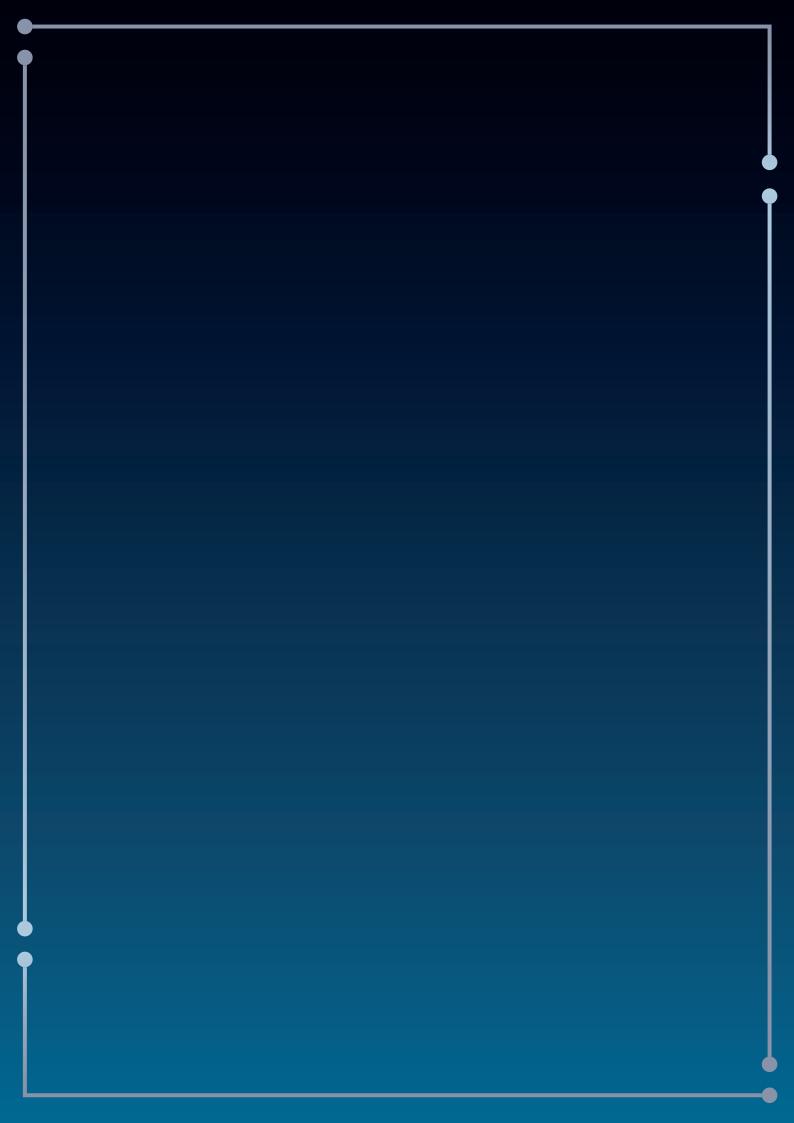
LOCKDOWN BUT NOT SHUTDOWN

THE IMPACT OF THE COVID-19 PANDEMIC ON FINANCIAL SERVICES IN JORDAN





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Foreword

by H.E Dr. Ziad Fariz - Chairman of the Board of Directors of JoPACC



Jordan's infrastructure has been developing and evolving over the years to better cater for the needs of the financial sector and the Jordanian economy. That being said, past crises that we dealt with have been largely socio-economic in nature. This allowed the Central Bank better control in mitigating the source of the impact. However, COVID-19 is primarily a health crisis that had economic implications. Furthermore, it was indiscriminatory of social, cultural, economic, or geographical considerations. Unlike our past experiences, the scale that we were encountering was a fully national scale. That complicated things, as the Central Bank could not mitigate the source of the crisis, but only its effects. Therefore, this represented a significant challenge that certainly required employing past experiences. However, it also necessitated problem solving and innovative problem thinking that took into consideration the entirety of Jordan's economy.

Naturally, we are experiencing unavoidable negative economic consequences of the COVID-19 pandemic which will spill into the short, medium, and long terms. A rise in unemployment, and subsequent decrease in consumption will exert significant pressures on Jordan's business environment. The services sector, which accounts for over **60**^{-/.} of Jordan's GDP, suffered substantially. The aforementioned is expected to increase uncertainty with regard to investments. That being said, we are witnessing a drastic change across business environments, which will result in higher demand for digital services, products, and operations. This could definitely be a positive outcome for Jordan's growing technology sector. This is evident through the increase in demand on Digital Financial Services, and the increase in digital financial inclusion that we witnessed as the crisis unfolded. The unprecedented interest in Jordan's tech sectors, such as fintech, agritech, lendtech, and medtech, highlights a positive prospect that is ahead of us. Instead of purely focusing on crisis management, we should strive to embrace the opportunity of supporting those sectors, which will ultimately support the economy in its recovery.

The length of time we need to recover will greatly depend on our commitment to enable and protect our vital sectors. The decisions we make now will be the determinant factor between a long and a short recovery, and the Central Bank has had its eye on the latter since the beginning of the crisis. The pandemic has taught us many things, both as governmental bodies as well as private sector entities. For one, during the move to adopt digital services it is important to ensure process innovation complements the shift. This is important so as not to transport the inefficiencies of previous processes to the digital space. Both public and private entities need to build up capacity for rapid, comprehensive responses to crises. Combined with transparency and collaboration, effective crisis management holds the potential to amplify any measures taken.

COVID-19 has redirected us towards the path of economic self-reliance. Our vital sectors, such as the agricultural, industrial, pharmaceutical, and IT sectors, are the lifelines of our society. It has become ever so important to ensure that these sectors are afforded sufficient resources when needed, so that they can similarly support us during our time of need. An enabling environment for innovation in the private sector is more vital than ever. Governments cannot, and should not, carry the full weight of the impact arising from such global adversities, which necessitates a strong, resilient private sector. Therefore, moving forward, response measures should not only aim for short-term relief. Instead, we need to shift our focus towards long-term sustainability of our economic environment to strengthen our capabilities in facing future adverse circumstances.

Central Banks and financial regulators around the world endeavoured to introduce policies and measures that will soften the blow of the COVID-19 crisis on local, regional, and international economies.

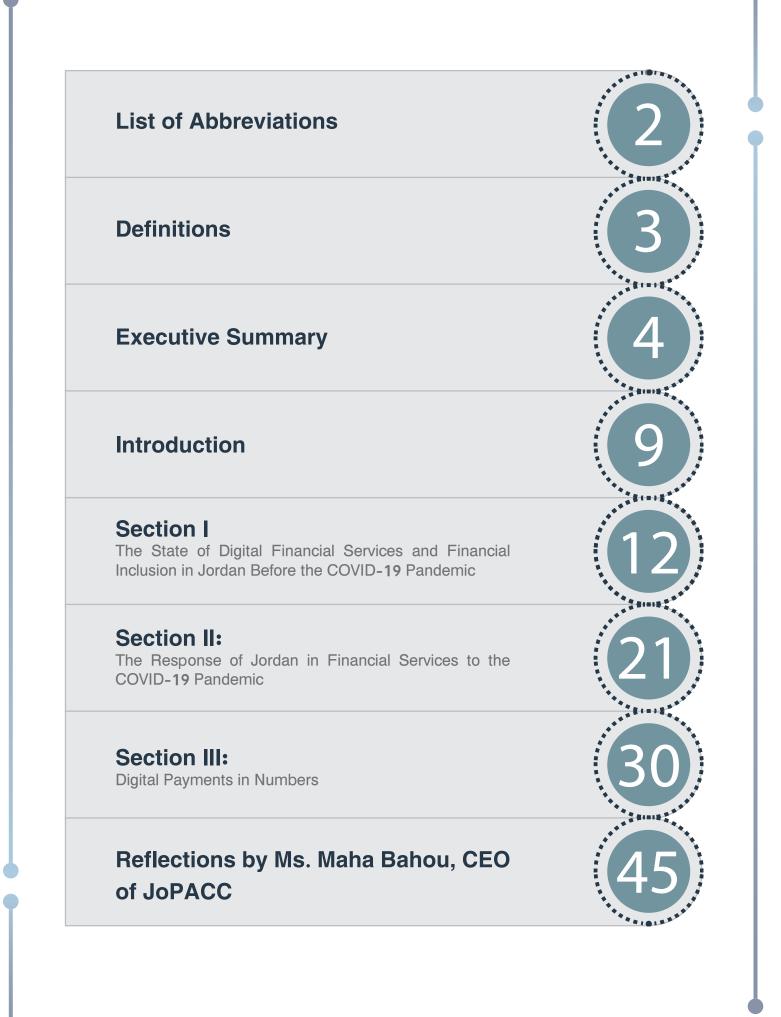
Regulators working in different jurisdictions should develop the capacity to recognize any lag in innovation under their supervision. This capacity can assist regulators in identifying any legal or regulatory roadblocks that are hampering the pace of the development of the financial sector. Such capabilities on the part of the regulator will result in proactive measures that propagate economic growth. Furthermore, Central Banks can take on a leading role in the introduction of innovative solutions that will stimulate the market's uptake and usage of financial services. In addition to these market interventions, Central Banks can use the effective tools of monetary policies to maintain sufficient liquidity and supply of money in the market during periods of extreme market pressure. Given that such policies lie at the heart of central banks' mandates of safeguarding the economy and ensuring its growth, regulators should not hesitate to utilize these tools in protection of the economy. In Jordan, we have committed from the onset of the crisis to stabilize the economy. The Central Bank of Jordan has responded to the crisis in its earliest stages by introducing measures to ease the financial and economic burden on institutions and individuals and providing access to credit facilities to ensure the sustainability of affected businesses. It has further facilitated the remote onboarding to digital financial services to expand the reach of aid programs to wider society segments. We remain dedicated to exercising all tools in our disposal to ensure the sustainable health and wellbeing of the Jordanian economy and its people.

In Jordan, the financial infrastructure had been witnessing noteworthy development for the past decade. Such developments had been positioning Jordan as a leader in advancing the financial infrastructure even before the onset of the COVID-19 pandemic. What happened during the pandemic however, is that this infrastructure was put to the test. This report investigates and assesses the Jordanian financial sector before the onset of the crisis, and its response to it. Through analyzing the performance of different payment systems, it also provides us with an opportunity to understand the impact this crisis had on consumer behaviour and preferences, and examine the capacity of our existing infrastructure. In and of itself, this report is a reference to the various efforts which were undertaken during the crisis, and the way in which they were received by the private sector. Overall, I am very proud of the performance of our infrastructure in meeting the increased demand exerted on it during this critical period. Naturally, we encountered some issues, which have only empowered us to further improve the available infrastructure. Our ecosystem was enriched by the impressive degree of collaboration which we witnessed. The limitations imposed on movement were substituted with a substantial growth in collaboration between the various sub-sectors of the financial sector to offer more streamlined, integrated, and interoperable services to various beneficiaries. We hope this collaboration becomes a stable feature of our financial sector, and are looking forward to more effective partnerships amongst the different areas of our economy.

Looking ahead, we continue to align the aspirations we have held for Jordan's future with the current situation, especially given that the COVID-19 has accelerated us along this path of digitalization and development. Measures taken today for long-term impact should remain in harmony with where we have envisioned ourselves to be, and we should incorporate the current situation in our methodology towards the prosperous, stable financial sector we work towards. Therefore, the measures I perceive to be of importance are those we have set out and worked towards in the past few decades. These include measures aiming to increase financial inclusion, decrease inequalities in access to and usage of financial services, and higher financial literacy across the population. Furthermore, the financial sector should have an enabling regulatory environment through which they can proceed on their journey of digitalization. While the journey has been affected by the COVID-19 pandemic, our goals remain the same. Jordan's financial sector has long been lauded for its resilience and stability. Thus, these features present a pedestal on which we can face the difficulties that come in the way of our goals. Jordan's young and dynamic population, its promising innovative industries, and its sound leadership will form the foundations of our recovery and our journey towards economic and social sustainability. My past experiences in facing various economic and political crises instils in me an unwavering confidence in our ability to come out of this stronger than before driven by our affinity for cooperation and collaboration, and our commitment towards a better Jordan.

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Abbreviations

- ACC Agricultural Credit Corporation
- ACH -Automated Clearing House
- AFI Alliance for Financial Inclusion
- AWEF Arab Women Enterprise Fund
- BIS Bank for International Settlements
- **B-money** Bank Money
- CBJ Central Bank of Jordan
- CBO Community Based Organization
- COVID-19 Coronavirus Disease 2019
- DFS Digital Financial Services
- ECC Electronic Cheque Clearing System
- eKYC Electronic Know Your Customer
- E-money Electronic Money
- **FI** Financial Institution
- Findex Global Financial Inclusion Database
- FinTech Financial Technology
- FSP Financial Service Provider
- GIZ German Development Cooperation
- ILO International Labor Organization
- IMF International Monetary Fund
- I-money Investment Money
- JoMoPay Jordan Mobile Payments Switch
- JoPACC Jordan Payments and Clearing Company
- MENA Middle East and North Africa
- MEPS Middle East Payment Services
- MFI Microfinance Institution

- MM4R Mobile Money for Resilience
- mPSP Mobile Payment Service Provider
- **MSME** Micro, Small, and Medium Enterprises
- NAF National Aid Fund
- NFIS National Financial Inclusion Strategy
- NGO Non-Governmental Organization
- NI Network International
- NPC National Payments Council
- PSP Payment Service Provider
- **QR** Quick Response
- RTGS Real Time Gross Settlement System
- SIM Subscriber identity module
- SSC Social Security Corporation
- SEP Social Enterprise Project
- SME Small and Medium Enterprises
- UNHCR United Nations High Commissioner for Refugees
- UNRWA United Nations Relief and Works Agency
- USAID United States Agency for International Development
- WFP World Food Programme

Definitions

- **Agent:** A registered party assigned by the payment service provider to provide some or all of the services that they are authorized to do through tools or systems provided by the PSP.
- **Digital economy:** An economy that is based on digital transactions and economic transactions that occur over the internet and digital channels.
- **Digital experiments:** Interventions in the current business, technical, awareness, or communication strategies governing digital financial services.
- **Digital Financial Services:** Financial services which can be accessed and delivered through digital channels.
- FinTech: Technology used to enable and support financial and banking services.
- **Digital ID:** A set of stored and captured attributes collected electronically that have the ability to uniquely identify an individual and dictate the type of transactions an individual can partake in.
- Digital Payments: Payments made over internet and mobile channels.
- **Digital signature:** Data that takes the form of letters, numbers, symbols, signs, etc., and is included in electronic form, with the aim of determining the identity and consent of the owner of the signature and their uniqueness and distinguishing them from others.
- **eKYC:** An electronic, remote, paperless form of the know your customer process which is used by institutions to gather information about their clients and verify their identity.
- Financial inclusion: The state wherein individuals and businesses have convenient access to and use affordable and suitable financial products and services – payments, savings, credit, transactions and insurance – that meet their needs, help to improve their lives, and delivered in a responsible and sustainable way.
- **Financial literacy:** The ability to adequately understand, manage, and use financial resources and services to ensure financial well-being.
- Interoperability: The ability of customers of different service providers to transact directly.
- **Mobile money:** Monetary values stored through electronic means that are the liability of the issuer in exchange for receiving their value in cash.
- Mobile money transfer: The movement of e-money from one mobile wallet to another.
- Mobile wallet: An account which can be accessed through mobile phones and holds e-money.
- **Open banking:** Financial institutions providing other financial institutions and third-party financial service providers access to certain elements of their customers' data through the use of application programming interfaces (APIs) to facilitate the provision of services to customers.
- **Theory of change:** A methodology used to describe and show long-term goals and the processes and actions needed to achieve these goals.
- Financial Market Infrastructure (as defined by the BIS): A multilateral system among participating institutions, including the operator of the system, used for the purposes of clearing, settling, or recording payments, securities, derivatives, or other financial transactions.
- **Payment System (as defined by the BIS):** A set of instruments, procedures, and rules for the transfer of funds between or among participants, where the system includes the Participants and the entity operating the arrangement.
- **Merchant Acquirers:** Financial institutions or banks that accept transactions to facilitate digital payments and provide merchants with the infrastructure and financial facilities to do so.

EXECUTIVE SUMMARY



In the years and months leading up to the COVID-19 crisis, Jordan's financial sector was well underway in tackling the low financial inclusion rates observed in the Kingdom. This effort, led by the Central Bank of Jordan, had an observable effect on the levels of financial inclusion, and the shape of the digital financial ecosystem in Jordan, both through the introduction of new market players occupying a novel capacity, and the increased involvement of different national and international stakeholders working towards the mission of extending financial services equally to all segments of society.

Several initiatives underscored Jordan's commitment towards financial inclusion, most notable of which is the Central Bank of Jordan's commitment to the Maya declaration at the **2016** Global Policy Forum hosted by the Alliance for Financial Inclusion. The Central Bank of Jordan's National Financial Inclusion Strategy for the years **2018-2020**, which was launched in **2017**, aimed towards increasing financial inclusion and reducing the gender gap in access to financial services. In addition, the Central Bank of Jordan introduced a comprehensive financial literacy program for Jordan's youth, and for empowering the digital financial, microfinance, and Small and Medium Enterprises financial inclusion in Jordan remain positive. The Central Bank, in partnership with the Bill and Melinda Gates Foundation, launched the Mobile Money for Resilience Facility, which represented a unique nationally-administered, international assistance program. The Central Bank also launched the FinTech regulatory sandbox, in an effort to drive innovation in the financial sector, and produce more adaptive regulations that do not compromise on the safety of the financial sector.

The Jordan Payments and Clearing Company, which was established in **2017** by the Central Bank along with the **24** Commercial Banks operating in the Kingdom, aims towards a comprehensive and innovative Digital Payments solutions benefitting all and contributing to the financial inclusion in the Kingdom. It does this through developing the digital payments infrastructure, as well as through ensuring sufficient knowledge dissemination in the market. As part of this effort, JoPACC released two reports, one on the Digital Transformation of Financial Institutions in Jordan, and another detailing the results of a Digital Experiment on the barriers to entry disproportionality affecting women.

Jordan's banking sector is regarded as an advanced sector both internationally and regionally. Its wider financial sector comprises over **185** financial institutions distributed between banking, payment service providers, merchant acquirers, microfinance institutions, exchange houses and other financial institutions. Its digital financial infrastructure is also seen as advanced in comparison to the region and the world. This includes a Real-Time Gross Settlement System, an Automated Clearing House, an Electronic Cheque Clearing System, a Mobile Payments Switch, an Electronic Bill Presentment and Payment System, an ATM switch, as well as an evolving digital payments ecosystem.

Following the outbreak of the COVID-19 pandemic, and in order to preserve the overall financial sector, the people of Jordan, and the progress made over the previous decade, the Central Bank, the Government, as well as the private sector have introduced a number of policies and measures. Eight measures focused on Payment Systems, six measures focused on the Banking Sector, and four measures were geared towards preserving liquidity and funding. The Central Bank of Jordan's financing programs that targeted SMEs have benefited over **4000** entities, ensuring the maintenance of salary and wage payments, operational expenses, purchased goods and working capital. Moreover, postponing loan installments, slashing ATM withdrawal fees, and offering a grace period for returned cheques are some of the measures that contributed greatly to reducing the burden of the pandemic's economic ramifications on individuals. Several national programs were launched to increase awareness in digital financial services and ensure lower economic shock across the Kingdom. CBJ's measures carry long-term benefits on individuals, businesses, and the

economy and have contributed to protecting the economy and its stakeholders and to supporting economic growth. The National Aid Fund, as well as the Social Security Corporation, introduced and substantially expanded on aid programs delivered through digital means.

Financial institutions observed stark variations in consumer behavior, where demand on digital channels increased. Furthermore, the crisis has put the weaknesses of the financial sector under the spotlight, where services which had lacked behind on digitalization, such as credit, were amongst the hardest hit. However, consumers who were brought into the umbrella of financial inclusion during the COVID-19 crisis reported experiencing difficulties in their usage of different services. To mitigate this, various institutions expanded their services and overall integration in the market, in an effort to break down the barriers coming in the way of meaningful access to financial services. The COVID-19 pandemic led Financial Institutions to prioritize digital capabilities' expansion over branch expansion and expedite the digital transformation process in the financial sector, while pushing more than ever for the acceptance and implementation of digital solutions such as eKYC that could have made the response to the crisis smoother. JoPACC played a very important role in ensuring the dissemination of financial education material during the crisis, through focusing on the main concerns and difficulties faced by clients, and has further launched a new payment system during the pandemic, enabling instant payment systems.

ECC Main Insights

The usage of the Electronic Cheque Clearing (ECC) system has generally decreased in **2020** compared to previous years, with the months of March and April displaying the lowest levels of usage. Additionally, the percentage of returned cheques increased significantly during the lockdown (March-May **2020**). These observations point to the impact of the pandemic on business transactions usually done through the Electronic Cheque Clearing system, and on the worsening financial situation of individuals and businesses as a result of the lockdown.

- ECC usage decreased in **2020** compared to previous years, and usage reached its lowest in the past two years in March and April of **2020**,
- The number and value of returned cheques as a percentage of the total number and value of cheques were unusually high in April and May of **2020**,
- These changes were attributed to phases of the lockdown in which:
 - » The difficulty of transacting with paper cheques was high
 - » Commercial activity in various economic sectors was halted, which reduced the number of high-value business transactions
 - » CBJ measures were enacted, which reduced the severity of the consequences faced by individuals and companies who issued returned cheques.

ACH Main Insights

The usage of the Automated Clearing House has generally increased in **2020** compared to previous years. The number of transactions increased during the lockdown, and decreased when the lockdown first ended. As for the value of transactions, during the lockdown lower value transactions were being made, but after the lockdown, transactions saw an increase in value. These changes were associated with the increase in salary payments through the system and the reduction in the value of other transactions.

- The usage of the ACH increased at a higher rate in 2020 when compared to previous years,
- The number of transactions on the ACH went through three stages:
 - » An increase during phases 1 and 2; likely due to the high restrictions on mobility
 - » A sharp decrease during phase 3 (June 2020); likely due to the easing of the lockdown and the increase in mobility

- » A sharp increase in July **2020**; likely due to the resumption of activity across most economic sectors in the kingdom and the shifting of a portion of June salaries to July as reported by some banks
- The value of ACH transactions increased after the end of phase 2; likely due to the resumption of larger business transactions occurring through the system, which accompanied the reopening of most economic sectors in the kingdom,
- Lower value, more frequent transactions were occurring on the ACH; likely due to the increase in the number of salary transactions on the system and the decrease in high-value transactions, which was due to the halting of commercial activities in various economic sectors.

eFAWATEERcom Main Insights

The usage of eFAWATEERcom has generally increased in **2020**, in comparison to previous years, with **100,000** new customers and **64** new billers joining the system. Usage in individual months fluctuated, with April displaying the lowest level of usage and June displaying the highest; indicating that payments on the system were shifted from the time of the lockdown until after the lockdown. Trends also showed a major shift in preference towards digital transactions and the use of the Jordan Mobile Payment Switch to make payments. Finally, telecommunications and utilities billers remained amongst the top billers, while government billers demonstrated weakened performance.

- Approximately **100,000** new customers joined the platform between March and June **2020**, these new customers mainly used to service for telecommunications and utilities.
- The number of new customers showed a significant drop during phases 1 and 2 (March 17th- April 29th), which has recovered gradually by June 2020.
- The cash-based transaction rate on eFAWATEERcom has significantly deteriorated between March and June. The percentage of cash transactions decreased from 28% before COVID-19 (before March 21st) to 13% in after its onset.
- During the lockdown period (March-June), the concentration of usage was shifted towards telecommunications and utilities.
- The number of transactions and the transaction amounts has dramatically decreased in March and April. This decrease was compensated in May and June where the number of transactions on the system has reached its maximum since its launch in **2014**.
- The number of eFAWATEERcom transactions taking place through JoMoPay has doubled in Q2 2020, compared to Q1 2020.

JoMoPay Main Insights

The usage of the Jordan Mobile Payments Switch increased during and after the COVID-19 lockdown, with both the number and value of transactions increasing significantly following March. The different payment types on the system also experienced significant changes, with cash-out and salary transactions exhibiting the largest increases in number, closely followed by money transfers which resulted in an increase in interoperability between the different PSPs in the market. A large proportion of these changes were attributed to the distribution of aid through mobile wallets and the difficulty of transacting with physical payment instruments during the lockdown.

- The number of transactions and the transaction amounts of JoMoPay increased significantly across phases 1-3 (March-July).Merchant purchases made through JoMoPay saw a slight decrease in March 2020.
- Salaries and Cash-out transactions saw the largest percentage increase in the number of transactions after March.

- Three categories saw a decrease in the average transaction value: cash-out, salaries, and loans.
- The percentage decrease in the average value for cash-out transactions is likely due to the larger volume of cash-out transactions. This was largely caused by the distribution of aid to recipients who used the wallet as a method to receive aid from the NAF, which they instantly cashed out.
- The percentage of off-us transactions increased from 1% before COVID-19 to 17% after its onset; likely due to
 - » the increase in the number of money transfers made on the system
 - » the increase in awareness of the platform and its capabilities
 - » the increase in the number of users
- NAF and its beneficiary transactions represented 23% of the total transactions on JoMoPay in 2020.
- 34% of transactions made by NAF beneficiaries who received aid after the lockdown were cash-out transactions, up from 3% of beneficiaries who received aid before phase 1 (before March).
- The average value of the cash-out transactions made by NAF beneficiaries (March-June) was very similar to the value of the aid payments disbursed through the system.
- The number of transactions conducted on JoMoPay by NAF beneficiaries started increasing after March and experienced a large jump between April and May.
- A large drop in the number of transactions is observed in the number of transactions conducted on JoMoPay by NAF beneficiaries after July. This could indicate that a significant portion of NAF beneficiaries only used the system to receive aid payments, therefore it is possible that they will not become active users of mobile wallets once aid payments are reduced or halted.



On the **11**th of March of **2020**, following widespread infections from all around the world, the World Health Organization declared the novel Coronavirus infection (COVID-**19**) a pandemic¹. Albeit this not being the first pandemic, nor the first Coronavirus outbreak, faced by the world, the dangers of this virus culminated in its long incubation period and high transmissibility. Subsequently, the world was swept up in a global race to protect the wellbeing of humans, slow down the spread of the virus, and find a vaccine. Everyday life was massively disrupted. Facemasks quickly became an essential tool for survival and the protection of others, and everyday routines were effectively transformed around limiting exposure and 'flattening the curve'.

The preventative and protective measures imposed by governments around the world had a substantial effect on the global economy. The global economic pyramid experienced massive disruption, from international trade all the way down to the health of small local businesses. While protecting the health and wellbeing of residents around the world took the number one priority of most governments, it was becoming clearer that protecting the economic health of communities was next in line in terms of priority.

The first case of the COVID-19 in Jordan was reported on the 2nd of March 2020. This represented the arrival of the COVID-19 pandemic to Jordan, and the start of the governmental measures in dealing with the crisis. For the purpose of clarity, the different social distancing, quarantine, and lockdown measures introduced by the government have been grouped into four primary phases in this report. The first phase, "Phase 0" was the phase leading up to the imposition of the government measures aimed at containing the spread of the COVID-19 virus. This phase included the halting of certain commercial activities. This phase began on the 2nd of March, with the arrival of the first case to Jordan, and ended on the 16th of March of 2020. Second is "Phase 1", which marks the beginning of the imposition of widespread governmental measures, including the closure of various economic sectors, limitations on travel, and finally a country-wide lockdown. Phase 1 began on the 17th of March and ended on the 28th of April of 2020. "Phase 2", which began on the 29th of April and ended on the 3rd of June of 2020, marked the beginning of easing the measures introduced by the government to limit the spread of the COVID-19. Most commercial and economic sectors were allowed to resume in-person operations, with restrictions, and mobility was increased. Finally, "Phase 3" represented further easing of restrictions. Movement between governorates of the Kingdom was permitted, as well as longer hours for movement and operation of different commercial sectors. This final phase began on the 4th of June. The following timeline maps out the different measures introduced in each of the four phases.

Al-Tammemi, A. (2020, April 27). The Battle Against COVID-19 in Jordan: An Early Overview of the Jordanian Experience. Retrieved September 13, 2020, from https://www.frontiersin.org/articles/10.3389/fpubh.2020.00188/full

	March 14	March 15
0	Various businesses and societal activities were halted, these included mosques, churches, tourist sites, sports events, cinemas, swimming facilities, sports clubs, and youth centers	The operation of all educational institutions was halted
1	March 17 - All air travel from/to the kingdom was effectively halted (commercial cargo, diplomatic missions, and international organizations were exempt) - All land/sea border crossings were shut to passenger movement (commercial cargo was still allowed to move across the border) - In-person operations of the private sector were halted except for vital sectors such as health care - In-person operations of the public sector were halted except for vital sectors as determined by the prime minister - Recommendation from the government affirming that people must not leave their houses except for emergencies - Gatherings of more than 10 people were prevented - Movement between governorates was prevented - Malls and commercial centers were closed - Mass transportation was halted - The only things allowed to work were pharmacies, bakeries, and food, drug, water, fuel, and electricity supply chains	March 21 Full curfew was imposed
		March 25 Small neighborhood grocery and convenience stores, pharmacies, drinking-water stores, and bakeries will be allowed to open from 10am-6pm and movement on foot will be allowed
		March 26 Larger supermarkets allowed to sell and deliver items to citizens homes
		April 19 All restaurants were re-opened in Aqaba
2	April 29 Use of cars allowed inside governorates between 8am-6pm, alternating between even and odd numbered cars	
3	June 4 - All cars (no matter if even or odd) allowed to move between 6am-midnight - Movement between governorates allowed again - Things open from 6am-11pm	

June's Global Economic Prospect's baseline forecast predicted a 5.2^{-/.} reduction in global GDP in 2020². In fact, 92.9^{-/.} of countries in 2020 are expected to undergo recessions as a result of the pandemic. The Middle East and North Africa (MENA) region will experience a projected contraction of 4.2^{-/.}, third only to Europe and Central Asia (4.7^{-/.}) and Latin America (7.2^{-/.}). As for Jordan, the International Monetary Fund projects a -3.7^{-/.} real GDP growth in 2020, the first shrinkage in GDP since 1989³.

This represents an alarming blow to Jordan's economic growth and development. That being said, Jordan's development over the last decade has geared it to better face this crisis. In fact, Jordan became one of the top **20** performing countries in the World Bank's 'Doing Business' report for the year **2020**. This was directly linked with introducing new regulations to govern aspects of financial transactions, such as insolvency, digital payments, and public procurement⁴. This, therefore, leads to the topic of this report: What was the impact of COVID-**19** on the Digital Financial Infrastructure in Jordan, and what was the impact of Jordan's Digital Financial Infrastructure on the fight against the COVID-**19** pandemic.

- 2 The Global Economic Outlook During the COVID-19 Pandemic: A Changed World. (n.d.). Retrieved September 13, 2020, from https://www.world-bank.org/en/news/feature/2020/06/08/the-global-economic-outlook-during-the-covid-19-pandemic-a-changed-world
 - Jordan and the IMF. (n.d.). Retrieved September 13, 2020, from https://www.imf.org/en/Countries/JOR

3

Jordan Country Report: Overview. (n.d.). Retrieved September 13, 2020, from https://www.worldbank.org/en/country/jordan/overview

SECTION I:

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The State of Digital Financial Services and Financial Inclusion in Jordan Before the COVID-19 Pandemic

12

Well before the onset of the COVID-19 crisis, the Jordan 2025 national vision and strategy⁵ recognized the importance of financial services for the overall growth and sustainable development of the Jordanian economy. Through this comprehensive document, the Kingdom articulated its commitment towards creating the necessary infrastructure, leading to broader and better access to financial services for all Jordanians. This coincided with the results of the World Bank's 2014 Findex report⁶, which estimated that only 24.6% of Jordanians above the age of 15 were financially included. Ever since, various national efforts have strived towards increasing financial inclusion in the Kingdom through developing the digital financial infrastructure and enhancing financial literacy and acceptance amongst residents of Jordan.

Financial Inclusion in Jordan before COVID-19

The financial inclusion rate of the adult (above the age of **15**) population in Jordan was determined to be **42**% of adults through the more recent FinDex data⁷. That being said, the injustices created by financial exclusion are not equally distributed across marginalized communities in Jordan. In fact, diving deeper into the rates of financial inclusion demonstrates massive disparities in the access to and usage of digital financial services (DFS).

Rates of account ownership at a formal financial institution in Jordan, for example, are unevenly distributed along gender divides. In 2017, 56% of men above the age of 15 had an account at a formal financial institution, while only 27% of women over the age of 15 had an account at a formal financial institution. This 29-percentage points difference designates Jordan as the country with the highest gender gap in financial account ownership globally. Furthermore, the gap grew between 2014 and 2017, where in 2014 33% of men and 16% of women had an account at a formal financial institution, an 18-percentage points difference. Albeit the sector-wide developments in financial services and a marked increase in financial inclusion, the data clearly points to a deteriorating reality for Jordan's women in finding and accessing financial services. In a survey conducted by the Jordan Payments and Clearing Company (JoPACC) of account-holding financial institutions (FIs), it was found that, with a few exceptions, most surveyed FIs lacked any products catering for the needs of female clients. In fact, a substantial segment of products offered by a number of institutions played along stereotypically-observed financial needs of women that did not generalize to the majority of the female population⁸. Thus, it was evident that a deficiency in meaningful communication between the financial sector and its female clients was alienating the good part of half the Jordanian population from engaging in the formal financial sector.

In an effort to advocate for and reinforce the importance of communication with clients and beneficiaries, JoPACC partnered with the Arab Women Enterprise Fund (AWEF) to conduct a digital experiment aiming to better understand the barriers coming in the way of women's access to DFS. In its output report titled "From Access to Practice: Investigating Women's Access to and Usage of DFS in Jordan", it was found that meaningful and collaborative financial literacy was a prime enabler for women to access and use new financial technology solutions available to them. Furthermore, representation of women in the financial sector and the existence of female agents were observed to be important factors for the empowerment of women through DFS'.

Youth were similarly disadvantaged, where in **2017** only **25**^{*i*}. of young adults (between the ages of **15** and **24**) held an account at a formal financial institution, as compared to **51**^{*i*}. of adults over the age of **24**. The gap between older adults and young adults has also grown between Findex's Jordan 2025: A National Vision and Strategy. (2015). Retrieved September 09, 2020, from http://inform.gov.jo/en-us/by-date/report-details/articleid/247/jordan-2025

- 8 A Storm to Transform: An Outlook of Digital Transformation of Financial Institutions in Jordan (Rep.). (2020). Amman: Jordan Payments and Clearing Company. http://www.jopacc.com/ebv4.0/root_storage/en/eb_list_page/a_storm_to_transformation_digital_transformation_of_fis_report_2020_(may_2020).pdf
- 9 Digital Experiments from Access to Practice (Rep.). (2020). Amman: Jordan Payments and Clearing Company. http://www.jopacc.com/ebv4.0/ root_storage/en/eb_list_page/digital_experiments_report_english.pdf

⁶ Home: Global Findex. (n.d.). Retrieved September 09, 2020, from https://globalfindex.worldbank.org/

⁷ Demirguç-Kunt, A., & World Bank, issuing body. (2018). The global findex database 2017 : Measuring financial inclusion and the fintech revolution. Washington, D.C.: World Bank Group. https://globalfindex.worldbank.org/index.php/#about_focus

2014 and **2017** findings, where in **2014 12**^{-/.} of young adults had access to an account, compared to **32**^{-/.} of older adults. In an effort to reduce this gap, and create a more "financially-savvy" Jordanian youth, the Central Bank of Jordan (CBJ), in collaboration with the non-governmental organization (NGO) INJAZ, launched the National Financial Literacy Program, which added financial education to the curricula of approximately **350,000** students (from **7**th to **11**th grade) in private and public education. The program, which is part of the CBJ's National Financial Inclusion Strategy (NFIS), introduces students to basic business ethics, how to establish businesses, how to access financial and investment institutions and overall financial and business planning¹⁰. By **2020**, the initiative aims to include financial education in the curricula of all private, public, military, and UNRWA schools in the Kingdom¹¹.

National Efforts and Initiatives towards Digital Financial Services

Financial Inclusion took center stage in the Kingdom's priorities towards sustainable economic and social development, with the Central Bank leading the way in introducing several policies, instructions, and initiatives to increase financial inclusion across all segments of Jordanian society.

In **2015**, the Electronic Transactions Law was introduced and passed by the Council of Ministers. The law aims to enhance e-commerce and the digitalization of services in the Kingdom by clarifying the legal framework for doing business online or for making contracts via electronic means of communication. Moreover, the law affords to electronic records the same legal value as documents made in writing. As such, ledgers and other book-keeping obligations can be satisfied by electronic records, provided such records meet certain security and technical requirements. The introduction of this law represented a hallmark in Jordan's digitalization journey, in particular it represented a milestone in the digital transformation journey of FIs, which possessed the legal tool to commence offering DFS to their clients¹². Furthermore, it enabled the CBJ to introduce the Mobile Payments Instructions of **2017**, in order to ensure the safe development of the mobile money and digital payments ecosystem¹³.

In April **2016**, the CBJ joined the Alliance for Financial Inclusion (AFI). Early on, the CBJ positioned itself as a regional leader for financial inclusion policies through its commitment to the Maya Declaration during the **2016** Alliance for Financial Inclusion Global Policy Forum. The Maya Declaration represents a platform through which member institutions can commit to financial inclusion targets, implementing local policy changes, and share updates with a network of other stakeholder institutions.

The CBJ made this commitment through setting a national goal of increasing financial inclusion to 36.6? (from 24.6?) of the adult population by 2020, while decreasing the gender gap from 53? to 35?. Subsequently, nine targets were set out to achieve this¹⁴:

- 1. Finalize the draft of the NFIS by the end of 2017,
- 2. Formulate DFS and microfinance consumer protection guidelines by Q1 2017,
- 3. Continue to champion the financial education program into the existing Jordanian school curriculum from 7th to 11th grade by 2020,
- 4. Enhance interoperability among payment systems in the Kingdom by the end of 2018,

¹⁰ Beiter, K. (2016, December 11). Mandatory Financial Literacy Courses in Jordan. Retrieved September 06, 2020, from https://themedialine.org/ news/mandatory-financial-literacy-courses-jordan/

¹¹ Azzeh, L. (2016, December 05). Financial education added to curricula at 3,387 private, public schools. Retrieved September 06, 2020, from https://www.jordantimes.com/news/local/financial-education-added-curricula-3387-private-public-schools

¹² Prime Ministry, the Hashemite Kingdom of Jordan. (2015, May 17). Law No. 15 of 2015 concerning Electronic Transactions. https://www.ilo.org/ dyn/natlex/natlex4.detail?p_isn=103025&p_lang=en

¹³ Central Bank of Jordan. (2017, June 1). Mobile Payment Instructions of 2013, amended pursuant to the Instructions of 2017 which were amended according to the Board of directors' decision No. (116/2017) dated 1st June, 2017. https://www.cbj.gov.jo/EchoBusV3.0/SystemAssets/24ab593c-e6da-4247-9a6c-7644b996d2f2.pdf

Alliance for Financial Inclusion. (2016, November 11). Central Bank of Jordan makes bold Maya commitment to financial literacy, access for refugees, gender, DFS and data. Retrieved September 06, 2020, from https://www.afi-global.org/news/2016/11/central-bank-jordan-makes-bold-maya-commitment-financial-literacy-access-refugees

- 5. Ensure the efficient and responsible growth of the Microfinance sector as part of the formal financial system,
- 6. Provide refugees and non-nationals with access to DFS,
- 7. Ensure the provision of an enabling legislative and regulatory environment for DFS,
- 8. Upgrade financial inclusion data collection and measurement to align with AFI's network to produce comparable indicators by **2018**,
- 9. Increase the financial inclusion access of Jordan's youth (15-22-year old's) by 25,000 annually by 2020.

In fulfilment of its Maya Declaration, the Central Bank of Jordan launched its NFIS for the years **2018-2020** in **2017**. Through the NFIS, the CBJ established a comprehensive, cross-cutting strategy towards increasing financial inclusion, which took into consideration various sectors within Jordan's financial ecosystem. The strategy identified four cross-cutting areas as enablers of financial inclusion: **1**) Laws, Regulations, and Instructions, **2**) Data and Research, **3**) Financial Consumer Protection Capabilities, and **4**) Financial Technology. The strategy aimed at applying these enablers to three industries and instruments in Jordan's financial sector: **1**) Microfinance, **2**) Digital Finance, and **3**) SME Financing. Through enabling these three sectors, the strategy strives towards various products that can be realized to target four integral target groups (bottom **40**%, women, refugees, and youth) towards achieving financial inclusion.

In February 2018, the CBJ signed an agreement with the Bill and Melinda Gates Foundation to establish the Mobile Money for Resilience (MM4R) facility, which was housed at the CBJ. The MM4R comprised of a \$3 million fund aiming to support the goal of providing access to financial services to vulnerable groups in Jordan. At its core, the MM4R initiative puts the Barcelona Principles into action, proposing a theory of change and a set of objectives to achieve its mission of improving the guality of life of refugees, vulnerable Jordanians, and host communities in Jordan and empower them to become more resilient. Its seven primary functions are: incubation and acceleration, products and services development, payment technology, awareness and financial education, partnerships and outreach, institutional development, and knowledge capture and dissemination. It exercises these functions through four primary tools for implementation: 1) grant funding, 2) convening power and space, 3) debt, equity, and credit guarantees, and 4) domain expertise and research capabilities. In October of 2019, the MM4R signed two agreements in fulfillment of these objectives: the first with JoPACC, taking the shape of a JOD 30.5K grant to equip and enable Jordan Post Office branches in the Mafraq governorate to act as super agents for mobile money, to facilitate the distribution of humanitarian aid by the World Food Program. The second, with the National Aid Fund (NAF), comprised of a (JOD 620K) grant to support NAF in digitizing cash assistance to approximately 100K beneficiaries¹⁵. Through such initiatives, the MM4R facility is a unique approach to developmental financing, providing a clear framework for a nationally administered international assistance program.

Both the NFIS and the MM4R attributed a great importance to financial technology in reaching sustainable financial inclusion. Consequently, the FinTech Regulatory Sandbox was established and launched by the CBJ in February **2018**. The main objective of the Sandbox is to provide a safe and controlled live experimental environment to test newly developed FinTech innovations. The FinTech Regulatory Sandbox provides the required guidance and mentorship for applicants to reach different technology and innovation incubators in Jordan without being subject to all or most regulatory and supervisory requirements without any initial legal costs. Therefore, it supports participants in reducing the cost and time needed to enter the market. Participants that graduate the sandbox will be sponsored by the CBJ through the Jordanian Entrepreneurship Fund¹⁶.

Central Bank of Jordan. (n.d.). The Central Bank of Jordan signs two agreements that aim to enhance financial inclusion under the Mobile Money for Resilience (MM4R) Initiative that is sponsored by Bill & amp; Melinda Gates Foundation [Press release]. Retrieved September 6, 2020, from https://www.cbj. gov.jo/DetailsPage/CBJEn/NewsDetails.aspx?ID=264

¹⁶ Central Bank of Jordan. (n.d.). Fintech Regulatory Sandbox. https://www.cbj.gov.jo/EchoBusV3.0/SystemAssets/9328fddf-3f3d-40d8-9ed3-d98b-bc89db20.pdf

JoPACC was established in **2017** to inherit the assets and missions of the preceding National Payments Council (NPC). The NPC was an advisory body to the CBJ representing the entirety of Jordan's banking sector tasked with the development of the digital financial infrastructure of Jordan. Following a comprehensive World Bank mission to Jordan, it was decided that the NPC would become an independent company focusing its efforts on the development of the payment and clearing infrastructure of Jordan. Therefore, JoPACC's first strategy aims towards the high-level goal of comprehensive and innovative digital payment solutions benefitting all and contributing to the financial inclusion in Jordan, towards achieving a digital economy. To achieve this goal, JoPACC's first strategy took the form of a theory of change harnessing **5** primary strategic pillars, through which it can intervene and persevere towards financial inclusion, and an improved digital financial infrastructure in Jordan:

- 1. Increasing access, adoption, and usage of digital payments, while taking into consideration the future needs of customers, partners, and stakeholders
- 2. Improving the infrastructure, digital products, and digital platforms in the financial technology ecosystem. Through leveraging technological developments and general advancements in the areas of financial services and payments, JoPACC aims to lower the costs affiliated with digital payments, increase reliability, and interoperability to further enhance financial inclusion in Jordan.
- 3. Ensure compliance, safety, security, risk management, and fraud detection across the sector. JoPACC aims to nurture confidence and trust in financial services.
- 4. Robust Governance and capacity building
- 5. JoPACC's branding, marketing, and awareness

The above strategy highlights the contributions that JoPACC aims to make to Jordanian society and financial inclusion. Through introducing and operating new and existing payment and clearing systems, JoPACC aims to further enhance Jordan's developed digital financial infrastructure. Furthermore, through intervening in awareness and literacy efforts, developmental digital financial capacity building, standardization and enriching interoperability, and promoting knowledge dissemination and partnerships in the market, it ensures that the development of the financial sector is felt and appreciated by all segments of Jordanian society.

The Digital Financial Infrastructure and Stakeholders in Jordan

Stakeholders:

Jordan has a well-developed financial system that is made up of a variety of different stakeholders.

- The banking sector is made up of 24 banks, 16 of which are local banks, with the other 8 being foreign banks. Banks represent the dominant players in the financial sector in Jordan, as their assets in 2018 accounted for 93.4% of the total assets of the financial sector¹⁷.
- 2. The mobile payments sector consists of 7 licensed mobile Payment Service Providers (mPSPs), all of which are integrated to the Jordan Mobile Payments switch (JoMoPay) to ensure interoperability between all mobile wallets.
- 3. Three dedicated merchant acquirers operate in the market, to enable and support digital payments acceptance. The license extended to mPSPs and Banks by the CBJ also enables them to be merchant acquires.
- 4. The Microfinance sector in Jordan is still relatively young; it is comprised of 9 formal Microfinance Institutions (MFIs) who provide lending services to individuals, groups and businesses.

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Summary report of the National Assessment of Money Laundry and Terrorism Finance Risks: Amman-Jordan (2020). AML/CFT National Committee

- 5. Exchange houses, numbered at over **140** (with over **256** branches), make up the largest group of non-bank FIs in Jordan. They offer services which include cross-border remittances, currency conversion, as well as acting as agents for mPSPs.
- 6. The Jordan Post Company possesses a strong network of 310 branches nationwide and is particularly available in rural areas where banks and MFIs don't operate. The Jordan Post Company acts as a mobile money agent, an agent for eFAWATEERcom, offers savings and microlending products, money transfers, as well as other financial services. The Jordan Post Company is an independent Governmental Corporation, which is highly trusted amongst the Jordanian population.
- 7. Payment Service Providers and FinTech companies are becoming prominent players in the Jordanian Digital Financial Ecosystem. These range from tech-enablers, to value-added services companies. Such businesses complement the market, and greatly enhanced innovation and value in product offerings.
- 8. CRIF is the only credit bureau in Jordan. It has become a focal point for lending growth in the Kingdom, where all banks and most of the MFIs operating in Jordan are integrated with CRIF as credit information providers and users, improving transparency and reducing risk in lending.
- 9. The Jordan Loan Guarantee Corporation aims to provide the necessary guarantees to facilitate financing of SMEs owned by the private sector. The Jordan Deposit Insurance Corporation implements and manages a transparent deposit insurance scheme in order to protect depositors.
- **10**. There are a variety of different NGOs that support the digitization of payments in the Kingdom, these organizations include: USAID, GIZ and Mercy Corps.

Digital Money in Jordan:

The International Monetary Fund (IMF), in its FinTech Notes series, proposed a framework (figure 1), through which different means of payment can be categorized and compared. This is achieved through the identification of four attributes of a mean of payment¹⁸:

- Type: the framework identified two types for means of payment: Claims and Objects. Objectbased means of payment are settled immediately, with no exchange of information, as long as the transacting parties deem the object to be valid. Claim-based means of payment refer to the transfer of a claim on value existing elsewhere, requiring the recognition of the payer as the rightful owner of the claim, that sufficient funds are identified back to the claim, and that all relevant parties register the transfer.
- 2. Value: for claim-based payments specifically, the value indicates whether the redemption of the claim is at a fixed or a variable value in currency. As for object-based means, differentiation is based on whether their denomination is in the domestic unit of account or its own unit of account.
- 3. Backstop: the backstop applies only to claims with fixed-value redemptions, and relates to whether the redemption guarantee is backstopped by the government, or the practices of the private sector.
- 4. Technology: this attribute aims to segregate centralized from decentralized settlement of the mean of payment.

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Adrian, Tobias, & Mancini Griffoli, Tommaso. (2019). The Rise of Digital Money. FinTech Notes, 19(1), FinTech Notes, 2019-07-15, Vol.19 (1)

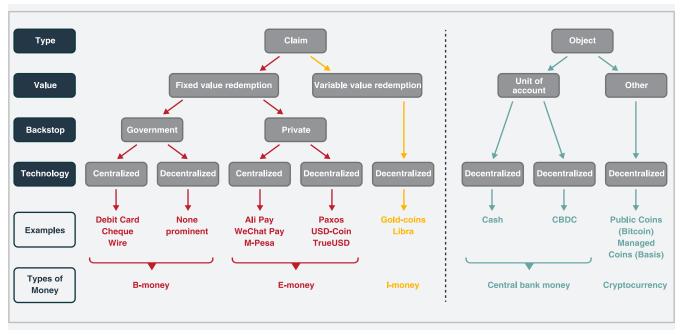


Figure 1: The Money Tree. Source: Adrian, Tobias, & Mancini Griffoli, Tommaso. (2019). The Rise of Digital Money. FinTech Notes, 19(1), FinTech Notes, 2019-07-15, Vol. 19 (1)

Through this framework, the IMF distinguished between five different means of payment: Central Bank Money, Crypto-currency, Bank Money (b-money), Electronic Money, and Investment Money (i-money). Applying the above framework to Jordan's digital money ecosystem, we conclude that all of Jordan's Digital Payments systems represent B-money means of payment.

Although conventional mobile money markets have leveraged centralized, private backed, fixed value redemption means of payment (e-money), the governance and regulatory framework through which mobile money was introduced to Jordan renders it a form of Bank money (b-money). Mobile money in Jordan is a fixed-value redemption, claim-based means of payment backstopped by the Central Bank of Jordan. In **2017**, the Central Bank of Jordan introduced the "Electronic Payments and Transfers Instruction", regulating payment system providers and operators, and putting in place appropriate controls to reduce risk on customers and the digital financial services ecosystem. Through this form of implementation of mobile money, the target segment of mobile money in Jordan, who are mostly financially excluded, can enjoy the same level of protection and supervision as banked individuals. This is of vital importance as it greatly reduces the risks experienced by mobile money users, while still introducing a new digital payment instrument and infrastructure.

Jordan Mobile Payments

JoMoPay, an electronic switch operated by JoPACC, was officially launched on the 1st of April 2014 for payments and financial services that are offered through mobile wallets. The switch enables a safe means for immediate electronic payments and enables users to use their mobile devices to transfer instant payments of small values. This includes bill payments, person-to-person transfers, and paying for purchases directly through mobile wallets. Mobile wallets are offered by mobile Payment Service Providers (mPSPs) licensed by the CBJ. Accordingly, the system reduces the need for dealing in cash and minimizes its associated risks.

To ensure full interoperability of the mobile money ecosystem and facilitate and accelerate the process of carrying out and accepting payment operations, mPSPs are integrated with eFAWATEERcom, Jordan's bill presentment and payment platform, and more importantly, the JoMoPay switch is integrated with the Real Time Gross Settlement System (RTGS) where settlement is centralized and takes place in Central Bank Money through mPSPs' settlement banks.

Automated Clearing House

The Automated Clearing House (ACH) is a retail payment system that was launched on the **30**th of October **2016** aiming to provide banks and the Central Bank, in addition to their customers, with a retail payment service to facilitate and accelerate the execution of numerous, yet low-value credit and debit money transfers to contribute to enhancing the efficiency of the financial system in the Kingdom. The ACH system enables credit transfers between individuals, as well as direct debit transactions, and batch payments. All **24** commercial banks in Jordan are participants on the ACH

eFAWATEERcom

The electronic bill presentment and payment system, eFAWATEERcom, was launched on the **29**th of June **2014** as an effective central and integral platform, enabling the electronic presentment and payment of bills. This platform is regarded as one of the most advanced systems that achieved positive progress in the field of digital payments in Jordan.

The system facilitates and accelerates the bill payment process through different payment channels such as bank branches, ATMs, mobile banking, internet banking, mobile wallets applications, Jordan Post branches, kiosks, and agents. The system is owned by JoPACC and operated by Madfooatcom.

Electronic Cheque Clearing

The Electronic Cheque Clearing (ECC) is an electronic system for clearing cheques between banks. Prior to the implementation of ECC, the Central Bank of Jordan (CBJ) provided manual cheque clearing services up until **1997**. Following that, the CBJ moved to automated clearing until **2007**. Afterward, on the 4th of November **2007** the service evolved to providing more rapid (same day or next day) electronic clearing of cheques. The ECC is Jordan's largest clearing system in terms of value and volume of transactions.

Real Time Gross Settlement

The Real-Time Gross Settlement System – Jordan (RTGS-JO) is an electronic, central, real-time, gross settlement system, which was developed in **2002**. All electronic payment and clearing systems in the Kingdom are integrated to the RTGS, since it aims to provide settlement of large-value payments between banks for all clearing. The RTGS is operated by the CBJ, and settlement takes place through accounts of banks held by the Central Bank of Jordan. Therefore, it is considered as one Jordan's most systemically important Financial Market Infrastructures.

On the **15**th of March **2015**, the CBJ launched the new RTGS service, which was the first in the region and the second in the world to adopt the new ISO **20022** messaging standard. All financial and technical international standards recommended by major international institutions, such as the World Bank and Bank for International Settlement, were taken into consideration in designing the new system.

Jo-Net & MEPS-Net

The Jo-Net & MEPS-Net are two switches operated by the leading payments acquirers in Jordan – Network International (NI) and Middle East Payment Services (MEPS) respectively. The switches allow full interoperability between all ATMs and banks by ensuring that each ATM supports every card type and every payment scheme brand, whether the card was issued in Jordan or abroad to maximize the return on their investment in ATMs.

The number of ATMs is rapidly increasing in Jordan and this is to keep up with the development in the financial services sector and to increase access points to absorb the increasing number of ATM users. The number of ATMs reached **2017** machines by the end of **2019**, up from **1,927** machines by the end of **2018**. Those machines are spread all over the Kingdom. The capital, Amman, has **66.4**% of all ATMs in Jordan, followed by Irbid Governorate (**9.9**%) and Zarqa Governorate (**6.3**%).

This highlights a major disparity in access to financial touchpoints in rural as opposed to urban areas.

Jordan is also experiencing growth in its card payment acceptance. All banked customers are issued a debit card for ATM and Point-of-Sale transactions, and mobile money customers can issue a companion pre-paid card. The point-of-sale infrastructure is growing in Jordan, with increased demand on digital payments.

SECTION II:

The Response of Jordan in Financial Services to the COVID-19 Pandemic

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As countries around the world took measures to protect their populations against the spread of the COVID-19 pandemic, it has become clear that this pandemic carries with it more than public health consequences. Severe impact on economies, services, and in particular, financial services and the use of cash has accompanied this global crisis. In Jordan, given the substantial segment of Jordanian society with no formal access to financial services, accessibility to financial services presented a notable challenge during the lockdown, and transactions made in cash were effectively halted. Regulating access to financial services and introducing financial support and financing programs during the lockdown represented some of the government's top priorities in facing the pandemic. Jordan declared a state of emergency on March 18th and announced closing public and private businesses and offices, for 10 days, after which FIs re-opened partially and began offering their financial services gradually until the curfew and limited movement ended in early June 2020.

DFS, more specifically mobile wallets, took prominence in mid-March **2020**, especially given the growing fear of contagion through contaminated cash. The country resorted to mobile payments to reduce the use of cash, and encouraged employers to transfer salaries that were previously paid in cash through mobile wallets. Moreover, many governmental and non-governmental entities introduced mobile payments to beneficiaries to replace previously cash-based payments. Consequently, the number of active mobile wallets in the Kingdom doubled across **4** months, growing to over **1** million users. Mobile wallets are one channel of administering financial services in the Kingdom, and to understand the impact of the pandemic on the financial sector in Jordan, it is prudent to look at all elements of the financial system; regulators, FIs, services, access (both to services and information), and users.

Regulators

The CBJ played a crucial role in containing the negative repercussions of COVID-19 on individuals and businesses and led the scene in stabilizing the economy and the financial sector during the spread of the virus in Jordan. On March 20th, CBJ announced six key measures to contain the impact of the pandemic on the economy and ease its impact on individuals. Those measures are:

- Postponing all loan installments to all clients; companies and individuals, of all economic sectors without the addition of any fees. The postponement was renewed monthly, for 3 months – March, April, and May, and in June CBJ encouraged banks to postpone loan installments without adding fees or late-payment interest for individuals who prove they have been negatively impacted by the pandemic.
- 2. Reducing the compulsory commercial bank reserves held at the CBJ from 7^{-/}. to 5^{-/}. of bank deposits, injecting an additional JOD 500 million of liquidity to banks. The amount was increased to 1050 million on April 1st.
- Reducing the financing cost of CBJ's refinancing program that targets small- and mediumsize projects.
- 4. Reducing loan guarantee commissions and raising the percentage of insurance coverage of the local sales guarantee program.
- 5. Releasing guidelines for dealing with cash, as it is identified as a threat for contagion.
- 6. Mandating that banks slash all fees incurred by clients for using other banks' ATMs.

CBJ later released a 7th measure announcing the SME Financing Program- a soft loan program to support small and medium-sized companies with a total value of JOD **500** million, guaranteed by the Jordan Loan Guarantee Corporation. The program, aiming to assist SMEs in retaining business and protecting jobs, serves craftsmen, individual firms, and small and medium enterprises in a wide range of sectors, including industrial, trade, agricultural, services, construction

and operational sectors. The program intends to ensure the maintenance of salary and wage payments, operational expenses, purchased goods and working capital. The interest rate for this facility was capped at 2½ and the repayment grace period was set at one year, with an 85½ loan guarantee. Over 5,200 loan applications were received by mid-July, where 3,942 applications were accepted with a total value of JOD 380.8 million¹⁹. The average value of loans was nearly JOD 100,000, and the biggest share of loans was granted to the retail and wholesale sectors. A portion of the loans disbursed through this program covered 64,000 workers' salaries. The program was implemented in collaboration with all banks in Jordan who processed loan applications and assessed applicants' solvency and credit worthiness, and subsequently processed payments.

In addition to the seven announced measures, CBJ has expanded an existing program in response to COVID-19, which is the Facilitated Financing Fund for Economic Sectors. The program was launched in 2011 and aims to enhance access to financing with adequate terms and costs by selected sectors, including industry, tourism, agriculture, renewable energy, information technology, transportation, health, technical and vocational education, and engineering consulting. During the pandemic, the program's interest rate was reduced from 1.75% to 1% for projects inside the capital, Amman, and from 1% to 0.50% for projects in other governorates. The fund's value was increased to JOD 1.2 billion to maximize its impact during the pandemic, and covered the salaries and wages of 27,500 employees. 134 companies received loans from this fund with a total value of JOD 130 million during the pandemic²⁰, and the program has benefited 1,242 companies in total with a loan value of JOD 890 million contributing to the creation of over 12,000 jobs.

In addition, CBJ announced cutting interest rates by 1^{+/}, where the CBJ main rate has gone from 3.5^{+/} to 2.5^{+/}, and the re-discount rate from 4.5^{+/} to 3.5^{+/}. CBJ has further announced postponing loan installments for the Agricultural Credit Corporation (ACC) for two months in an effort to assist farmers overcome the burdens incurred by the pandemic.

Moreover, and over a period of three months, CBJ introduced a number of measures to reduce the financial burden on individuals and facilitate access to financial services. One measure offered a 3-month grace period for returned cheques, protecting cheque issuers from being added to the returned cheques list and removing returned cheque fees. Later in June, CBJ announced that returned cheque issuers will be added to the returned cheques list for one month instead of one year in an effort to encourage the quick settlement of payments without consequences on their creditworthiness. Additionally, it reduced the returned cheque fee from JOD 40 to JOD 5. Another measure allowed exchange houses to offer door-to-door services, especially to the elderly, for personal transfers while also extending the option of transfer delivery to mobile wallets.

Mobile wallets took the local scene by storm and witnessed exponential growth since the outbreak of the pandemic. In a key milestone, CBJ permitted online wallet registration, eliminating the old practice of opening wallets through an in-person signed document. Together with the JoPACC, it issued instructions on salary payment through mobile wallets, encouraging entities to adopt wallets for wage payments. A number of banks joined efforts to facilitate access to wallet services and enabled card-less deposit and/or withdrawal for mobile wallet users through their ATMs. Some banks offered this service free of charge for a set period of time. Moreover, some mobile payment service providers offered home-delivered cash withdrawal. Additionally, after the full lockdown took place in the country, CBJ enabled international remittances to mobile wallet users through Western Union, facilitated by the eFAWATEERcom platform, noting that this service was, at the time, only available to bank clients. What ultimately contributed to the exponential growth in mobile wallet usage was the government's adoption of mobile wallets for aid disbursement and salary payment.

 ¹⁹ SMEs Support Program approves of loans of JD 381 million. (July 20, 2020) retrieved on September 6, 2020 from https://alghad.com//

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 Samarah, W. (2020, July 5). Jordan quick to shield MSMEs amid COVID-19 downturn. Retrieved September 06, 2020, from https://www.afi-global.

 org/blog/2020/07/jordan-quick-shield-msmes-amid-covid-19-downturn

These measures have significantly increased the uptake of mobile wallets, but active usage and adequate access to services remained key challenges to address. Therefore, CBJ launched a challenge fund for all mPSPs and merchants at the end of March **2020** to increase merchant acceptance of digital payments. A consortium of six mPSPs in Jordan submitted a proposal to the fund, in order to work jointly on incentivizing merchants to accept mobile payments and nurture the use of quick response (QR) code for payments. Moreover, CBJ announced in May a FinTech Regulatory Sandbox titled "FinTech in COVID**19** and Beyond" calling for applications by all types of FIs. CBJ encouraged the use of QR code for both individuals and enterprises to enable contactless payments and curtail the risk of spreading COVID**-19** through potentially contaminated cash.

During the pandemic, many entities showed interest in supporting governmental and national efforts to contain the pandemic and increase the capacity of entities at the frontline, as well as small businesses who were at risk of bankruptcy and/or termination of operations. Therefore, the government announced the "Hemmet Watan" Fund for national donations of JOD **100,000** or above, which was hosted at an account at the CBJ. This account comes in addition to accounts opened at CBJ for the Ministry of Health and Ministry of Social Development accepting donations from individuals and institutions alike, without minimal requirements on donations. Donations made by corporates, entities, and individuals in Jordan and abroad to all accounts reached JOD **107** million²¹. JOD **73** million were allocated for the NAF benefiting more than **250,000** households, JOD **1** million for Tkeyyet Um Ali for food support, **1** million for the Jordan Hashemite Charity Organization supporting families in need and daily workers, and JOD **1** million for the repatriation of stranded citizens without the resources to cover their travel and institutional quarantine expenses²².

In conjunction with all financial measures introduced by CBJ to preserve the economy and increase its resilience during the pandemic, CBJ contributed to raising financial awareness; promoting the use of digital financial services and discouraging the use of cash to reduce the spread of the virus. CBJ's awareness efforts encompassed publishing comprehensive information online on how to access and use digital financial services, how to use mobile wallets through mobile phones, and how these digital channels enable users to make transactions, from transferring money to receiving salaries and financial assistance electronically from the government's aid programs. Its efforts also included holding online awareness sessions on mobile wallets to maximize its reach to a larger audience. Moreover, and in collaboration with the World Bank, CBJ is in the process of conducting a vast **360**° Financial Inclusion Awareness Campaign that will be launched in the next few months. The Campaign will be conducted through offline and online channels, and will cover various financial topics: Digital Financial Services, Microfinance, SMEs, and Consumer Protection among others.

While CBJ responded to the crisis with short-term measures over a period of four months, these measures carry long-term benefits on individuals, businesses, and the economy and have contributed to protecting the economy and its stakeholders and to supporting economic growth. King Abdullah II of Jordan²³ and many international entities and experts²⁴ hailed CBJ's efforts in increasing the resilience of the economy, helping MSMEs survive the repercussions of the pandemic on their businesses, and preserving the financial and monetary stability in the Kingdom.

The Government of Jordan announced in the early days of the pandemic its adoption of digital payment channels to replace cash, encouraging citizens and employers to use mobile wallets to conduct financial transactions. The Ministry of Labor called on employers to digitize the payment

²¹ Razzaz: "Himmet Watan" is a solidarity account and we hope to receive more donations. (June 8,2020). Retrieved on September 06,2020 from https://www.almamlakatv.com/nes/40752-

²² Initiating transfer of payment (3) to families affected with Corona virus crisis on Monday. (July 12,2020) Retrieved on September 06,2020 from https://www.almamlakatv.com/news/42639-

²³ His Majesty King Abdullah II bin AlHussein commends the CBJ measures to mitigate Corona impact on the economy. (July 7,2020). Retrieved on September 6,2020 from https://alghad.com/

²⁴ Fahey, A., Karlan, D., & Goldberg, N. (2020, June 23). Hard Data for Hard Choices [Web log post]. Retrieved September 07, 2020, from https:// www.povertyactionlab.org/blog/6-23-20/hard-data-hard-choices

of salaries that were paid in cash before the pandemic. What made this transition to digital finance relatively smooth is the solid digital payments infrastructure in the country.

Two key national institutions announced that aid and other types of payments will be made through bank or mobile wallet transfers only. These are the NAF and the Social Security Corporation (SSC). NAF is mandated with supporting families in need by offering monthly financial aid, emergency aid, physical rehabilitation aid, and vocational training and employment programs, aiming to ultimately eliminate poverty and increase the employability of beneficiaries where possible. Before COVID-19, NAF had over 127,100 beneficiaries and had already commenced the transition to mobile wallet disbursements, encouraging their beneficiaries to open wallets to receive aid on so as to reduce the burden on post offices, which distributed the aid in cash on a monthly basis. Before the pandemic, 6,885 beneficiaries received their aid on the wallets, which was approximately 5.5% of beneficiaries at the time. With the spread of COVID-19 and the enforced lockdown, the government announced financial support programs to gig-economy workers and the most affected families, in addition to the distribution of the bread subsidy, through NAF for a set number of months. The total number of beneficiaries during phases 1-3 of the government's measures (as defined above) exceeded 381,000 and 68.5% of them received the aid on mobile wallets. Following a similar approach, the Social Security Corporation launched five support programs and encouraged beneficiaries with no account at a formal financial institution to open mobile wallets. Over a period of 4 months, over 700,000 beneficiaries benefitted from the programs, where 12,000 received financial support through mobile wallets.

The government and some of its key institutions seized the opportunity to shift financially excluded individuals to the realm of digital finance, increasing financial inclusion, the acceptance, and the spread of digitalized services. Several entities followed suit, from social enterprises such as the Social Enterprise Project (SEP), to international organizations such as the World Food Programme (WFP) and UNHCR to universities such as the German Jordanian University. Additionally, a good number of schools and private sector entities began accepting digital bill payments through eFAWATEERcom.

JoPACC

The remarkable growth in the adoption of DFS requires equivalent efforts to sufficiently inform users on how to use their financial accounts responsibly. Without proper access to information, new users of DFS may not feel confident in using such services and may not build trust in them. Given that JoPACC's strategy focuses on enhancing knowledge production and dissemination and on awareness efforts using a number of tools and utilizing various communication channels, and following the government's and the Central Bank's announcement of the adoption of mobile wallets for government-to-person (G2P) and salary payments, JoPACC took initiative to facilitate access to reliable and comprehensive information. Together with the Central Bank, JoPACC developed a booklet on mobile wallets, their uses, and the procedure of opening a wallet to receive salaries and wages, which has been shared by governmental entities and news websites. It has further produced several awareness videos and regular social media posts answering new users' frequent questions.

As mentioned earlier, the CBJ took a key step to facilitate the uptake of mobile wallets by allowing online self-registration. To enable access to information and mobile wallet registration links through one portal, JoPACC launched the Mobile Wallets Gateway²⁵. The Gateway acts as a directory of various information for both clients of mobile wallets, as well as for prospective clients. It allows access to self-registration links of all mPSPs. It also provides information on their contact details. Furthermore, it details the transaction fees for the different transaction types charged by each mPSP. A key feature of the Gateway is the inquiry on existing registered wallets by users

25 https://uai.jopacc.com

directly. The inquiry engine informs users of any wallets registered under their national numbers and with which mPSP.

With the increased demand for explicit and comprehensive information on mobile wallets, JoPACC launched a Facebook page (Mahafezna) that serves as a source for all needed information on mobile wallets. The page gives access to a demo wallet, videos, booklets, and answers to frequently asked questions. The page takes visitors' questions and assists in technical issues they face in coordination with mPSPs. In addition to Facebook inquiries, JoPACC commenced operating a call center to assist users, address technical challenges, and handle complaints generally. In the same context, and in continuation of JoPACC's efforts to increase awareness, JoPACC collaborated with a number of entities to maximize knowledge dissemination. In addition to providing access to a set of awareness materials- from booklets to videos to a demo wallet- JoPACC conducted trainings to community-based organizations (CBOs) and youth centers in a number of governorates and worked with specific sectors on providing sector related information, such as the agricultural sector.

One unique milestone in financial services that JoPACC takes pride in is the launch of the newest payment system- CliQ- during the pandemic. CliQ is an instant payment system that enables instant fund transfers in Jordan. In the first stage, participation to CliQ will be exclusive to banks in Jordan, with an outlook to connect other financial service providers at a later stage. CliQ aims to increase liquidity in the Jordanian market, offer an attractive alternative to cash payments, and accelerate the cycle of cash flow in the Jordanian economy. Importantly, through CliQ, full interoperability between mobile wallets and bank accounts can be reached in the future. It is equipped with three primary services: Single Credit Transfer, Request to Pay, and Return Payments. The system was launched in June **2020**, and four banks have connected to it, with the ultimate goal of connecting all banks in the near future. CliQ supports multiple payment address information before completing the transaction, and have the option for notification of the receipt of payment by the payee and confirmation of payee.

Financial Institutions (FIs)

The development and growth of a healthy financial system is interwoven with the availability and health of the following elements: FIs, financial services, regulations, users' needs, and access to services and information. In order to better comprehend and analyze the impact of COVID-19 on the financial system in Jordan, it is vital to understand the perspective of FIs and their views on the resultant dynamics of the financial market, the effect the pandemic had on financial operations, and the change in customer behavior. To gain these insights, JoPACC conducted a survey of FIs in Jordan, including banks, payment service providers, system operators, and microfinance institutions.

Despite the lockdown, **77.8**^{//} of FIs were able to run their operations at **80**^{//}-**100**^{//} capacity. To better serve their clients, FIs have taken measures to adapt their services to the new situation. Most FIs have added consumer services to online and mobile channels and have adjusted branch operations with the increased demand for online services. There was also a notable increase in the offering of online corporate financial services, with over **44**^{//} of surveyed FIs opting for such services, which until recently were mostly traditional. Additionally, expanding e-commerce opportunities was one of the measures taken by over **41**^{//} of FIs. On another front, over **55**^{//} of FIs intensified social media communication efforts in response to the increased dependence on social media platforms for information and updates on services. Other measures included offering mobile ATMs to all areas of the Kingdom, increasing withdrawal and transaction limits, increasing financial liquidity for clients, increasing the capacity and work scope of call centers, and in very few cases decreasing withdrawal limits. Furthermore, FIs have responded to CBJ's instructions to postpone loan installments for three months and to enable donations to national funds through their applications, in addition to

slashing low balance and ATM withdrawal fees. The shift to digital services by FIs and their increased adoption by clients were key features of the pandemic in the financial sphere.

With the change in financial market dynamics, FIs endured disproportionate challenges in some business areas. 47.2% of FIs reported consumer lending being the most negatively impacted area as a result of the pandemic and the associated measures taken to limit its spread, followed successively by corporate banking, retail services, operations and MSME services, and lastly customer service and marketing. IT and security were reportedly unaffected by the situation, exemplifying the value of technology and digital services in times of crisis. Fls reported other work areas that were negatively impacted by the pandemic, such as difficulty in reaching merchants, disruption in bill payment, providing support to agents, and more general logistics. Over 78/ of FIs stated that the acceptance of digital ID and digital signature could have made coping with the pandemic's implications on financial services easier. Online mobile wallet registration was first allowed after the outbreak of the pandemic and has contributed to facilitating access to mobile financial accounts. Fls, banks and non-banks, expressed equal interest in corporate DFS, digital lending and contactless payment acceptance as services and solutions that could have mitigated the challenges faced during the crisis. Moreover, 30% of FIs referred to open banking as a solution that could have assisted them in coping with the uncertainty of the situation. The pandemic has clearly served as a wake-up call to all FIs, regulators and the government on the importance of digitizing services and the technologies and solutions that enable them, and the need to expedite the transformation.

On the other hand, the demands of clients have expectedly changed during the pandemic with the change of service offerings and clients' financial needs. The adoption and active usage of digital channels dominated the scene in financial services, increasing as a result the number of financial accounts in the country. **97**/. of FIs reported an increase in digital transactions, and mPSPs witnessed remarkable growth in mobile wallet registration. Clients have proactively approached their FIs inquiring about existing or new digital services and have opted for them promptly, whereas branch, ATM, and point of sale (POS) transactions have notably dropped. On a lower scale, **50**/. of FIs reported an increase in cash withdrawals and some reported an increase in international transfers. This comes as no surprise, as people prefer to keep their money in cash during crises out of fear of limited access to their savings. This behavior was observed in many countries in the region and the world despite warnings on reducing the use of cash to contain the spread of the virus. Another trend is the increase in international transfers stemming from the same fear during crises.

Further insights FIs presented on change in client behavior, aside from the postponement of loan installment that was enforced by the Central Bank and requested by clients, were a notable increase in shifting to digital salary transfers, and an increase in digital bill payment. This growth in digital transactions subsequently led to a rising demand on FIs' call center services, which required FIs to maximize their capacity and intensify communication on online platforms. A few banks have reported liquidations of existing deposits, which is considerably predictable given the disturbed access to finance many individuals and businesses faced.

There is agreement across the world that the COVID-19 pandemic will have lasting impact on working culture and crisis management. Besides the increased acceptance of remote working, over 83% of FIs in Jordan plan to prioritize digital capabilities expansion over branch expansion. The crisis and the shift to digital finance, both by clients and financial service providers (FSPs), have yielded the unanticipated benefit of expediting the digital transformation process in the financial sector. On another front, nearly 64% of FIs intend to put a crisis management framework in place to be better prepared for similar unforeseen situations. Following the pandemic, over 50% of the FIs are keen to introduce new products and services targeting new customer segments and increase the distribution of financial services to all governorates. Fls believe that the government has a fundamental role to play in assisting the financial sector in overcoming challenges caused by COVID-19 and paving the way for new digital solutions and enhanced digital services. Besides relaxing and enhancing regulations to enable and accelerate the digitization of financial services, the government shall transition to digital services and payments itself. Its enforcement of digital payments will advance the uptake by users and will support building an inclusive digital economy. One proposed way to encourage the shift is to allow Fls to set fees on traditional transactions and services, such as teller services, cash withdrawal, and cheques, or to offer incentives on the use of alternative digital channels. eKYC and digital onboarding of customers are key demands of the financial sector, which they have strongly referred to in the discourse on the digital transformation of the financial sector in Jordan²⁶. This requires the authorization and acceptance of digital signatures by the government to open the door for the use of digital identity in financial and other services.

Other potential beneficial measures that could be introduced by the government, which FIs believe will ease the burden on them, are lowering interest rates and reducing taxes on FIs and on new loans, as well as to reducing other taxes such as income and sales taxes. Combined with expanded lending facilities, this would provide increased liquidity to financial markets and to businesses potentially facing insolvency, which will help preserve the smooth provision of credit to the market. The financial sector also proposed establishing a Jordanian equity fund to support local businesses, and offering support to new businesses/start-ups in addition to providing interest-free loans for SMEs. Moreover, decreasing the required percentage of reserve and reducing restrictions on liquidity requirements can contribute to reviving the financial market and its stakeholders.

While COVID-19 has inflicted severe health, socio-economic, and financial pains on societies and countries, it has shed light on the value of DFS and the necessity of digitizing services and operations. The financial sector expects an accelerated growth of DFS following the pandemic and intends to expedite the digital transformation process. It urges the government to set a clear roadmap for digitizing and elevating the infrastructure's capacity to shift citizens and residents to the digital space. The financial sector believes it can take the lead in the digital transformation of the country by offering safe and easy channels for digital payments. In addition, players in the financial sector believe that substantial developments in payments can take place as a result of digital signature and eKYC. Besides the motivated supply side, the demand has tremendously grown by users, and the forced transition to DFS has broken barriers users built in favor of cash and has grown trust in DFS. The result is an increased readiness to adopt digital payments, and in order to maximize results, more effort should be invested in raising awareness and expanding access to information. The impact of the pandemic on the spread of DFS should be sustained.

The future of a digital economy is expected to offer safe, cost-efficient, timing-saving, paperless, tech-based services that are delivered through digital channels, without the need for physical presence. Enhancing the resilience of societies against future threats and crises has topped the priority ladder of governments, businesses and NGOs, and going cashless is a key milestone in the digitization process of services paving the way for a digital economy. On the country level, COVID-19 made it clear that the established electronic payment infrastructure in Jordan contributed greatly to confronting the implications of the crisis.

User Experience

It was anticipated that the rapid shift to mobile wallets by Jordanians would overwhelm users and service providers. The Jordanian National Commission for Women and the International Labour Organization (ILO) conducted a Facebook survey in collaboration with the National Committee

A Storm to Transform: An Outlook of Digital Transformation of Financial Institutions in Jordan (Rep.). (2020). Amman: Jordan Payments and Clearing Company. http://www.jopacc.com/ebv4.0/root_storage/en/eb_list_page/a_storm_to_transformation_digital_transformation_of_fis_report_2020_ (may_2020).pdf

on Pay Equity on the use of mobile wallets for salary transfers in the private sector to assess the seamlessness of opening wallets online and user readiness for mobile salary transfers in the sectors of education, health and industry. Over 2,450 persons were surveyed from all governorates of Jordan, 20^{-/.} of whom were females and 80^{-/.} males. The key output of the survey was that 58^{-/.} of Jordanians faced difficulties in using mobile wallets, which could hinder the uptake of mobile wallets and their desired objectives.

57% of those surveyed couldn't register a mobile wallet online, while 13% described the experience complicated, whereas 30% found it easy. This is mostly related to low access to information, where over 75% of respondents didn't receive sufficient information or didn't find available information adequate. The other reason for the challenges faced in using mobile wallets is the technical experience and technical assistance users receive from service providers. Only 17% found call centers of mPSPs to be responsive and capable of solving raised issues. The survey shed light on the need for intensified knowledge dissemination and awareness efforts, especially on governmental platforms that people rely on for trusted information. It also calls on CBOs and labor unions to raise awareness of workers to protect their rights and encourage electronic salary transfers.

JoPACC reported more problems that were unveiled through complaints received by its call center and its social media channels. There have been many cases of wallet registration with wrong entry of data, which causes challenges in receiving aid on the wallet or in canceling the wallet. A more pressing issue was wallets opened on recycled SIM cards. When a mobile number is disconnected and canceled, the mobile wallet registered on it is not automatically canceled. Therefore, the new owner of the sim card ends up having a wallet tied to their mobile number under a different personal identification number, which complicates the cancelation process of the wallet. Additionally, there have been mobile wallet fraud attempts and some users fell victim to them. JoPACC, the CBJ and FSPs worked together to address all emerging issues and complaints, and the number of complaints has significantly dropped after two months following the lockdown.

SECTION III: Digital Payments in Numbers

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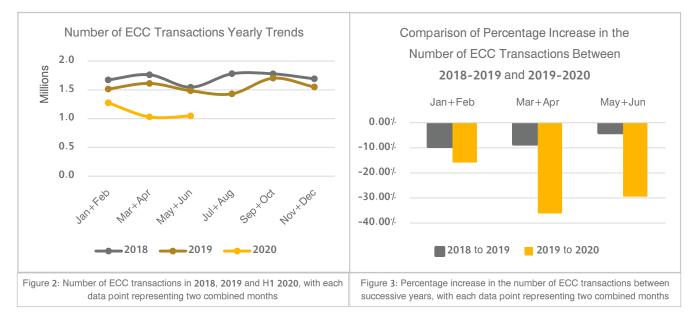
The COVID-19 pandemic altered the lives of people living in Jordan; with tight lockdowns and extreme health measures implemented to contain the virus, daily life took on a new form. The wave of change did not pass over the financial sector nor did it leave the Kingdom's payment systems unchanged. With the lockdown rendering cash payments hazardous and extremely difficult, users turned to other payment systems to meet their financial obligations. These systems include ones owned by JoPACC.

JoPACC currently owns five payment systems: The ECC, The ACH, JoMoPay, eFAWATEERcom, and the Instant Payment System (CliQ) which was launched during Phase 3 (starting the 4th of June) of the pandemic. These systems underwent different degrees of change and showed different levels of resilience.

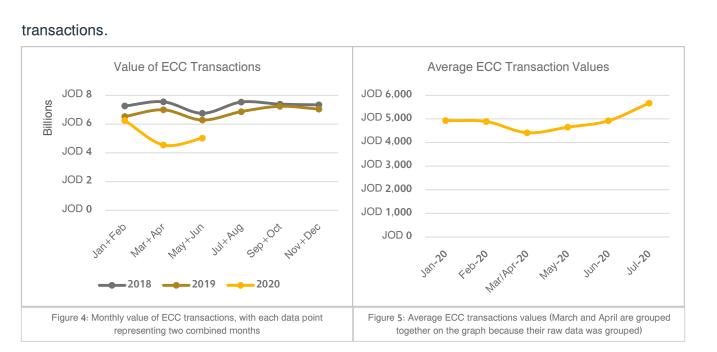
Payment and Clearing Systems

1) The Electronic Cheque Clearing System (ECC)

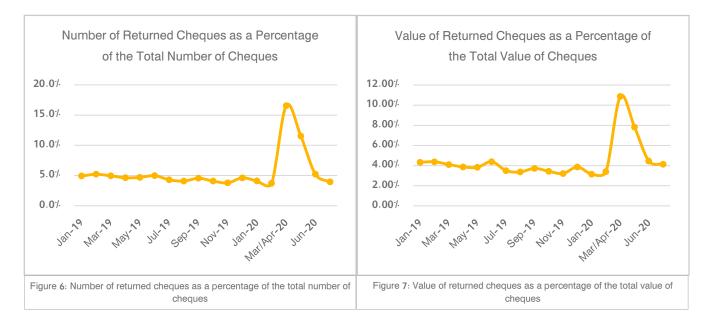
The usage of the ECC has in general decreased in **2020** compared to previous years, as evident in figures **2** and **3**. The number of ECC transactions reached its lowest value in the past two years in March and April of **2020**. Usage saw a slight increase in May and June, but the increase does not compensate for the drop observed in March and April. Although decreases were observed in previous years, they were part of a pattern of monthly fluctuations reflecting the maturity of the system and were not unprecedented to the same extent observed in **2020**. The lower transaction numbers on the ECC are likely the result of the difficulty of transacting with paper cheques during phases **1** and **2** (spanning the **17**th of March-**28**th of April, and the **29**th of April-**3**rd of June respectively), as well as the halting of commercial activities across various economic sectors, which limited the number of business transactions taking place through cheques.



The value of transactions, shown in figure 4, exhibited a similar trend to the number of transactions. The monthly value of ECC transactions reached its lowest value in the past two years in March and April of **2020**. However, the increase in May and June of **2020** in the value of transactions was more significant than that for the number of transactions; this is clear when looking at the increasing average transaction value in figure 5. The trends seen in **2020** are most probably the result of measures taken during phase **1** and **2**, in March and April, which halted most commercial activity in various economic sectors and reduced the number of high-value business transactions. The increase observed in May and June corresponds to the end of phase **2**, which saw the most restrictions on movement and economic activities, and the start of phase **3**, which included the recovery of some economic sectors and the resumption of a proportion of high-value business

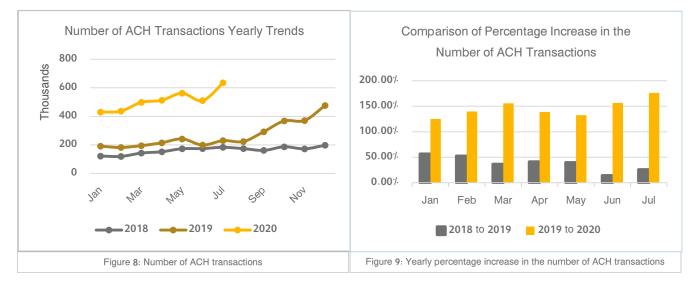


Phase 2, which included the pause on the majority of commercial activities across multiple sectors, was expected to inevitably increase the financial strain on companies, businesses, and individuals who usually deal with cheques. Therefore, the CBJ introduced new measures to deal with returned cheques, as explained in section 2 of this report. These new measures reduced the severity of the consequences faced by individuals and companies who issued returned cheques, with the highest level of leniency given to cheques issued between the end of March and mid-April. The implementation of this measure is evident through the number and value of returned cheques on the ECC as a percentage of the total number and value of cheques. The percentage of returned cheques, shown in figures 6 and 7, saw a huge increase in March and April 2020; it increased from around 3-4½ in the months before March to around 16½ of the total number of cheques in March and April, and from around 4½ to 11½ of the total value of cheques. The proportion of cheques that bounced due to insufficient funds also increased from around 60½ to 90½ of the total bounced cheques.

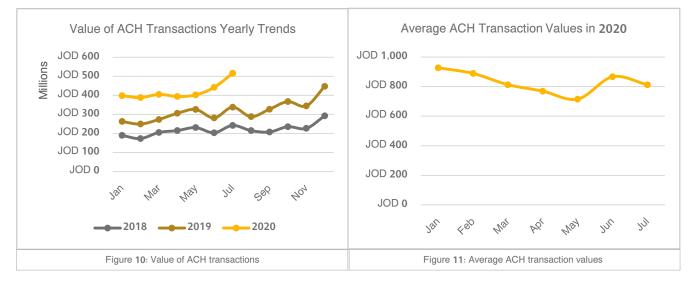


2) The Automated Clearing House (ACH)

The usage of the ACH has generally increased at a higher rate in **2020**, in comparison to previous years, as shown in figures **8** and **9**. The number of transactions saw some degree of fluctuation, which can be segmented into three primary stages. The first of which was an increase during Phases **1** and **2** (between March and May **2020**); this was likely due to the high restrictions on mobility, which had a positive impact on the number of transactions through digital channels. The second stage was a sharp decrease during phase **3** (June **2020**); this decrease coincided with the easing of the lockdown and the increase in people's mobility. Finally, the third stage saw a sharp increase in July **2020** reaching an all-time high, this might be due to the resumption of activity across most economic sectors across the kingdom resulting in more frequent transactions.



The value of ACH transactions, shown in figure **10**, exhibited a different trend from the number of transactions. The value was relatively stable between January and May **2020**, after which large increases were observed in June and July. The stabilization of the value of transactions despite the increase in the number indicates that lower value more frequent transactions were occurring through the system, as shown by the average transaction values in figure **11**. These lower-value transactions can possibly be due to companies switching to the ACH to distribute salaries, due to the halting of large business transactions that took place during phase **1** and **2**, or due to smaller more personal payments occurring on the system. The increase observed during phase **3** (June **2020**) could indicate that larger business transactions through the system resumed following the easing of the restrictions imposed in phases **1** and **2** and the resumption of most businesses' operation during phase **3**.



To better understand if the decrease in the average value of ACH transactions was the result of salary transactions, the volume and value of salary transactions were compared with the other transaction types taking place on the system. Indeed, the number of salary transactions, shown in figure 12, increased during phases 1 and 2. However, while the number of salary transactions increased, the value of salary transactions, shown in figure 13, remained relatively stable; this could either indicate an increase in salary payments being made through the ACH (which were lower in value, offsetting the average transaction value) or it could be the observable effect of Defense Law (No. 6), which allowed the reduction of salaries up to a certain percentage during the closure of economic sectors. A combination of both options seems plausible since the value of salaries in June did not differ significantly from the preceding months despite the large decrease in the number of transactions, which would indicate that salaries might have been returned returned to the original values when companies resumed operations. Another possibility is the shifting of June salary transactions to the beginning of July, which could explain the spike observed during July for both the value and the number of salary transactions. Looking at other transactions shows that their number, shown in figure 12, was relatively stable, but their value, shown in figure 13, saw a large increase after May 2020, which indicates the resumption of high-value, low-frequency business transactions during phase 3.

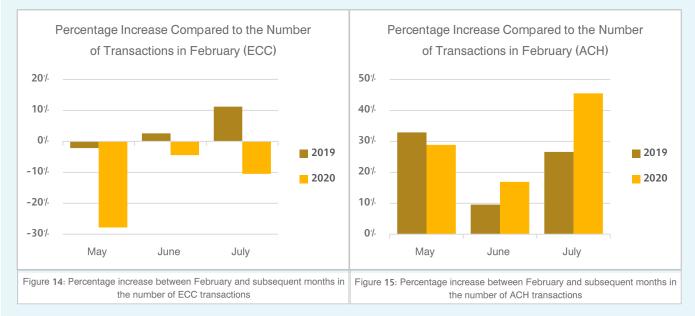


The ECC and the ACH (ECC VS ACH)

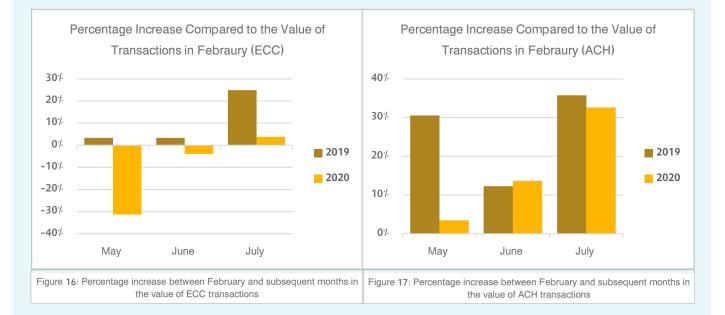
Given that a substantial portion of transactions on the ACH and the ECC represent business and corporate payments, they are assumed to be competing for similar payment categories. The number of transactions on the ECC saw a decrease in **2020** while the number of transactions on the ACH saw an increase. These changes affected the market share of the ECC. In February of **2020**, in what this report considers to be phase **0** (between the **4**th of March and the **16**th of March) of the pandemic, the ECC represented **58**% of the market share, but in July, after the full reopening of economic sectors, it only represented **47%**. So, a decrease of about **11%** in the ECC's market share was reported. This is compared to a **2%** decrease in the same period in **2018**, and a **2%** decrease in the same period in **2019**. This indicates that the decrease seen in **2020** is much larger than what has been seen previously and poses strong evidence that the ACH is more resilient to crises than the ECC.

The percentage increase (calculated as the difference between the two months, divided by the value of the benchmarked month) in the number and value of transactions between February, the month before the onset of pandemic related measures, and May, June, and July, the months after the end of the highest restrictions on mobility and economic activities, was compared to the percentage increase in the number and value of transactions across the same period in **2019**, for both the ACH and the ECC (figures **14** & **15**). This comparison aims to study whether the effects caused by the lockdown persisted on both systems between the different phases of the lockdown and after the easing of restrictions. The percentage increase in **2019** was studied and compared to that in **2020** so that they could act as a benchmark for the usual percentage increases on the systems between the different months, since **2019** was not affected by circumstances as extreme as a pandemic.

Starting with the number of transactions on both systems, the percentage increase between February and subsequent months in ACH transactions exhibited a similar trend to **2019** with a slightly lower percentage increase in May of **2020** (compared to **2019**) and higher degrees of growth in June and July of **2020** (compared to **2019**). This indicates that after the end of the strictest phases of the lockdown, the ACH was able to recover and continue with the expected levels of monthly growth. On the other hand, the percentage increase between February and subsequent months in ECC transactions strayed from the pattern observed in **2019** and showed much higher degrees of negative monthly growth, and while the percentage decrease was less severe in June and July, the ECC was not able to fully recover and return to the pattern observed in **2019**.

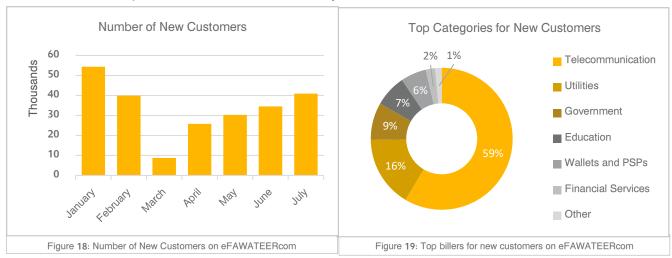


As for the value of transactions on both systems, the ACH performed better than the ECC but showed less resilience than it did with the number of transactions (figures 16 and 17). The patterns observed on both the ECC and the ACH strayed from patterns observed in 2019. In May of 2020, the ACH exhibited a fraction of the growth seen in May 2019. This shows that despite the increase in the value between February and May, phases 1 and 2 still had a negative impact on the growth of value on the ACH. However, the ACH was able to resume normal degrees of monthly growth during phase 3 (June and July), which is another testament to its resilience. On the other hand, the percentage increase between February and subsequent months in ECC transactions strayed from the pattern observed in 2019 and showed higher degrees of negative growth in May and June. However, the percentage increase was becoming less negative when moving from May to July. This could indicate that the ECC was beginning to recover its normal levels of monthly growth, at least partially, when it comes to the transaction values processed through it.

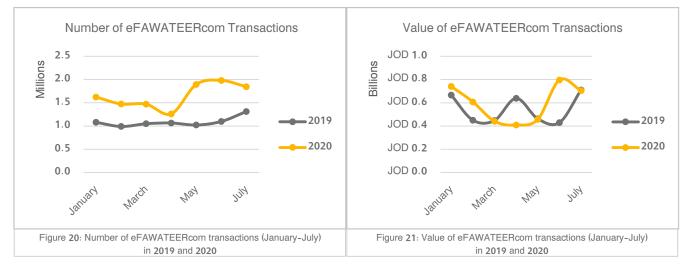


3) The Electronic Bill Presentment and Payment System (eFAWATEERcom)

Usage of eFAWATEERcom has increased substantively since the start of phase 1. The number of new customers, shown in figure 18, however, showed a significant drop during phases 1 and 2, which has recovered gradually by June 2020. New billers saw a large degree of growth with 64 new billers. Approximately 100,000 new customers joined the platform in the period between March and June 2020. The new customers on the system used it mainly for telecommunications and utilities, as shown in figure 19, rather than for services exclusive to eFAWATEERcom, as was common for new customers in previous years. This highlights that new customers' migration to the eFAWATEERcom platform came out of necessity.

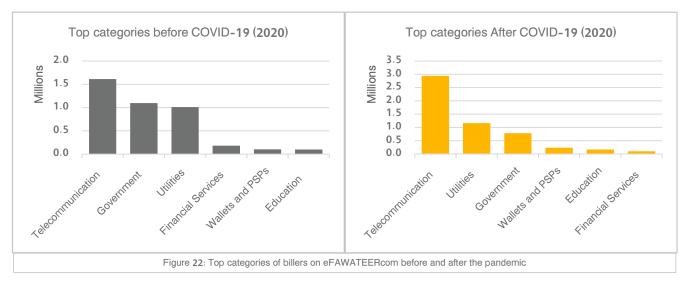


While overall usage has increased, usage across individual months, shown in figures 20 and 21, during 2020 fluctuated, reflecting the measures taken by the government concerning the pandemic. January and February exhibited trends similar to previous years while March and April exhibited a decrease in the number and value of transactions, corresponding to phase 1; the time period when the highest restrictions on movement and economic activity had taken place. The decrease observed in March and April was compensated in May and June where the number and value of transactions on the system reached their peak, since its launch in 2014. The decrease in March and April could be associated with the measures introduced by the government. The expected worsening economic conditions of individuals as a result of the lockdown led the Jordanian Government, The National Electric Power Company, and Jordan's water companies to extend the due date for bill payments. For example, the deadline to submit taxes was moved from April to the end of June, and the due date for water and electricity bills for March and April was moved to May. This led to the shift of bills on eFAWATEERcom from March and April to the following months, which would explain the increase observed in May and June.

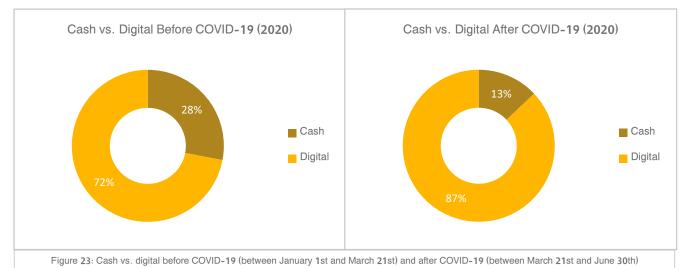


Transaction values on eFAWATEERcom, shown in figure **21**, exhibited a trend similar to the number of transactions, which is reasonable since payment categories are predefined on the system and fall within certain value brackets.

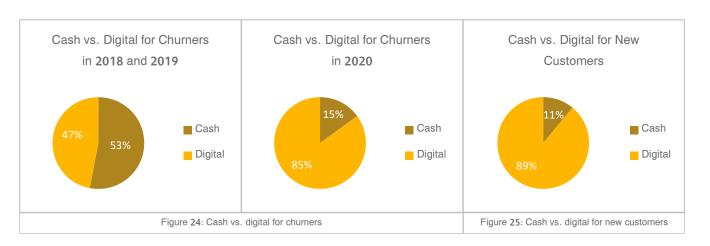
The change in trends due to the extension of deadlines for some bill payments is further supported by the top categories of billers following phases 1-3, shown in figure 22, which included more essential services and fewer governmental billers, highlighting the billers that did not extend payment due dates or only extended them until May. In fact, since the start of phase 1, governmental bills and entities were no longer part of eFAWATEERCom's top billers.



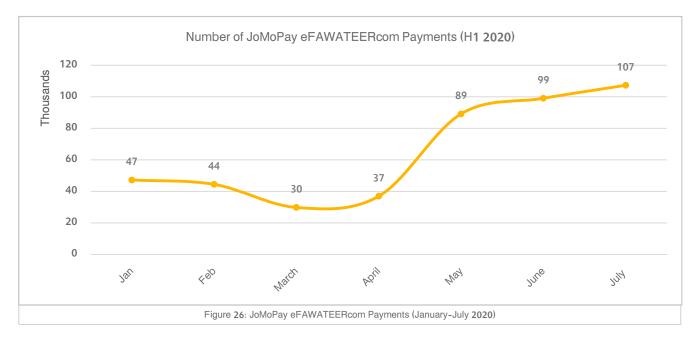
Cash-based payments, which are those made through eFAWATEERcom agents, ... significantly decreased on eFAWATEERcom, as shown in figure 23, where the percentage of cash-based transactions decreased from 28% before the start of the full lockdown on March 21st to 13% after and until the end of June. This is another indicator of the resilience of DFS in the face of crises when compared to cash.



The impact of the pandemic on cash-based transactions is even more evident when looking at newly added customers and one-time users from **2018** and **2019** who returned during the phases **1-3** (churners), where digital transactions by new customers in **2020**, shown in figure **25**, represented **89**% of their total transactions and digital transactions by churners, shown in figure **24**, represented **85**%, compared to **47**% in **2018** and **2019**. These numbers indicate that at least some of these customers joined the system or reused the system due to the difficulty of transacting in cash during phases **1-3**.

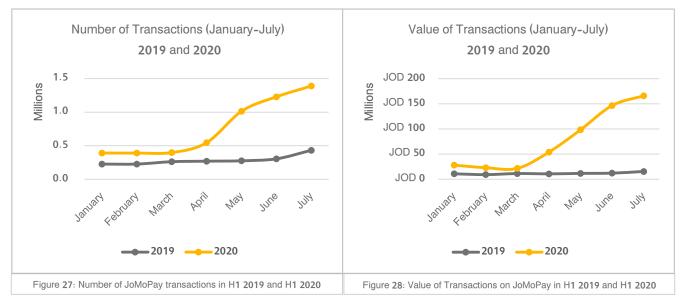


Digital payments on eFAWATEERcom can be made through JoMoPay. As seen in figure 26, the number of payments made through JoMoPay exhibited similar behavior to the overall number of payments on eFAWATEERcom, where the number of transactions dropped significantly in March and April but increased notably in May and June. These fluctuations in the number could be due to the same reasons that affected the entire system, but could also be due to the distribution of aid to mobile wallets, which increased the number of wallet users.

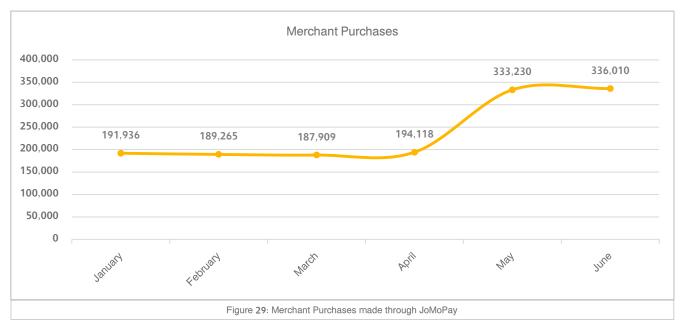


4) The Jordan Mobile Payments Switch (JoMoPay)

Similar to the other digital payment systems, the usage of JoMoPay increased significantly across phases 1-3. This change is clearly evident by the rise in the number of active wallet users, where the percentage increase in the number of wallets was almost 40% from 619,895 mobile wallets in March to 1,039,707 in July. As seen in figures 27 and 28 below, where a sharp increase is observed after March 2020. This increase was relatively driven by the distribution of aid from the NAF through mobile wallets, the increased media coverage of mobile wallets which led to increased awareness of the platform, and the difficulty of transacting in cash during phase 1.

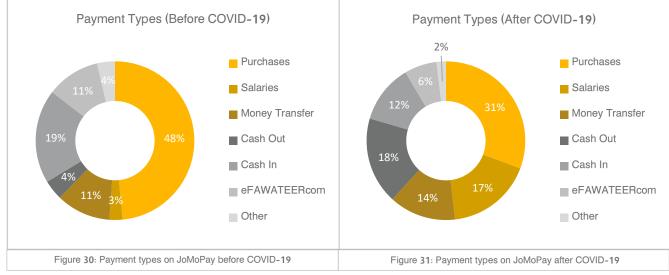


While the number and value of transactions increased on JoMoPay, merchant purchases made through JoMoPay (figure 29), saw a slight decrease in March 2020. In phase 2, where the lockdown and social distancing measures were eased, a significant increase in merchant payments took place. This is an indicator of the positive impact that the pandemic had on trust in digital payments and FIs.

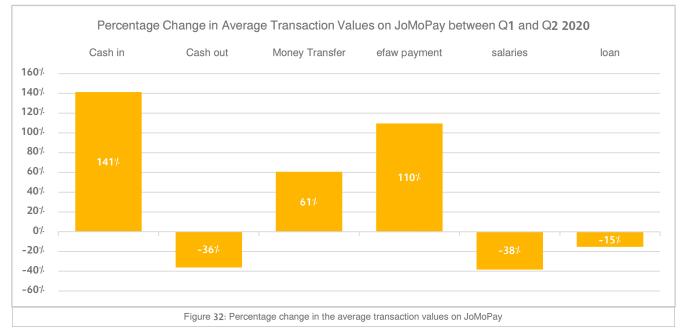


Usage increased for all payment types between phases 1 and 3. However, the percentage increase varied for different payment types, which resulted in a shift in the market utilization of each type, as seen in figures 30 and 31 below. Salaries and Cash-out saw the largest percentage increase. This was likely due to the distribution of aid through JoMoPay, which resulted in an increase in cash-

out transactions because a large portion of beneficiaries only used the wallet as an instrument to receive cash and did not use it for digital services. Another category that had a large percentage increase was money transfer, indicating an increase in the utilization of digital transactions either due to the difficulty of transacting with cash or the availability of digital liquidity due to the distribution of aid through wallets.

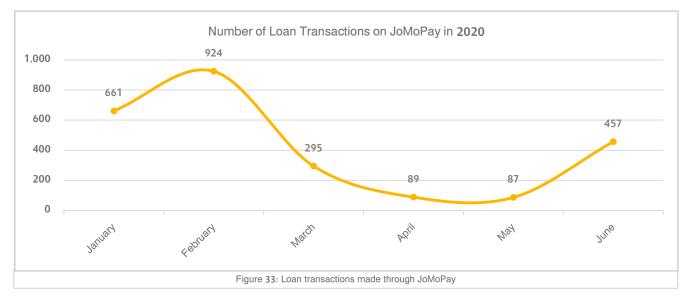


Average transaction values increased on the system due to the sharper increase in the value of transactions when compared to the increase in the number of transactions. However, as shown in figure **32**, three categories saw a decrease in the average transaction value: cash-out, salaries, and loans. The percentage decrease in the average value for cash-out transactions is likely due to the larger volume of cash-out transactions. This was largely caused by the distribution of aid to recipients who used the wallet as a method to receive aid from the NAF, which they instantly cashed out. The percentage decrease in salary values is likely due to the categorization of aid payments as salaries in the JoMoPay system. Looking at the percentage decrease in salaries and the percentage decrease in cash-out transactions in figure **32**, both values are approximately the same; this strongly indicates that the decreased ticket size of cash-out transactions was due to aid payments, which in turn shows that NAF payments were indeed responsible for the changes observed in cash-out transactions.

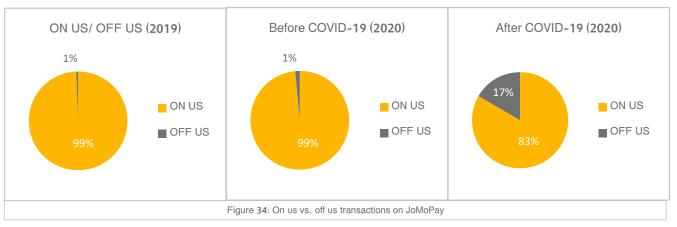


As for loans, the decrease in average value, shown in figure 32, was likely due to the worsening

economic situation in the Kingdom that affected both FIs and individuals. The negative impact of the pandemic on loans is clearly evident in figure 33, where the number of loan transactions dropped significantly in March, April, and May. This is consistent with the reported findings of JoPACC's survey of FIs that are covered in section 2 of this report, which indicated that consumer lending was the most negatively impacted area during the pandemic. The number of loan transactions started increasing again in June, which could indicate a return to normal activity.



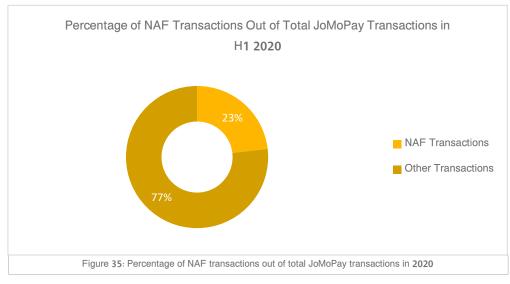
Another interesting effect of the pandemic on JoMoPay is the increase of effective interoperability in the market (while the JoMoPay switch guarantees interoperability, effective interoperability describes the utilization of the technical interoperability offered by the switch. This measure allows better understanding of the flow of liquidity between payment service providers). As shown in figure **34**, the percentage of off-us transactions (transfers made between customers of different PSPs) increased from **1**[/]. before COVID-**19** to **17**[/]. after its onset. This increase likely resulted from the increase in the number of money transfers made on the system, the increase in awareness of the platform and its capabilities, and the increase in the number of users. Another likely reason for this increase is the way that aid was distributed; NAF transferred the money to a number of PSPs who then transferred the money to their own customers and the customers of other PSPs.



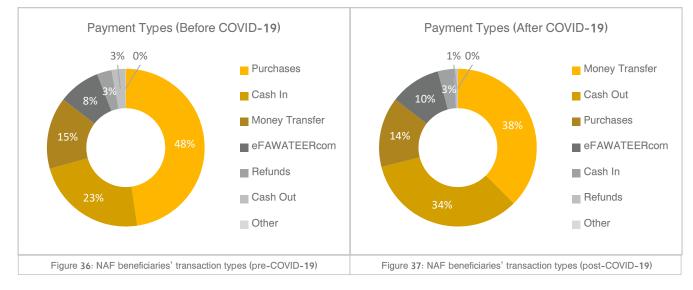
The National Aid Fund and JoMoPay

The majority of the changes observed on JoMoPay in **2020** were attributed, at least in part, to the distribution of aid from the NAF through the system. To further study this assumption, the transactions of NAF and its beneficiaries on the system were studied more closely. As shown in figure

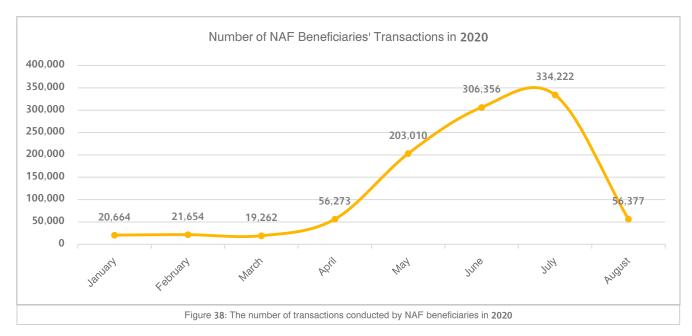
35, NAF and its beneficiary transactions represented **23**% of the total transactions on JoMoPay in the first half of **2020**. The majority of these transactions started after March but still represented almost a quarter of the total transactions since January. This shows that NAF transactions represented a significant portion of the transactions on the system, which makes it very likely that they significantly influenced the trends seen on the system, especially after March.



While a large portion of NAF transactions took place on the system after March, there were still some transactions that occurred between January and March. A closer look at the behavior of NAF beneficiaries that received aid in phase 1, and the ones that received aid during and after phases 1-3 through JoMoPay, showed a noticeable change in behavior, as indicated by the distribution of transactions across different payment types in figures 36 and 37. The beneficiaries during and after phases 1-3 showed less interest in using the system with 34% of transactions being cash-out transactions, up from 3% of beneficiaries who received aid before phase 1. The average value of these cash-out transactions was very similar to the value of the aid payments disbursed through the system. This increase in cash-out transactions likely resulted from the addition of beneficiaries who were not familiar with the use of digital financial instruments such as mobile wallets, except for cash-out purposes. This is consistent with some of the findings and assumptions of this report. The relative decrease in merchant payments and cash-in is likely due to the same reason since the beneficiaries who only used the platform to get cash are less likely to use the system for other purposes or to cash more money into their wallets. The interesting observation was the increase in person-to-person (P2P) money transfers, where mobile wallets likely became a reliable method for the transfer of domestic remittances for a substantial pool of its users.



The number of transactions conducted on JoMoPay by NAF beneficiaries varied widely in **2020**. The number of transactions, shown in figure **38**, started increasing after March and experienced a large jump between April and May. This is consistent with the progress of NAF payments, since this coincided with the disbursement of most of the aid payments. However, after July, a large drop in the number of transactions is observed. This could indicate that a significant portion of NAF beneficiaries only used the system to receive aid payments, therefore it is possible that they will not become active users of mobile wallets once aid payments are reduced or halted. Thus, it is likely that at least some of the changes seen on the system will not persist in the future.



REFLECTIONS BY MS. MAHA BAHOU, CEO OF JOPACC





Just as Jordan's first responders and first-liners played an integral role in mitigating the effects of the COVID-19 pandemic on Jordan, so did its digital payments infrastructure. Generally speaking, payment infrastructures have the same significance as any other type of infrastructure. Jordan's economy and society would have experienced severe negative consequences without widespread internet access, or transportation infrastructure. Similarly, an advanced, robust, and resilient payments infrastructure should be regarded as an integral component of any economy, and Jordan's payments infrastructure played a significant role in mitigating the effects of the COVID-19 pandemic. Without the infrastructure that we have today, tens of thousands of vulnerable Jordanians would have been financially isolated. This would have had devastating effects on the macro-economic level.

The pandemic has proven the cruciality of financial inclusion in increasing resilience during times of crisis, where access to cash may be hindered, putting basic needs and livelihoods at risk. In Jordan, mobile money has facilitated access to governmental aid during the pandemic to more than **260,000** families who depended previously on cash. The existing digital financial infrastructure has facilitated the transition from cash to mobile money and has contributed to minimizing the burdens these beneficiaries would have had to endure otherwise.

During this pandemic, a significant number of Jordan's financially excluded individuals had to use DFS. Since this switch from cash to DFS was both rapid and inorganic in nature, a number of challenges emerged in providing high quality services to customers. In absorbing these challenges, we strived to expand our connection to the end users through a dedicated hotline to address user complaints, in addition to an awareness campaign through social media, which was highly interactive. Sustainable financial inclusion heavily relies on positive experiences as well as financial literacy, since it allows users to understand the benefits of digital financial services and actively use these services. Therefore, to successfully achieve sustainable financial inclusion, providers should ensure that they provide high quality and easy to use services to customers along with comprehensive access to information. This would benefit individuals, providers, and the economy as a whole.

That being said, one important missing piece of the puzzle, which would have had a noticeable impact on financial institutions' ability to reduce the effects of the COVID-19 pandemic, is the existence of a robust functional digital financial identity for residents of Jordan. The Central Bank of Jordan permitted digital onboarding to mobile wallets during the pandemic, however, most banks were not able to undertake the same procedures. Unlike mobile wallets, bank services require higher standards of Know Your Customer (KYC) procedures. Through a functional financial digital identity mechanism, banks would have been able to offer their full range of service to individuals without having to sacrifice the safety and integrity of the financial sector. Furthermore, Jordan is falling behind in the digitalization of credit and lending capabilities. Although the Central Bank empowered banks to expand their available credit facilities through increased liquidity, clients (both legal and individuals alike) were unable to access these services due to the restrictions on mobility. In order to ensure that such credit facilities truly reach their potential in future crises, financial institutions need to invest in the digitalization of their credit and lending capabilities, and the Central Bank should ensure that the regulatory environment is enabling of such developments, the most important of which at the time being is the Digital Signature as it covers legal aspects in the application for credit.

Our financial infrastructure was not singled out of the pressures exerted by the COVID-19 pandemic on the overall Jordanian economy. In fact, the ECC, which has the highest value of transactions compared to other payment systems in Jordan, suffered a substantial blow. While the value of transactions was decreasing in 2019 and beginning of 2020, there was a significant drop in the number and value of cheques in addition to an increase in the percentage of returned cheques as a result of the pandemic. Taking these results into consideration, the risks of the concentration of these transactions on the ECC have become clear. Due to the nature of transacting in cheques, had there been a prior shift to more digital means of payment by businesses and individuals alike,

the financial effects of the COVID-19 pandemic could have been lessened. There is no denying the importance of cheques on the Jordanian economy. However, we currently possess other means of large value payments, which extend higher protection to payer, payee and the overall financial ecosystem. A possible challenge for the future is to better understand the value perceived by consumers of cheques over digital payments. This presents an opportunity to further enrich and develop our digital payment offerings, to better meet the demands and expectations of the consumers.

The COVID-19 pandemic has put paramount pressure on financial services and financial service providers. In less than four months, over half a million users were onboarded digitally to mobile wallets and the demand on technical assistance, customer service and financial awareness has subsequently intensified. JoPACC's payment infrastructure and conducted enhancements as well as the maximized human resources performance have catered to the increased demands on digital financial services. Moreover, our readiness to fully operate remotely has enabled us to launch a new payment system -CliQ- during the pandemic while working from home. The pandemic emphasized the need for flexible work arrangements and digital operations inside organizations. It has further shed light on the importance of digital services and the growing need to expand them. JoPACC will remain committed to enhancing the digital payment infrastructure in the kingdom and introducing digital financial solutions that will facilitate access to and encourage active usage of financial services. JoPACC is also dedicated to raising digital financial awareness and facilitating the financial journey of new users. Our strategy has been and will continue to be driven by our commitment to the National Financial Inclusion Strategy and to increasing financial inclusion in the country. Our goal will remain an inclusive, globally competitive, and resilient Jordanian Digital Economy.

