to the fact that "interoperable USSD does not exist," interoperability only exists if the customer is using a smartphone.[27]In addition, between payment service providers "interoperable USSD does not exist."[28] Another issue with USSD based devices is the challenges with reading and operating the menu. Making payments on a non-smartphone device is not simple, requiring the consumer to read text, and enter long PIN numbers. This is time consuming, and an issue for illiterate consumers.

Further, another main technological issue cited by consumers is the lack of online registration. Customers must go to agents in person in order to register. Creating an online version of the "Know Your Customer" form that must be filled out before registration can make the registration process easier, and thus make the technology more accessible.[29]

v. Refugee Population and The Role of Humanitarian Organizations

The exact number of refugees in Jordan is often contested, and politicized, since a higher population warrants a greater amount of aid. For this report the number of refugees in Jordan will refer to the number registered by the UNHCR as of March 2020. The UNHCR reports that as of March 31, 2020 "the number stands at 746, 581 persons of concern, including 656, 246 Syrians, 67,105 Iraqis, 14,778 Yemenis, 6,086 Sudanese, 746 Somalis, and 1,620 other nationalities."[30] The number of Syrian refugees alone make up about 10% of Jordan's population. [31]Within Jordan a majority of Syrians and other refugee families live in urban settings, while 20% live in

[26] Rouse, Margaret. "USSD (Unstructured Supplementary Service Data)." SearchNetworking.last modified Mar 2020.
[27] Scharwatt and Nautiyal. "The Long Road to Interoperability in Jordan." pp. 10.
[28] Rouse. "USSD (Unstructured Supplementary Service Data)."
[29]Barkawi, Muench, and Nichols. "Making Mobile Money Work for all." pp. 19.
[30] "Operational Update: Jordan." UNHCR: The UN Refugee Agency. March 2020. https://data2.unhcr.org/en/documents/download/75581.
[31] "10 Facts about the Syrian Refugee Crisis." *World Food Programme USA.* Nov 14 2019.

camps around the country. Refugees who are registered with the UNHCR living in camps receive a form of documentation proving their registration, while those living outside camps have asylum documentation. In order to first obtain access to a mobile device refugees must acquire a Jordanian SIM card, which requires them to "present a passport, work permit, residency permit or a Ministry of Interior (MOI) card (issued to Syrian refugees only)."[32] Those that are lacking ID, including new arrivals or non-Syrian nationals, often have inadequate documentation needed to obtain a SIM card. However, as of 2014 the UNHCR began issuing SIM cards to all registered refugees and asylum seekers. Despite this, there is still a major issue with regard to non-Syrian refugees. Since refugees of other nationalities do not receive a MOI card, they may obtain a SIM card, but they do not have the ability to register for a mobile wallet account. A MOI card or a valid passport is required to register for a mobile wallet account.[33] After the regulation changes in 2013 the CBJ allowed customers to register for mobile money through many different means like "their national id number, passport, UN number, or Ministry of Interior Service card." [34] However, the CBJ "determined that UNHCR documentation is not sufficient documentation to obtain a mobile wallet."[35] Therefore, due to this, as stated above, non-Syrian refugees that do not have a MOI card cannot register for a mobile wallet. It is important that this changes in order to provide access for all refugees.

In addition, once those documentation changes are made it is essential that governments, and humanitarian organizations take the step to transfer their cash payments to mobile money and mandate the technology. In a similar manner, conditional cash transfers, or aid given out on a conditional basis, can also be transferred to the mobile money platform. The move to digitized

[32] "Country Reports-Displaced and Disconnected." UNHCR.pp.39.
[33] Ibid. pp.39-40.
[34] Scharwatt and Nautiyal. "The Long Road to Interoperability in Jordan." pp.8.
[35] Barkawi, Muench, and Nichols. "Making Mobile Money Work for all." pp. 30.

payments is so vital because it has been shown that financial services play a crucial role during humanitarian crises. Digitized payments are said to create more "resilience to negative shocks, and help stimulate economic activity after a crisis."[36] As governments and organizations shift away from cash transfers it is crucial that they place a particular focus on how to develop a method of digitized payments that will help to increase financial inclusion.

To take a closer look at this situation, a recent study conducted in Jordan and Lebanon sheds light on the obstacles of bridging together cash and voucher assistance and financial inclusion. This study is helpful in understanding how the use of mobile services to deliver aid assistance is not sufficient in bolstering financial inclusion. In Jordan, in particular cash and voucher assistance (CVA) comprises 28% of "total humanitarian assistance."[37] Recently, Jordan has begun to "shift payments from physical cash or check to basic bank accounts or mobile wallets."[38] To do this, Jordan has been making use of their existing mobile money structures and technology. Due to this the CVAs provided in Jordan are highly digitized compared to similar programs in other countries. In addition, there are pilots being conducted now within the United Nations for CVA mobile wallets. These digitized CVAs can be used at POS or ATMs. CVAs either take the form of cards, IRIS scanners, or mobile wallets. Despite this progress, government and humanitarian organizations are failing to link CVA with financial inclusion. This is so because the CVA is not connected to a recipient's account. The main reason is because financial service providers often create a pooled account for the aid agencies, which does not allow recipients to have access to an individual account, forbidding them from conducting other

[36] Chehade, Nadine, Peter McConaghy, and Martin Meier Chrissy. "Humanitarian Cash Transfers and Financial Inclusion: Lessons from Jordan and Lebanon." 2020. Working Paper. Washington, D.C.: CGAP and World Bank Group. pp.1

[37] Chehade, McConaghy, and Chrissy. "Humanitarian Cash Transfers and Financial Inclusion." pp.1.

[38] Ibid. pp.15.

financial services. In order for this to change financial inclusion must become a priority for governments and donors, and financial service providers (FSPs) must create "a direct relationship with aid transfer recipients."[39] In prioritizing the work of governments and NGOs, innovation of fintechs can be supported along with programs that will link "digital CVA and financial inclusion."[40] To address the disconnect between CVAs and the recipient's account it is essential that financial service providers (FSPs) build relationships with the lower income population and turn them into long term customers. This way FSPs can see the value in creating individual accounts. In addition, if organizations work closely with FSPs they can lower fees involved with CVAs. Helping to lower the fees attached to CVAs will provide an incentive for FSPs to break apart the vouchers individually, rather than pooling them together. In this way governmental organizations could collaborate with humanitarian organizations and stakeholders to increase efficiency and effectiveness. Despite all of these issues, the use of digitized cash transfers does help in increasing trust and awareness surrounding the technology. [41]

Lastly, it is important to note that previous studies that have been conducted surrounding consumers' experience with mobile money in the form of aid assistance. In Ethiopia, Bangladesh, and Zimbabwe a case study looked at financial inclusion in relation to mobile money transactions. The study concluded that "just 10 percent of recipients across all three countries were able to independently conduct mobile money transactions." [42]The recipients tended to prefer cash rather than mobile money. From another study conducted in 2018, however, users want to be included on the design plan of the technology. To ensure lasting and sustainable adoption consumer experience must be prioritized on the behalf of users that use the technology

[39] Ibid. pp.3.
[40] Ibid. pp.3.
[41] Ibid. pp.3.
[42] Ibid. pp.5.

for aid purposes. Tailoring the technology to the consumers and listening to feedback to create more consumer-friendly products is equally as important as efficiency.[43]

vi. Consumer Protection

Another major issue that must be addressed regarding the adoption of mobile money and stimulating financial inclusion is consumer protection. Consumer protection is especially important since many of the users that mobile money seeks to aid come from low income groups, with "low levels of financial literacy."[44] Due to this, many are fearful of the technology and desire to draw cash out of the wallet as quickly as possible. This is partly due to tax concerns regarding mobile money. Consumers also believe, for similar reasons, that if they use their devices for mobile money, that their transactions will be traceable.[45] In addition, during the registration process users fill out a "Know Your Customer" with questions inquiring about monthly income, "without any disclaimer about how this information might be used."[46] To overcome these fears the government should publish information regarding how and what the collected data is used for. It may be the important first steps of governments and NGOs to provide awareness and education on mobile money, in addition to information on how and why mobile could benefit their wellbeing and life. Financial literacy and consumer protection go hand in hand, and higher levels of literacy can promote safer practices.[47]

[43] Ibid. pp.15-16.
[44] Boakye-Adjei, Nana Yaa. Leon Isaacs, and Gemma Robson. "Paving the Way for Digital Financial Services in Jordan." CGAP, DMA Global and GIZ. Working Paper. 2017.
[45] Hwang Hwa, Byoung. "Jordan: Reaching Refugees with Mobile Money in Jordan- Experiences from the Field." Microfinance-Mena. last modified May 29 2019.
[46] Barkawi, Muench, and Nichols. "Making Mobile Money Work for all." pp. 19.
[47] https://www.citibank.com/icg/sa/digital_symposium/docs/mobile_10ways.pdf

Additionally, an increase in marketing efforts is essential in supporting mobile money uptake through an expansion of financial literacy. One way to spread awareness for this service may be to support large volumes of mobile cash transfers. Marketing tactics will simultaneously work to solve issues relating to lack of trust in the technology. In particular, campaigns should reach areas of the kingdom that have a high population of Syrian refugees in order to raise awareness amongst this vulnerable population. [48] In addition to refugees, marketing campaigns could work to target women, another highly financially excluded group. Likewise, Dinarak, "a leading payment service provider in Jordan" has worked to reach underprivileged women.[49] To do this, Dinarak chose to partner with female businesses signing them up to become mobile money agents. This partnership helped increase awareness of the technology amongst women and encouraged others in their communities to move away from cash-based transactions. Along with these efforts, the Arab Women's Enterprise Fund partnered with Dinarak on marketing and training for women, which focused on education and increasing financial literacy.[50] Moving forward, specific or targeted marketing to vulnerable populations, or those typically financially excluded, is key to supporting mobile uptake and countering the fearful mentally towards the technology.

Another way to overcome the barriers faced by consumers requires analyzing the usage of current mobile money holders and learning how to create products and programs that are tailored to their needs. [51] In turn, this may narrow the focus of the products that the technology offers, and allow for a more streamlined, simple usage, that is less overwhelming to the user.

[48] Byoung. "Reaching Refugees with Mobile Money in Jordan."
[49] Gueguen, Chole, Sabal Majali, and Ahmed Tamimi. "Dinarak Jordan: How Mobile Money can Empower Female Agents and Clients." SeepNetwork. 2019.
[50] Gueguen, Majali and Tamimi. "Dinarak Jordan."
[51] Barkawi, Muench, and Nichols. "Making Mobile Money Work for all." pp. 8.

This may be one of the most important factors since consumers are not demanding mobile money because they see the technology as far more complicated than using cash.

vii. Fee Structure

It is essential that the mobile money fee structure does not negatively target the poor or position itself as a barrier to financial inclusion. There are currently three different types of models in relation to the fee prices: "slab-based pricing: transactions within a defined range are charged a flat fee, percentage based pricing: the user pays a flat percentage of the amount sent, and free: no transaction cost incurred."[52]Analyzing the different types of fee structures it is clear that the fee structure negatively impacts users that send smaller transactions. The larger the transaction the smaller the fee. This fee structure then presents itself as a barrier to widespread adoption amongst poorer populations, whose transactions tend to be smaller. However, different models have been tested to determine if having "utility service providers absorb part of the transaction fee could be offset by higher mobile money penetration in the long run."[53] In certain countries, like Kenya, negotiations with telecom companies have already been made to limit the fees charged on small transactions. Jordan should take similar steps in order to reduce fees on smaller transactions. In addition, an increase in widespread "utility bill payment adoption" via mobile money could support the transition of the "mobile money industry from a transaction-fee business model to a platform based business model."[54] Utility bill adoption means using mobile money to pay for certain household necessities like water, and sanitation costs. Utility cases require the coordination of many different actors across a multitude of platforms, and thus

[52] Cook, William, Kyle Holloway, and Rebecca Rouse. "How Do Mobile Money Fee Structure Impact the Poor." *CGAP.* May 15 2017.
[53] "Mobile Money Transaction Fees and Utility Bill Payments in Emerging Markets." *GSMA.* Jan 18 2019.
[54] "Mobile Money Transaction Fees and Utility Bill Payments in Emerging Markets." GSMA. Jan 18 2019.

contributing "platform-based models."[55] This type of business model will facilitate the transaction and the connection between various different actors will create value. The platform-based business model will help move away from a fee structure that burdens the consumer and looks to obtain value from businesses and governments. Jordan could look to transition to this business model, as it is essential in alleviating the burden placed on consumers that often presents itself as a barrier to financial inclusion. However, adjustments made to the full development of mobile money infrastructure within Jordan would ensure that the system could handle this model.

viii. Money Laundering and Terrorist Financing (Remittances)

Money laundering and terrorist financing must be addressed in order for financial inclusion via mobile money to be achieved in a safe, sound manner. Risks on both the consumer and merchants' sides must be addressed and accounted for. On the consumer side, fraudulent information may be presented at the time of registration, or one may attempt to conduct transactions cross-border to fund crimes. Money may be then redeemed in the form of cash and used to further illegal activities. [56] One way to mitigate these risks is to set account limits, as well as establishing limits on "transaction frequencies and volumes, and amounts transferred within a certain time period."[57] The second method includes a monitoring of suspicious activity. These two practices would work in tandem, because if limits are set on transactions, terrorists would have to break up their transactions into several smaller ones, which would likely set off alerts.

[55] Ibid.
[56] Solin, Marina and Andrew Zerzan. "Mobile Money: Methodology for Assessing Money Laundering and Terrorist Financing Risks." GSMA. 2010. pp.16.
[57] Solin and Zerzan. "Money Laundering and Terrorist Financing Risks." pp.16.

Additionally, if consumers are exhibiting a high amount of risk, (large transactions, and high volume), they will then be subject to "register face to face and become fully identified."[58]

On the merchant side, risks can be reduced through due diligence, and the spread of awareness on how criminal activity may hurt their businesses. In addition, mystery shoppers can test for any illegal activities. The highest risk of money laundering occurs on the merchant or agent side. They have the greatest access to accounts, so it is essential that due diligence is conducted both initially, and periodically. This can come in the form of mystery shoppers, as previously mentioned, or "they can require agents and retail partners to train front line associates in Anti-Money Laundering and Counter Terrorism." This includes assistance in monitoring the training and the activity on a location basis to "identify unusual activity and investigate and take corrective action."[59] Taking these steps will help to mitigate terrorist financing or money laundering concerns on the merchant side.

In addition, it is important to note the safety and legal concerns regarding international remittances. It has been observed that companion cards, which are "Mastercard debit cards linked to the user's mobile wallet accounts," are being used by consumers for international remittances.[60] Since these cards work outside of the country, consumers will hand the companion card to a relative or friend, who will then have access to the account from outside of the country[61] In order to decrease the risk of money laundering and terrorist financing through international remittances, similar methods regulated domestic transfers must be employed. This includes, limits on transfers, and monitoring of transfers and accounts, as well as due diligence.[62]

58 Ibid.pp.16.
59 Ibid.pp.17.
60 Barkawi, Muench, and Nichols. "Making Mobile Money Work for all." pp. 22.
61 Ibid. pp. 22.
62 Solin and Zerzan. "Money Laundering and Terrorist Financing Risks." pp.17.

ix. Merchants and Agents

Addressing the challenges faced by both merchants and agents is an essential component in increasing the uptake and sustainability of the technology. On the merchant side, in order to increase adoption of the technology there must be incentives in place for the merchants.[63] There is a very small number of merchants that accept mobile money payments in Jordan. Mainly only large businesses or corporations are working with the technology. Often, companies may advertise or claim they accept mobile money, but the system is not in service. To clarify, the mobile money system distinguishes between the wallet or account of an individual user versus the account of a business owner. The wallet of the business owner serves as a point of sales, and has more features, than a traditional individual wallet. This is done in order to provide the business owner with accounting services. However, due to the increased level of services that come with a business account, these accounts require further registration and documentation.[64] Hence, oftentimes the payment service provider will encourage business owners to sign up for a regular individual account, rather than the business account, and use the "person to person function for their business needs."[65] To overcome the perceived drawbacks of mobile money for merchants, which include tax implications, and regulations, governments could incentivize the technology, and raise further awareness for how it can benefit their businesses.

Specifically in order to increase uptake amongst merchants, it is important to identify merchants that will "most benefit from digital financial services and are receptive to it" to create tailored incentives and features.[66] The second method that can be employed to increase momentum and uptake is a focus on economic "pain points," in certain sectors and

63 Barkawi, Muench, and Nichols. "Making Mobile Money Work for all." pp.16-17.
64 Ibid.pp.15.
65 Ibid.pp.17.
66 Ibid.pp.20.

demonstrating how mobile money can alleviate these issues. This would include "transportation/logistics, technology-enabled businesses, and informal financial services."[67] First, in regard to the transportation sector, final payment for the goods or service usually does not occur until after the delivery. This gap in delivery and payment dates creates unnecessary risk for all parties involved. As each part of the business cycle assumes more risk (the trader has to hand off their goods prior to receiving payments, the delivery driver must travel far distances without payment, and the person receiving the goods has to pay a higher cost due to high risks involved) it makes it harder for businesses to grow. However, with the use of mobile money many of these pain points would cease to exist, as each actor could be paid instantaneously. This would be of significant benefit to businesses and merchants. Further, with respect to technology enabled businesses, consumers have emphasized their desire for the platform to have more features such as the ability to split one payment on two separate accounts. If PSPs can team up with these tech companies, it may be able to develop features that can help other businesses in the future and promote lasting success. Lastly, informal financial services, as well as "mobile-connected credit products" can greatly benefit from the uptake of mobile money.[68] This has been done in Kenya, where they have linked mobile payments to lines of credit to create a credit score for the consumer, which will enable them to access loans. [69] Thus, focusing on economic pain points, and tailoring features and products to the needs of merchants are all key components to driving merchant adoption of mobile money.

Agents also face challenges, as they feel their interests are not aligned with Payment Service Providers (PSPs). They feel that PSPs are not eager to gain feedback on how to improve

[67] Ibid.pp.20.
[68] Ibid.pp.26.
[69] Ibid.pp.27.

the system. An alignment amongst PSPs and agents is strongly needed. Agents are requesting changes such as the ability to have a "desktop version of the application," and create a focus on "smaller exchange companies."[70] A degree of innovation is evident amongst agents to create a system that works better for them in the absence of user reform. Some agents are even completing the tasks that consumers should be able to access and complete from their own devices. These efforts show the lack of trust in the system, as well as financial illiteracy and the need to build awareness and communication between different actors within the system. As an example, agents will pay the bills of their consumers via their own mobile wallets, while the customer will pay the agent in cash. Similarly, although the Jordanian Ministry of Justice mandated mobile payment for court payments, rather than registering for their own mobile wallet, people are simply paying agents in cash who then complete the transfer on their behalf. This is an important example, as it shows that mandating the usage of the technology is not enough to increase uptake.[71] It would also be helpful if people became more aware of how the services could benefit them and increase their financial literacy.

x. Mobile Money and Individual Debt

As mentioned in the previous section, mobile money can be linked to lines of credit, in order to facilitate access to loans, which has been done in Kenya. However, this has not been achieved without negative side effects. In Kenya, apps now offer loans similar to payday loans under a market that is highly unregulated with no control over interest rates. It has been found that 1 in 10 adults in Kenya "have defaulted on a digital loan."[72]For others, they are forced into a

[70] Ibid.pp.19.
[71] Ibid.pp.21.
[72] Faux, Zeke. "From Micro-Credit to Major Debt." Bloomberg Businessweek. Feb 17. 2020.

cycle of debt and borrowing. The high levels of accumulating debt have proved life threatening to many in Kenya, who originally saw mobile money technology as means to provide them with financial security and bring about a better life. These negative consequences run contrary to the many tales describing all the benefits of mobile money. One of the original lending apps Tala created by Shivani Siroya, began this unfortunate trend. The app accessed "text messages, location data, contacts and call logs."[73] Without the necessary regulations in place, or any sort of consumer protection, debt collectors often make personal threats to consumers. In addition, in Kenya, given the easy access to loans, a sports gambling app became "the top place that borrowers spent their loans."[74] Yet, the app Tala, continued to give out loans with few limitations out of fear that regulation would hurt the company's growth. Currently, there are more than 50 loan apps in Kenya, which furthers the issue, since loans are now being paid off by loans from other apps, worsening the cycle of debt. Rather than promoting financial inclusion, these lending apps have rendered many financially destitute. It is essential that Jordan takes this case into consideration and sets up a regulatory environment for lines of credit and mobile lenders pre-emptively.

xi. Gambling in Jordan and the Criminalization of Debt

Since gambling is the primary area where Kenyans have spent their borrowed money it is necessary to explore the gambling and financial environment in Jordan. As Jordan is a majority Muslim country, there are certain Islamic principles that must be considered in terms of how gambling works in Jordan. Under the religious doctrines of the Islamic religion gambling is prohibited. This is evident in verses of the Quran and Hadith, sayings of the Prophet. Many of

[73] Zeke."Micro-Credit to Major Debt."
[74] Ibid.

the verses depict gambling as a sin, or as "haram." In Surah Al Baqarah, God states "They ask you about wine and gambling. Say, 'in both there is great sin and some benefits for people. And their sin is greater than their benefit."[75] Thus, it is concluded from the readings of the Quran and Hadith that gambling is haram or forbidden under Muslim law. Following suit, Chapter 3 of the Jordanian Penal Code, Article 393 to 396 deems gambling an illegal act, that faces punishment of imprisonment or a fine.[76] However, despite the fact that gambling is illegal in Jordan, there is said to be "no strict control over gambling websites."[77] Specifically, with a simple web search, a multitude of online casinos, and gambling sites are available to Jordanian players. This is so because the government in Jordan "does nothing to block offshore casino sites from servicing the country. As you play at an online casino that is legally licensed outside of Jordan the operator will happily accept Jordanian players." [78]Hence, Jordanians still have access to these sites, which may enable a similar phenomenon to take place in Jordan, as it did in Kenya, where gambling apps became one of the top places for borrowed money. Due to the lack of regulation over online gambling, there is concern that mobile money could cause an increase in debt. There also needs to be protection in place for these apps as well as lending apps in general, like those created by Shivani Siroya. Even if gambling could possibly be less of concern in Jordan, there are other outlets to spend borrowed money, including online apps that could cause Jordanians to quickly fall into debt with the presence of lending apps.

[75] Abu Bakr, Muhammad. "Prohibition of Gambling." Blossom. last modified Apr 6 2018.
[76] The Penal Code for the Year 1960, Public Law Chapter 3 of Gambling. The Hashemite Kingdom of Jordan (1960).
[77] "Online Gambling Sites in Jordan." GamingZion. last modified May 2020. https://www.gamingzion.com/jordan/gambling/gambling-sites/.
[78] "Online Casino Websites in Jordan." Online Casino Websites. last modified Mar 2020. https://www.onlinecasinowebsites.com/jordan/.

In addition, it is important to mention that Jordan is one of the few countries globally that criminalizes debt. A recent article published in the New York Times explains how "nearly 2,000 people, about 12 percent of Jordan's prison population, are locked up for nonpayment of loans, according to a national report supported by the United Nations Office on Drugs and Crime."[79] This has become a large problem in Jordan, as more women and mothers have begun to take on microloans. Nearly "70% of micro loan borrowers in Jordan are women."[80] The microloan industry in Jordan often offers high risk loans, through easy credit and high interest rates, penalties, and "the threat of jail if the loans are not repaid."[81] This has become such a problem in Jordan, that King Abduallah of Jordan himself "personally repaid the debts of 1,500 women, and his appeal raised nearly $10 million to cover the debts of 6,481."[82]The debtors can face up to 90 days in prison, and further jail time if the debt goes unpaid within the following year. According to experts, although criminalizing debtors "violates the International Covenant on Civil and Political Rights, it still occurs in countries such as Saudi Arabia, Egypt, Yemen, and the state of Mississippi."[83] A part of this issue of debt so prevalent amongst women in Jordan stems from their lack of financial literacy. Which reiterates the importance of financial literacy education within mobile money campaigns, to ensure a vulnerable population is not being taken advantage of, as in the case of these microfinance loans. In addition, these microfinance companies must face more regulations. Another way to avoid the issue of debt and imprisonment, could be to strictly focus on specialized loans or pay as you go loans, explained in the next section, rather than traditional highly leveraged microfinance loans. Overall, the criminalization of debt is an

[79] Sweis, F. Rana. "A $423 Helping Hand that could Land a Mother of 7 in Handcuffs." New York Times. Apr 9, 2020.
[80] Sweis. "Helping Hand lands Mother in Handcuffs."
[81] Ibid.
[82] Ibid.
[83] Ibid.

important factor to consider when discussing the impact that mobile money will have on increasing the debt of a population.

xii. Applications of Mobile Money Including Ways to Mitigate Debt

Taking into consideration the massive amounts of debt mobile money has the potential to incur, along with the criminalization in Jordan, specialized loans like pay as you go loans, could be more advantageous for the lower income population. In addition, as mentioned previously, it is essential that consumers learn and use the fintech on their own without agents making transactions for them. This, with financial literacy, is a key part of mitigating debt and ensuring users understand the service. The continued use of an agent, or intermediary actor "reduces the reliability and frequency of paying with a mobile wallet, which in turn leads to slower repayment and higher default rates."[84] Innovative solutions around this dilemma have developed amongst companies in Africa where mobile money is more mature, like PEG Africa. To combine both non-traditional loans and to try to encourage active self-payment in order to increase repayment rates PEG Africa in Ghana piloted two different methods. The first payment method is known as pay over the phone (POP). Since "customer-centric research indicated that people were used to passive payments that involved human interactions," the company decided that in order to make users feel more comfortable they should include human interaction within the payment method.[85]Users were already calling agents to ask questions, so it became sensible to allow consumers to make payments over the phone. In order to complete the payment, the consumer calls PEG to "indicate" they want to make a payment, PEG will then "initiate the 'pull' transaction, and the

[84] Waldron, Daniel and Michiel Wolvers. "Can User-Friendly Payment Methods Improve Repayment Rates?" CGAP. World Bank Group. 2017.
[85] Waldron and Wolvers. "Can User-Friendly Payment Methods Improve Repayment Rates?"

consumer approves using a PIN."[86] The other method of payment PEG Africa implemented included STAR payments. In this case PEG developed a generic USSD, that consumers could save as a number in their phone. When they want to make a payment, they simply call the USSD number saved on their phone and enter their PIN number and the amount they would like to pay. As a result of these pilots, it is shown that "users paid 13 percent more often and 23 percent more per payment than a control group."[87] In 2017 PEG was able to implement both payment options in Ghana, where 79% of all "own wallet payments," are now paid through these methods.[88] Thus, these new innovative developments have proven successful so far.

Another method that has seemed successful in both driving uptake of mobile money and financial inclusion is Pay-As-You-Go (PAYG) solar businesses employed by companies like M-KOPA and PEG Africa. This system works by allowing customers to purchase and pay for "products in small increments." In the case of M-KOPA and PEG Africa the products are solar based, but in general the PAYG system can function for any service.[89] Most of the customers that PEG Africa serves make around "US $5- to US$10 a day."[90] The customer will make a deposit ranging from "US$30 to US$35, and they will pay the remaining balance of the loan over a period of about 12 months using mobile money," until they have full ownership of the product.[91] These loans are notable, because rather than going into debt if the customer can no longer make the payments, they will "return the asset to the provider." [92] In addition, a hallmark feature of

86 Ibid.
87 Ibid.
88 Ibid.
89 "Pay-as-You-Go Solar as a Driver of Financial Inclusion." USAID Global Development Lab: Center For Digital Development. 2017.pp.1.
90 Ola, Danielle. "PV Talk: PEG Africa on the Evolution of Pay-as-You-Go Solar." PVTech. last modified Mar 31, 2017.
91 Danielle. "The Evolution of Pay-as-You-Go Solar."last modified Mar 31, 2017.
92 Irkliewskij, Mikel and Alexander Raia. "Pay-as-You-Go and the Internet of Things: Driving a New Wave of Financial Inclusion in the Developing World." Mastercard. May 2018. pp.5.

many of the PAYG models includes the ability of the provider to "unlock or lock the asset based on the customer's payment history." [93] This technology referred to as IoT can also be beneficial as it can monitor the "functionality and health of the asset, and collect data to increase market intelligence on product and service offerings."[94]This is beneficial in creating financial literacy campaigns surrounding the technology, and learning how to better serve the mobile money user. All of those methods specified above will support the sustainability and consumer friendliness of the technology.

PEG Africa initiated their PAYG method as they saw it valuable to households that rely on kerosene lighting and are not served by any electrical grid. These solar products are a safer way to gain access to electricity. The system works in a positive reinforcing cycle, since the PAYG systems are conducted through mobile money payments, the system works to both increase uptake of mobile money and provide customers with essential services. Providing electrical services serves as an incentive to use mobile money services. However, the services offered through PAYG systems can go beyond solar products. Specifically, PEG Africa offers free hospitalization insurance for any customer that pays online. PEG Africa realized that one of the main reasons customers were not paying on time had to do with "health issues." These unexpected issues could result in the inability to pay for months.[95] The company took note of this problem and decided to partner with BIMA, who created specific insurance plans for each customer.[96] Offering services such as health insurance can serve as another driver or incentive increases customers' uptake of mobile money. These benefits offered through PAYG services can extend into providing services like "clean water, telecommunications, agriculture,

93 Irkliewskij and Raia. "Pay-as-You-Go and the Internet of Things." pp.5.
94 Ibid.pp.25.
95 Danielle. "The Evolution of Pay-as-You-Go Solar."last modified Mar 31, 2017.
96 Ola. "PEG Africa on the Evolution of Pay-as-You-Go Solar." 2017.

cookstoves and gas, sanitation, education, and retail."[97]However, it is still essential the mobile money platforms are accessible to these "off grid customers," and easy to use. The accessibility, and incentivization will go hand in hand in increasing uptake. Furthermore, the company offering these services must be in tune to regional specific issues. [98]

The services and systems offered by PEG Africa are valuable, but for these methods to work in Jordan they must be tailored to the regional climate. For example, the refugee crisis in Jordan brings about certain issues and considerations. Offering clean water, and sanitation services to those who complete their payments via mobile money, might be valuable to refugee camps, and the country in general. To enact all of these services, and further increase the uptake of mobile mobile however, as mentioned previously it is essential that the mobile money services are tailored to the customers, and easy to use. After the previously discussed issues are solved it is essential that "partnerships are established to provide new products, and reach new markets, in order to reach new areas."[99] In areas that are geographically remote, it can be suggested to partner and work with merchants that have "trusted parties in these communities because they supply families with food and essentials."[100] PAYG companies should also look to create partnerships with the private and public sectors. The public sector is a key factor in shaping regulations around financial inclusion and creating incentives. Partners in the private sector are needed for investment and building a service of high quality.[101] The partnership between private and public sectors has been successful in USAID's Power Africa Initiative, where the sectors have come together in order to support "market developments" among refugee populations.[102]

[97] Irkliewskij and Raia. "Pay-as-You-Go and the Internet of Things." pp.4.
[98] Ibid. pp.14-22.
[99] Ibid.pp.4.
[100] Ibid.pp.24.
[101] Ibid.pp.25.
[102] Ibid.pp.25.

The actors involved in this coalition include NGOS, government actors, PAYG companies, all work together to help serve and develop services that would work effectively for the East African refugee population. This is a model that Jordan may be able to follow, as they seek to develop and expand the mobile money market among refugee populations in the country.

xiii. Financial Inclusion in the Face of Crisis:

Given the recent global spread of the coronavirus, this section analyzes the resilience and role of mobile money during a health crisis. The study of the Ebola outbreak provides insight into this as many of the countries infected with Ebola had developed mobile money systems. During the outbreak of Ebola in Liberia from 2014 to 2016, the Liberian government struggled to complete payments to healthcare and other essential workers. Many of the staffers who were working on the front lines to combat the disease, were in remote hard to reach areas, with "limited access to banks."[103] Due to this situation, the government had to transfer cash around the country. Which was a difficult task due to the country's poor infrastructure and the presence of the contagious disease. This resulted in delays in payment to health care workers, and negatively affected emergency response. Learning from this crisis, mobile money platforms worked with the Ministry of Health in Liberia in order to process the "payments to health workers through mobile money."[104] Other countries began to follow suit, and it is estimated that in Sierra Leone, payments made through mobile money saved 2,000 lives. Following these examples, it seems imperative that during the time of a global pandemic COVD-19, Jordan seeks to use their mobile money platforms to aid in stopping the spread of the disease and ensuring the

[103]Kourgialis, Jonathan. "Learning from Ebola: How Mobile Money can Prevent Health Crises." Center for Financial Inclusion. 2018.
[104]Kourgialis."Learning from Ebola." 2018.

payments of their health care workers in remote areas. It could be helpful for governments to prepare themselves by creating a committee for mobile money payment emergencies, that can oversee the transactions in the time of a crisis.[105]

It is evident that the coronavirus pandemic is creating a situation that is encouraging the development of incentives for the use of mobile money as a public health tool. Following the outbreak of coronavirus, the World Health Organization has suggested the use of "contactless payments," instead of banknotes, which may be spreading the coronavirus.[106] Banknotes can carry bacteria and viruses. Due to this, countries in Africa that have been using fintech to deter the spread of the virus. For example, "governments and startups are implementing measures to shift a greater volume of payment transactions toward mobile money."[107] Thus, mobile money as described in the example above during Ebola, can be used as a public health tool. Recently, Safaricom enacted a fee waiver on M-Pesa transfers, to help increase use during the pandemic. It has been announced that "all person-to-person (P2P) transactions under 1,000 Kenyan Schillings (≈ $10) would be free for three months."[108]Ghana, has initiated a similar policy calling for mobile money providers to waive fees on small transactions as well. In addition, Ghana allowed for easing of "Know Your Customer" requirements in order to "allow citizens to use existing mobile phone registrations to open accounts with the major digital payment providers."[109] Many other countries like Kenya, have begun to use mobile money as means of fighting off the virus. Some stores are even refusing to accept cash payments. The CEO of Paga, the leading mobile

[105]Ibid.
[106]Gardner, Bill. "Dirty Banknotes may be Spreading the Coronavirus WHO Suggests." *The Telegraph*. last modified Mar 2, 2020.
[107] Bright, Jake. "Africa Turns to Mobile Payments as a Tool to Curb COVID-19." TechCrunch. last modified Mar 25, 2020.
[108] Bright. "Africa Turns to Mobile Payments." 2020.
[109] Ibid.

money business in Nigeria, has allowed merchants "to accept payments from Paga customers for free."[110]This can help aid the uptake of mobile money across the continent, and encourage the long-term use of digital payments.

Specifically, in Jordan, the Central Bank of Jordan has issued a "COVID-19 Response Challenge Fund: Mobile Money for Resilience (MM4R)."[111] The CBJ created this fund in light of COVID-19, and the role traditional paper money potentially has in spreading the disease. As a result, the challenge fund establishes a set of initiatives that will help overcome issues surrounding the development of mobile money in Jordan. The obstacles the fund intends on addressing include: "challenges to the uptake and usage of digital financial services (DFS), financial inclusion of Jordanians and refugees, and the efficiency and effectiveness of cash transfer programs (CTPS)."[112] Thus the goal of the fund will be to help encourage the uptake of mobile money helping mPSPs to "increase merchant acceptance of mobile payments."[113] The initiatives enacted in response to COVID-19, thus may act as a catalyst to mobile money adoption, and motivate the use of the technology. In accordance with the fund the CBJ has asserted that mobile money is the main form of payment for salaries in the private sector and transfers for the unbanked population. The fund seeks to increase the number of mPSPs and merchants in order to reach the needed capacity to handle all of the digital payments. To attract the merchants, this fund created by the CBJ provides financial incentives that mPSPs can apply to receive. On the side of mPSPs, this includes a "Merchant Discount Rate (MDR): paid on behalf of the merchants for 60 days starting from the go-live date. In addition, a financial

[110] Ibid.
[111] "Mobile Money for Resilience (MM4R) (COVID-19 Response Challenge Fund). Central Bank of Jordan. 2020. http://www.cbj.gov.jo/EchoBusv3.0/SystemAssets/Ticker%20News/ COVID-19%20Response%20Challenge%20Fund.pdf. pp.1.
[112]"Mobile Money for Resilience (MM4R).pp.1.
[113] Ibid.pp.1.

incentive of (.25) JD per transaction: paid per transaction for 60 days starting from the go-live date, and a TV spot worth 10,000 JD on a main public channel to advertise the solution."[114] On the merchant side, there is also a "financial incentive of .25 JD per transaction, paid for every transaction for 60 days starting from the go-live date."[115] The CBJ will select certain mPSPs to be eligible for the fund based on compliance and a set criterion. All licensed mPSPs are eligible to apply. The project also outlines their expectations of the awarded mPSPs, ("a minimum of two or more") stating that 60 days after the go-live date must have succeeded in having "15 merchants accepting mobile payments, 4 covered governorates, 2 merchant category accepting digital payments, and a minimum of 5,000 transactions."[116] However, there is no consequence if mPSPs fail to achieve these desired outcomes. These incentives ideally will spark an increase in the uptake of mobile money and place more pressure on the government to focus their attention on the technology. Although it has yet to be seen how effective these incentives will be in practice, they have the potential to serve as a catalyst for mobile money adoption in the country.

IV. CONCLUSION

In conclusion, given the study of literature provided in this paper, Jordan needs to make a number of adjustments and changes in order to ensure a successful widespread adoption of mobile money. These improvements include changes to required documentation; targeted marketing and financial literacy campaigns; alterations to the fee structure; regulation over money laundering and terrorism; as well as technological updates and improvements to user friendliness; on the sides of consumers, merchants and agents. These alterations require the

[114] Ibid.pp.2.
[115] Ibid.pp.2.
[116] Ibid.pp.2.

coordination of all actors involved, and the overall integration of mobile money into the financial ecosystem. While the literature discussed acknowledges the role of mobile money in increasing financial inclusion, it warns the potential destructive role of the technology. Thus, the implementation of mobile money cannot occur without significant consideration to how it will impact debt within the economy. Additionally, there is the need for future studies to address Jordan's transition from transaction-based fees to a platform-based business model specific to Jordan. This would also include determining the ideal fee structure or model for the most optimal uptake and increase of financial inclusion in Jordan. Lastly, the recent developments of COVID-19 provide a new avenue of future study in analyzing the type of impact pandemics will have on the adoption of mobile money. Future research may focus on the long-term effects of the health crisis on the existing adjustments made to the fee structure, specifically, whether these lower fees will remain or return to higher rates at the end of the pandemic, and whether health related fears are significant enough to drive the uptake of mobile money.

Bibliography

“10 Facts about the Syrian Refugee Crisis.” World Food Programme USA. Nov 14 2019. https://www.wfpusa.org/articles/10-facts-about-the-syrian-refugee-crisis-in-jordan/

"10 Ways to Accelerate Mobile Money: USAID-Citi Mobile Money Accelerator Alliance.” Citibank. https://www.citibank.com/icg/sa/digital_symposium/docs/mobile_10ways.pdf.

“Country Reports- Displaced and Disconnected.” UNHCR in partnership with GSMA. 2019. https://www.unhcr.org/innovation/wp-content/uploads/2019/04/Country-Reports-WEB.pdf.

"Financial Inclusion." The World Bank Group. 2018. https://www.worldbank.org/en/topic/financialinclusion/overview.

“Financial Literacy as a Means to Financial Inclusion.” Bank of Indonesia. 2011. https://www.oecd.org/daf/fin/financial-education/48303716.pdf.

“Mobile Money for Resilience (MM4R) (COVID-19 Response Challenge Fund). Central Bank of Jordan. 2020. http://www.cbj.gov.jo/EchoBusv3.0/SystemAssets/Ticker%20News/COVID-19%20Response%20Challenge%20Fund.pdf.

“Mobile Money Transaction Fees and Utility Bill Payments in Emerging Markets.” GSMA. Jan 18 2019. https://www.gsma.com/mobilefordevelopment/programme /m4dutilities/mobile-money-transaction-fees-and-utility-bill-payments-in-emerging-markets/

“Mobile Money for the Unbanked: Mobile Money Definitions.” GSMA. July 2010. https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2012/06/mobilemoneydefinitionsnomarks56.pdf.

"Online Casino Websites in Jordan." *Online Casino Websites.* last modified Mar 2020. https://www.onlinecasinowebsites.com/jordan/.

"Online Gambling Sites in Jordan." *GamingZion.* last modified May 2020. https://www.gamingzion.com/jordan/gambling/gambling-sites/.

“Operational Update: Jordan.” UNHCR: The UN Refugee Agency. March 2020. https://data2.unhcr.org/en/documents/download/75581.

"Pay-as-You-Go Solar as a Driver of Financial Inclusion." USAID Global Development Lab: Center For Digital Development. 2017. https://www.usaid.gov/sites/default/files/documents/15396/USAID-PAYGO.pdf

The Penal Code for the Year 1960, Public Law Chapter 3 of Gambling. The Hashemite Kingdom of Jordan (1960).

Abu Bakr, Muhammad. "Prohibition of Gambling." *Blossom*. last modified Apr 6 2018. https://blossomfinance.com/press/prohibition-of-gambling-6-of-28

Barkawi, Ben, Sasha Muench, and Max Nichols. "Making Mobile Money Work for all: A Review of the Jordan Mobile Payment System." Mastercard Center for Inclusive Growth. 2019.

Boakye-Adjei, Nana Yaa. Leon Isaacs, and Gemma Robson. "Paving the Way for Digital Financial Services in Jordan." CGAP, DMA Global and GIZ. Working Paper. 2017. https://www.cgap.org/sites/default/files/Working-Paper-Paving-the-Way-for-Digital-Financial-Services-in-Jordan-Jun-2017.pdf.

Boletawa, Eliki. "Financial Literacy: An Important Tool for Financial Inclusion." *Alliance for Financial Inclusion (Global)*.last modified Jan 23 2015.

Bright, Jake. "Africa Turns to Mobile Payments as a Tool to Curb COVID-19." *TechCrunch.* last modified Mar 25, 2020. https://techcrunch.com/2020/03/25/african-turns-to-mobile-payments-as-a-tool-to- curb-covid-19/

Chehade, Nadine. Peter McConaghy, and Martin Meier Chrissy. "Humanitarian Cash Transfers and Financial Inclusion: Lessons from Jordan and Lebanon." 2020. Working Paper. Washington, D.C.: CGAP and World Bank Group.

Cook, William, Kyle Holloway, and Rebecca Rouse. "How Do Mobile Money Fee Structure Impact the Poor." CGAP. May 15 2017. https://www.cgap.org/blog/how-do-mobile-money-fee-structures-impact-poor.

Faux, Zeke. "From Micro-Credit to Major Debt." *Bloomberg Businessweek.* Feb 17. 2020.

Gardner, Bill. "Dirty Banknotes may be Spreading the Coronavirus WHO Suggests." *The Telegraph.* last modified Mar 2, 2020 .https://www.telegraph.co.uk/news/2020/03/02/exclusive-dirty-banknotes-may-spreading-coronavirus-world-health/.

Gueguen, Chole, Sabal Majali, and Ahmed Tamimi. “Dinarak Jordan: How Mobile Money can Empower Female Agents and Clients.” *SeepNetwork*. 2019.

Hwang Hwa, Byoung. "Jordan: Reaching Refugees with Mobile Money in Jordan- Experiences from the Field." *Microfinance-Mena*. last modified May 29 2019. http://microfinance-mena.org/news/reaching-refugees-mobile-money-jordan-experiences-field/

Irkliewskij, Mikel and Alexander Raia. “Pay-as-You-Go and The Internet of Things: Driving a New Wave of Financial Inclusion in the Developing World.” Mastercard. May 2018. https://newsroom.mastercard.com/wp-content/uploads/2018/05/180652_MC_PAYG_Whitepp_9.pdf.

Khraim, Hamza, Y.E. Shoubaki, and A.S. Khraim. "Factors Affecting Jordanian Consumers' Adoption of Mobile Banking Services." *International Journal of Business and Social Science.* Vol. 2. 2011.

Kourgialis, Jonathan. “Learning from Ebola: How Mobile Money can Prevent Health Crises.” *Center for Financial Inclusion.* 2018. https://www.centerforfinancialinclusion.org/learning -from-ebola-how-mobile-money-can- prevent-health-crises.

Ola, Danielle. "PV Talk: PEG Africa on the Evolution of Pay-as-You-Go Solar." *PVTech.* last modified Mar 31, 2017. https://www.pv-tech.org/interviews/pv-talk-peg-africa-on-the-evolution-of-pay-as-you-go-solar.

Rouse, Margaret. "USSD (Unstructured Supplementary Service Data)." *SearchNetworking*.last modified Mar 2020. https://searchnetworking.techtarget.com/definition/USSD.

Scharwatt, Claire and Anant Nautiyal. “The Long Road to Interoperability in Jordan: Lessons for the Wider Industry” GSMA. 2016.

Solin, Marina and Andrew Zerzan. “Mobile Money: Methodology for Assessing Money Laundering and Terrorist Financing Risks.” GSMA. 2010. https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2012/03/amlfinal35.pdf.

Sweis, F. Rana. "A $423 Helping Hand that could Land a Mother of 7 in Handcuffs." *New York Times.* Apr 9, 2020.

Waldron, Daniel and Michiel Wolvers. “Can User-Friendly Payment Methods Improve Repayment Rates?” *CGAP*. World Bank Group. 2017.

https://www.cgap.org/blog/can-user-friendly-payment-methods-improve-repayment-rates.