



# **PROJECT SAND DOLLAR:**

**A Bahamas Payments System Modernisation Initiative**

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## Table of Contents

1	Executive Summary.....	3
2	The Bahamian Payments System & Financial Access .....	4
2.1	Goals of the Modernisation Initiative .....	4
2.2	Existing Measures of Financial Inclusion and Access.....	4
2.3	Baseline Financial Inclusion Data from Exuma .....	6
2.4	Tailoring Financial Inclusion Intervention.....	7
3	Advancing Payments Infrastructure Development.....	7
3.1	Automated Clearing Arrangements .....	7
3.2	Non-Bank Direct Participation in Settlements.....	7
3.3	Strengthening Ease of Access to Financial Services.....	8
4	Project Sand Dollar.....	9
4.1	Key Specifications of the Proposed Solution .....	10
4.2	Monetary Policy and Financial Stability Safeguards .....	11
4.3	The Roles and Contribution of Key Stakeholders .....	12
4.4	Tailoring the Digital Currency Experience.....	14
4.5	The Digital Payment Process.....	15
5	The Bahamas' Implementation Plan .....	15
6	Gauging Potential Benefits against Costs .....	16
6.1	Improved Financial Inclusion .....	16
6.2	Reducing the Ill Effects of Cash Usage .....	16
6.3	Reduced Transactions Costs .....	17
6.4	Strengthened Economic Surveillance .....	17
7	Education and Marketing Strategy .....	17
8	Conclusion.....	18
	Appendix : .....	19
	Selected Bibliography .....	19
	A1. Tables and Charts .....	20
	A2. Tiered KYC Requirements. ....	23
	A3. Market Research on Exuma.....	27



## 1 EXECUTIVE SUMMARY

The Central Bank will introduce a digital version of the Bahamian dollar, starting with a pilot phase in Exuma in December 2019, and extending in the first half of 2020 to Abaco. This initiative has acquired the name Project Sand Dollar, with the sand dollar also being the name assigned to the proposed central bank digital currency (CBDC). This is a continuation of the Bahamian Payments System Modernization Initiative (PSMI), which began in the early 2000s.

The Bahamian PSMI targets improved outcomes for financial inclusion and access, making the domestic payments system more efficient and non-discriminatory in access to financial services.

Although average measures of financial development and access in The Bahamas are high by international standards, pockets of the population are excluded because of the remoteness of some communities outside of the cost effective reach of physical banking services. More onerous customer due diligence standards for AML/CFT international tax compliance have also resulted in forms of exclusion, including more recent responses to tighter “know your customer” (KYC) systems introduced to preserve international correspondent banking relationships. As recent policy and regulatory reforms have begun to tackle these barriers, the Central Bank is intent on accelerating payments system reform, admitting new categories of financial services providers and using the digital payments infrastructure to make the supply of traditional banking services accessible to all segments of the population.

Recent surveys document that as part of a financial literacy campaign, there is room to improve both knowledge and awareness of financial products and responsible financial behavior. Opportunities also exist to reduce transaction costs for businesses and consumers. Feedback from Exuma, show a high penetration of mobile phone usage, and a likelihood that a higher share of the population would be willing to use digital financial services including electronic payments. The public though will need more assurances around the safety of conducting online transactions. The digital currency design and public education will tackle these issues.

Most of the benefits of introducing a digital currency are still unquantifiable. However, they include a potential suppression of economic costs associated with cash usage, and benefits to the Government from improved expenditure and tax administration systems. It is expected that the Government, as participant and user, would be a strong promoter of digital payments adoption, alongside non-bank payment services providers as the initial lead intermediaries in this space.



As the pilot progresses in Exuma, the Central Bank will simultaneously promote the development of new regulations for the digital currency, and strengthen consumer protection, especially around data protection standards. The Bank will also advance reforms to permit direct participation of non-banks in the domestic payments system. Early passage of the new Central Bank of The Bahamas Bill will support the creation of some regulations, while additional reforms will be possible under the existing Payment Systems Act.

## 2 THE BAHAMIAN PAYMENTS SYSTEM & FINANCIAL ACCESS

### 2.1 Goals of the Modernisation Initiative

The Bahamian Payments System Modernisation Initiative (PSMI), of which the digital currency project is a recent component, targets collectively improved outcomes around financial inclusion and access, making the domestic payments system more efficient, non-discriminatory in access to financial services across the entire archipelago. The main goals are that 100% of the population has access to digital payments services; universal access to banking services of a deposit account maintenance nature; a reduction in the size of legitimate but unrecorded economic activities that take place in the informal sector; and full admission of micro, small and medium-sized businesses into the digital space. The positive outcomes are also explicitly aimed at strengthening national defenses against money laundering and other illicit ends, including activities that thrive in cash intensive environments. More universally enabled access to electronic payments and to digital financial services also dovetails with the strategy to deliver government services through digital channels, thereby improving tax administration and increasing the efficiency of spending.

### 2.2 Existing Measures of Financial Inclusion and Access

Average measures of financial development and access, mask the archipelagic disparities in access to basic financial services, and similarly highlight the costly nature of delivering services through physical channels in The Bahamas. Relative to the size of the economy, the domestic deposit base of approximately \$6.5 billion and outstanding credit to the private sector at \$6.2 billion equate to respective 60.5% and 57.9% of GDP in 2018. Relative to the size of the population, The Bahamas has the 35th highest density of bank branches in the world and the 15th highest density of automated banking machines. However, there are significant gaps in who has access.<sup>1</sup> Given the dispersed geography, with pockets of sparse populations, many rural, Family Island communities have limited or no access to these physical modes of delivery, with

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<sup>1</sup>See IMF Financial Access Survey database. <https://data.imf.org/?sk=E5DCAB7E-A5CA-4892-A6EA-598B5463A34C>.



services being totally unavailable, or only through electronic channels. Moreover, the branch network has been scaled back in response to the rising costs of maintaining such operations. When coupled with other difficulties in establishing banking relationships, these pockets of the Bahamian domestic environment therefore remain captive to sole reliance on cash transactions, with consequent exposure to opaque or illicit activities that thrive in such settings, and with costs—particularly to the public sector—to deliver cash-based assistance or payments.

The domestic financial system has also discriminated in access through both official policies and the in-house practices of licensed institutions. Even as policies have been relaxed, the system has only transitioned gradually to a more accommodating state, as anecdotal feedback from the 2018 and 2019 reforms underscore.<sup>2</sup> The 2001 suite of legislation that addressed global anti-money laundering (AML) concerns and subsequent years strengthening of the Bahamian international tax cooperation arrangements introduced onerous customer due diligence systems that effectively excluded or slowed basic financial access.<sup>3</sup> Customer due diligence standards also tightened, in more recent years, as commercial banks responded to more demanding terms on correspondent banking relationships (CBRs). This followed international assessments that placed the Bahamian AML/CFT regime at higher risk. Until 2018, Exchange Control Regulations also maintained broad exclusions on non-residents' access to Bahamian dollar deposit accounts, when these might have facilitated domestic payments transactions.<sup>4</sup>

Additional evidence on financial inclusion were obtained from a baseline survey conducted in 2018,<sup>5</sup> similar to other surveys used for OECD countries. This highlighted the gap between which financial products were utilized, versus those of which they were made aware. The survey<sup>6</sup> indicated both a high degree of awareness and access to basic deposit facilities in The Bahamas, although that has not translated into increased level of use of such products. About 93% of the surveyed persons had knowledge of savings accounts and 85% knew of checking accounts compared to a lesser 80% and 70% of the same individuals who used such instruments. Further from a payments perspective, only 48% of individuals had access to credit card facilities, against awareness of these by 89% of those surveyed. Other measures of inclusion also exposed gaps,

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<sup>2</sup> Banks did not all implement the adjusted customer due diligence standards at the same time.

<sup>3</sup> Just up to 2018, a common requirement to establish a personal deposit account at domestic bank was for the applicant to produce multiple forms of official identification, evidence of employment and proof of physical address. Risk-based application of procedures that would have eased constraints on the majority of domestic clients started to be endorsed in the 2018 legislative reforms.

<sup>4</sup> Evidence of a permit to reside or work in The Bahamas was a requirement in order for a non-resident to maintain a Bahamian dollar deposit account.

<sup>5</sup>The Bahamas Financial Literacy Results 2018

<https://www.centralbankbahamas.com/news.php?id=16402&cmd=view>

<sup>6</sup> See a snapshot of the results in the appendix.



in the use of investment and insurance products, including pensions (see Table 1 in the Appendix).

The Central Bank's survey also uncovered evidence of self-exclusion from banking services partly because of the customer due diligence requirements, and in the case of businesses, exclusion from use of electronic transactions because of the costs. In particular, in cases where individuals reported not having a bank account, some indicated that it was due either to the inability to, or the inconvenience of satisfying KYC documentary requirements. Meanwhile, anecdotally, businesses that either reported not accepting electronic payments or still had a preference for cheque writing as opposed to wired payments, commonly cited the costs of the electronic options as an inhibitor.

### 2.3 Baseline Financial Inclusion Data from Exuma

In the Summer of 2019, the Central Bank also conducted a targeted baseline survey on financial inclusion and access for Exuma, alongside new data for the rest of The Bahamas, which provides a context for consumer education and awareness and tracking financial inclusion measures as the pilot progresses.<sup>7</sup> The results also highlight room for increased use of digital financial transactions once costs, ease of use and cyber security concerns are addressed.

The Exuma results, which are summarized in the Appendix, underscore high access to basic bank accounts by 93% of the island's residents. The access numbers though, are on the higher end against participation in savings accounts for slightly more than 9 out of 10 persons on average in the survey, with both results potentially elevated due to the surveys being conducted over land phone lines, and potential exclusion of undocumented persons. Additionally, the Exuma survey indicates that some two-thirds of bank accounts receive deposits that originate from salary payments, and about 15% receive pension payments. Where bank accounts were not used, lack of trust in the institutions or the inconvenience of getting to a bank were the most cited reasons for self-exclusion (collectively for 17% of those without accounts).

About 96% of surveyed Exumians own mobile devices, and about 40% use these to perform some forms of bill payments or online banking transactions. Close to two-thirds of respondents disclosed a willingness to use mobile devices for payments or commercial transactions in the future. When disclosed, there was a reluctance to use electronic banking and financial transactions, which was skewed more toward older respondents, and mostly reflecting unease or distrust with electronic platforms, including cyber security concerns.

Anecdotally, the Central Bank has noted elsewhere that businesses' willingness to embrace electronic payments on either the receipting or disbursing end, has been inhibited by costly merchant fees.

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<sup>7</sup> The national survey results are being published separately.



## 2.4 Tailoring Financial Inclusion Intervention

While the Central Bank is developing a broader national financial inclusion strategy that would address these issues, improved access to payments services, would provide the conduit through which other financial services could be more easily reached. This strategy would also rely on sustained financial literacy campaigns to boost product awareness and encourage more positive behavior around personal finances. Embracing electronic payments at higher rates will also require education around cyber safe financial behavior.

## 3 ADVANCING PAYMENTS INFRASTRUCTURE DEVELOPMENT

The digital currency initiative fits in with the wider reforms that have supporting regulatory and policy changes at their centre. As in previous iterations, it will also involve direct investments in infrastructure improvements.

### 3.1 Automated Clearing Arrangements

The Central Bank started the modernisation initiative in the early 2000's to automate the payments settlements process among the clearing banks (commercial banks). In 2004, the Bank invested directly in the start-up of the Bahamas Interbank Settlement System, the real-time gross settlement (RTGS) system for large value payments between clearing banks. The Central Bank then promoted efforts to establish the commercial bank owned, Bahamas Automated Clearing House (BACH) in 2010, for electronic settlement of small-value retail payments.<sup>8</sup>

The ACH and RTGS have improved the speed and efficiency of domestic payments. They have supported development of electronic point of sale payments at the retail level, including use of debit cards; and added to the efficiency and speed of cheque processing, with an intentional and evident trend in favour of increase use of wire transfers over cheques. Fiscal policy has also helped, as on July 1, 2013, the Government removed the stamp tax on Bahamian dollar electronic funds transfer or debits. Only cash withdrawals and cheque writing still attract stamp tax.

### 3.2 Non-Bank Direct Participation in Settlements

The Central Bank is now encouraging non-bank participation in the provision of electronic payments, to spur innovation, competition and faster adoption of electronic solutions. This reform started with the enactment of the Payments Systems Act (PSA) in 2012, which established a regulatory framework for electronic payments, including stored value products. Once the

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<sup>8</sup> The RTGS settles payments on a gross basis, where the value of the individual transaction is \$150,000 or greater. All lower value, retail payments are processed through the ACH, with commercial banks netting off debts and credit on a bilateral basis and settling the differences among each other through RTGS payments. Settlements clear through balances that each institution maintains with the Central Bank.



supporting Payment Instruments (Oversight) Regulations were introduced in 2017, the Central Bank began to accept license applications for non-bank providers of payment services providers (PSPs). These entities can operate in the same markets for stored-value products as banks, credit unions and money-transmission businesses (MTBs). There have already been three licensed PSPs, with other applications under review. Several MTBs are also developing digital payments solutions under the regulatory oversight of the Central Bank.

The draft new Central Bank legislation contains provisions that would level the playing field even further. The Bank has signalled that it will allow direct participation of non-clearing banks in the ACH and RTGS systems. Regulated credit unions, international banks, PSPs and MTB's would be permitted to establish settlement accounts directly with the Central Bank as opposed to having to negotiate settlement arrangements with commercial banks. The Central Bank has also proposed that the Government and the National Insurance Board would be allowed to join the ACH and RTGS, as the two largest single originators and recipients of payments. Both entities already maintain accounts with the Central Bank that can satisfy settlements. Opening of the ACH to broader participation will require regulations, and commercial bank initiated changes in the private ACH arrangements.<sup>9</sup>

### 3.3 Strengthening Ease of Access to Financial Services

Throughout recent regulatory reforms, the Central Bank was also guided by the principle that access to payment services should not discriminate between whether the products originate from banks or from other regulated entities; and that the range of access that users of cash currently enjoy in services should persist when the products were digitised. Also, irrespective of whether consumers availed themselves of mobile payment services or traditional bank deposits, the Central Bank has taken the stance that the ease of access and risk tailored customer due-diligence should be similar.

On ease of access, streamlined customer due diligence standards were introduced in 2018 under revised AML Guidelines<sup>10</sup> which simplify the identification and address verification requirements to establish personal deposit accounts or access other services from financial institutions. A passport is now sufficient to open a bank account; or two other pieces of identification in the absence of passport. This shifts more emphasis to transactions monitoring process after account relationships have been established, and limits enhanced due diligence to customers which banks

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<sup>9</sup> The PSA allows the Central Bank to designate certain parts of the domestic payments system as systemically important and, as a result, to impose additional regulatory conditions on their operations. This would include access to such parts of the system on a non-discriminatory basis for other payment services firms.

<sup>10</sup> Streamlined Requirements for Account Opening

[https://www.centralbankbahamas.com/legal\\_policies.php?cmd=view&id=16883](https://www.centralbankbahamas.com/legal_policies.php?cmd=view&id=16883)





assess to be of higher risk. For very low-value stored products, the identification process need not be invoked.<sup>11</sup> The Central Bank also signalled that a job letter or proof of employment would not be a requirement to open a personal deposit account. This affects the cross-section of the resident adult population who might not be employed, but would be entitled to transaction accounts, such as savings facilities with debit cards attached.

The other easing, which the Central Bank undertook in 2018, was to remove Exchange Control restrictions from non-residents' access to Bahamian dollar (B\$) deposit facilities. Irrespective of immigration or work permit status, these persons can open and maintain B\$ deposit accounts with balances of up to \$50,000 without approval from the Central Bank.

To progress beyond these regulatory steps, the Central Bank recognised that, in The Bahamas, “public goods” outcomes still existed, even where the same circumstances might produce strictly private sector efficient solutions in larger developed or developing country settings. Outcomes still have to ensure that all pockets of the archipelago are serviced by the private sector solutions that emerge. Also, the solutions should connect all consumers regardless of the consumers' choice of service provider. It is an interoperability requirement, that for The Bahamas would only be achieved swiftly if it were universally profitable. As proposed, the digital currency solution would eliminate this constraint.

## 4 PROJECT SAND DOLLAR

The intended outcome of Project Sand Dollar is that all residents in The Bahamas would have use of a central bank digital currency, on a modernized technology platform, with an experience and convenience—legally and otherwise—that resembles cash. It is expected that this will allow for reduced service delivery costs, increased transactional efficiency, and an improved overall level of financial inclusion. The anonymity feature of cash is not being replicated, although the Sand Dollar infrastructure would incorporate strict attention to confidentiality and data protection.

***A digital fiat currency would not be a “crypto currency” in any sense resembling private instruments in existence.*** It would be an identifiable liability of the Central Bank of The Bahamas, equivalent in every respect to the paper currency. Its value would be the same as the existing currency. The digital currency would also not be a stable coin, or a parallel currency, in the sense that it would not derive any value separate from the external reserves backing afforded to the

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<sup>11</sup> In the AML Guidance Notes these would be accounts that carry \$500 or less and for which the monthly reload capacity is \$300 or less. Monitoring of transactions for AML purposes, still applies for all accounts which financial institutions maintain. Where higher risks are assessed, supervised institutions may also invoke processes that go beyond identification, such as verification of sources of income or wealth.



Central Bank's demand liabilities.

#### 4.1 Key Specifications of the Proposed Solution

The Central Bank undertook a rigorous process to select a technology solutions provider for the design and implementation of the digital fiat for The Bahamas. The search process stressed a need for a robust solution that addressed both the archipelagic and infrastructural challenges of providing electronic financial services, as well as the requirement to provide a solution that was robust against international regulatory standards.

In March 2019, NZIA Limited was selected as the solutions provider. A few key aspects of the proposed solution are as follows:

- Achieving interoperability among existing and new channels for the provision of payments services. All payments services firms would have access to the digital currency and would be able to use the Sand Dollar Network to settle retail Bahamian dollar payments.
- Supporting “offline functionality” even if communication between the islands is disconnected. Built-in safeguards would allow users to make a pre-set dollar value of payments when communications access to the Sand Dollar Network was disrupted. Wallets would update against the network once communications were re-established.
- Near instantaneous validation of transactions/real-time transactions processing.
- Point of sale support for businesses accepting payments. Through PSP tailored solutions, business would be able to process payments with modern credit and debit card machines or mobile phone apps.
- Fully auditable transactions trail (non-anonymous). Transactions monitoring still protects user confidentiality, and would be governed by strict regulatory standards around access.
- Monitoring for fraud detection.
- Restriction of digital currency to domestic use. A Bahamian CBDC would be for domestic use only, and prohibited from acceptance by non-domestic payees. Wallet holders would still have the option, through PSPs, to integrate accounts with commercial banks, to make electronic purchases of foreign exchange, enabling use of their accounts internationally.
- Multi-factor authentication for wallet users. Users would have to supply two passcodes, one randomly generated, to complete some payments transactions.
- Digital ID solution (using KYC and identity features incorporated in the system design) that can be piloted for use in the financial services sector.



The digital version of the Bahamian dollar would be available for both wholesale and retail applications. Wholesale application would ordinarily restrict usage to payments settlements at the inter-bank level, akin to clearing house transactions. The proposed retail application, would also allow the general public to make and receive digital payments. Each holder would maintain direct claims on the Central Bank and legally have the equivalent of accounts with the Central Bank.

Over the pilot phase, the Central Bank will work along with the technology provider to ensure that all the relevant facets of the digital system are fully functional before it is more widely deployed. The pilot will launch in Exuma in December 2019 and expand to Abaco in the first half of 2020. The Abaco setting will test emergency wireless communications features that would enable rapid financial services recovery following natural disasters; and connect with the island's retail businesses early in their recovery process.

#### 4.2 Monetary Policy and Financial Stability Safeguards

The Bank is closely attentive to the monetary policy and financial stability implications of a digital currency and is incorporating prudent safeguards for these.<sup>12,13</sup> These go beyond customer due diligence and transactions monitoring standards that tackle financial crimes (money laundering, terrorism financing, and proliferation) and tax evasion. One concern is that a CBDC could compete with traditional banking services, as a deposit alternative and draw resources out of banks. If it were to happen on any significant scale, it would leave the issuing central bank in the suboptimal position of having to reallocate domestic resources, a role that is best reserved for licensed financial institutions.<sup>14</sup> A consideration too is whether holdings of digital currency would earn interest, which would be another reason for the public to view them like deposits. Financial stability risks would also be highlighted by concerns that sudden, large shift of funds into CBDCs could present a form of bank run. Early international regulatory caution around issuance of

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<sup>12</sup> The policy considerations and risks of CBDCs has been extensively documented by organisations such as the Bank for International Settlements (BIS), International Monetary Fund (IMF) and the Financial Stability Board (FSB). The Financial Action Task Force, has weighed in on recommended standards to counter financial crimes abuse. See the Appendix for a selected bibliography.

<sup>13</sup> That said, official sentiments towards CBDCs has shifted. A BIS Survey indicated that 70 percent of all central banks were exploring some work on CBDCs. The Bahamas and Eastern Caribbean Central Bank, are in this subset, both intending to make the digital currency available to the general public (a retail version). Many other central banks are only exploring issuing wholesale CBDCs that would be restricted for use in payments settlements among financial institutions. There is also the apparent competition from potential global stable coins like the proposed Facebook libra that has drawn global reaction from standards setting bodies and regulators. Regulators acknowledge that the rise in popularity of cryptocurrencies were in measure responses to gaps in the efficiency and reach of the international payments settlement mechanisms, especially for low-value transactions like remittances.

<sup>14</sup> Adrian, Tobias; Mancini-Griffoli. "The Rise of Digital Money." Fintech Notes (International Monetary Fund). Washington, D.C., July 2019.



digital currency also highlighted cyber security and other risks that could cripple payments networks and severely disrupt smooth functioning of the affected financial sector.

By policy, the Central Bank has imposed several design factors into the digital currency proposal to mitigate the aforementioned risks. So that it does not operate in practice as a substitute for traditional banking deposits, limits will be placed on the amount of the B\$ instrument that individuals, businesses and other non-supervised financial institutions would be able to hold. Moreover, to be enabled for higher-value transactions, personal digital wallets will have to be linked to deposit accounts at domestic financial institutions, into which any excess holdings of the currency would have to be deposited. Because the ultimate goal of Project Sand Dollar is financial inclusion, individuals would still be able to have mobile wallets without the need for a bank account, but with less functional capabilities. Without exception, though, all wallets held by businesses would have to be linked to established bank accounts. To further remove similarities with deposits, interest will not be paid on any holdings of digital currency.

Financial stability concerns and runs on bank deposits are related to the speed at which electronic transfers can be enabled, aside from whether the instrument used is a CBDC. Safeguards are being developed nonetheless for The Bahamas. The Sand Dollar infrastructure will deploy real-time consolidated transactions monitoring to provide early warning of critical threats on individual banks' liquidity. It will deploy circuit breakers, if necessary, to prevent systemic instances of failures or runs on bank liquidity.

### 4.3 The Roles and Contribution of Key Stakeholders

The major stakeholder groups for the digital currency include the Central Bank, the general public, financial intermediaries licensed by the Central Bank, the public sector (including the National Insurance Board), and general businesses and entities other than licensed financial intermediaries. They each have different respective roles to play in the modernization process.

The Central Bank's role would be multi-purpose, including currency issuance, monitoring of holdings and sponsoring a centralized KYC/identity infrastructure. In particular, although the Bank will not provide front-end customer service, nor directly sponsor digital wallets, it will ultimately maintain the ledger of all individual holdings of the digital currency. On a near-to medium-term timeline, the Bank will also promote a centralized KYC register to maintain identification and profile data that would either mandate or allow individuals who do not maintain such information within banks or licensed intermediaries, to supply the data for the register. By regulation, the register would be maintained to be compliant with AML/CFT standards to enable other financial relationships to be established by Central Bank supervised entities (SFIs). This register would draw on data in government maintained systems, once statutory provisions are enabled, or consent-enabled access frameworks are established.



Financial intermediaries include all Central Bank SFIs that would be allowed to operate as sponsors of mobile payment wallets, including banks, credit unions, MTBs and PSPs. Within this group, the Central Bank expects that PSPs and MTBs will possess the technology to offer mobile wallets from the outset. It is not expected that either banks or credit unions will have enabled technology for mobile wallets at the onset of the digital currency's introduction, but this would remain an option for them to pursue.

Banks and credit unions are expected to contribute to the customer due diligence regime; facilitate connectivity of deposit accounts with mobile wallets; and enable foreign exchange transactions. In particular, the Central Bank will promote regulations to permit all PSPs, with the consent of enrolling participants, to rely on KYC documentation already possessed by commercial banks. By regulations, it is ultimately proposed that a legal obligation be imposed on banks and credit unions to share customer requested KYC confirmation with any SFI provider of payments services. Banks, ultimately, will also be required, through regulation, and customer consent frameworks to honor real-time direct debit or withdrawals from deposit accounts of wallet holders that finance acquisitions of digital currency.

The public sector has multiple roles to play, including as lead originators and recipients of digital payments. This includes equipping both the payments receipting and disbursing systems to conclude transactions in digital currency; and becoming direct participants in the ACH. In particular, the Government and the NIB are expected to be the two largest originators of digital payments. Both also represent the largest store of official data on the status of private commercial entities that might enroll in digital payments services.<sup>15</sup>

Private commercial entities and others beyond the public sector and Central Bank SFIs would represent the core “business” or “B” component of digital payments. For these entities, enrollment in digital currency will always require a link between wallets and bank deposit accounts, so that excess receipts can be transferred into banks. In each case, status as a business would have to be evidenced from existence on the business license register, for expediency, making use of proposed information sharing mechanisms with the Department of Inland Revenue.

The general public is intended to mean individuals (retail level “peers” or “Ps”) as originators or recipients of digital payments. It could also include sole proprietors who operate as micro and small businesses, provided that the volume and profile of their transactions do not single them out as businesses. Whenever the active transactions profile distinguishes a wallet holder as a potential commercial operator, the Central Bank will require the financial intermediary to

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<sup>15</sup> The Central Bank proposes to establish information sharing arrangements (MOUs) with the relevant public sector agencies to provide financial institutions have access to such due diligence information.



undertake the due diligence to enroll the wallet as a business operated account; or through the due diligence process, document the affirmation that the account is non-commercial.

#### 4.4 Tailoring the Digital Currency Experience

The Central Bank will impose a ceiling on how much digital currency can be maintained in a mobile wallet, according to the category of user and the level of required customer due diligence. Central Bank SFIs will not face any limit on holdings, as these would be interchangeable for the clearing balances which SFIs maintain with the Central Bank. Other non-individual wallet holders (primarily businesses) would be permitted to hold total balances which are the greater of \$8,000 or 1/20<sup>th</sup> of their annual sales receipts, subject to a maximum ceiling of \$1 million. Monthly transaction limits would also apply: proposed at 1/8<sup>th</sup> of annual sales or \$20,000, whichever is greater.

For individuals, wallets established with basic due-diligence, would be capped at a maximum holding capacity of \$500 and subjected to monthly transactions totals against either payments or receipts of \$1,500. Personal accounts, which undergo more enhanced due diligence around identification, verification of contact, would be enabled to operate within a maximum holding amount of \$5,000 and subject to an annual transactions limit of \$100,000 (or \$10,000 per month). Personal wallets, once connected to deposit accounts at financial institutions, would be enabled to undertake higher total transactions value, on the condition that the transactions flow through deposit accounts, since the maximum amount of digital currency holdings would remain capped. The Central Bank will vary these limits over time as may be necessary to satisfy the robustness of the AML/CFT regime, under the principle that the more elevated due-diligence would always enable accounts to operate with higher transactions limits.

The wallet establishment process is intended to be simplified, and reliant upon procedures established by the Central Bank; and the approved KYC system of banks and payment services providers. It will be possible to initiate the process through banks (eventually credit unions), PSPs or MTBs, but in all cases using Central Bank pre-established account codes.<sup>16</sup> Users would be able to download the Sand Dollar app to mobile iOS (Apple) or android devices and then complete the account setup process through a licensed service provider. All personal users would be able to elect to establish the lowest level of transactions activation; and then to subsequently enable higher access amounts by completing the enhanced due diligence process.

A card-based version of the digital wallet will also be piloted for users who elect not to use a mobile device, or for users that elect to undertake some transactions offline from the mobile app. This should appeal to individuals who might wish to operate initially in a less digital setting

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<sup>16</sup> See Appendix for a diagram of the eco-system.



for ease of comfort. These individuals would be able to receive updates of their wallet balances through point of sales devices.

#### 4.5 The Digital Payment Process

Sand dollar payments would occur in a secure tokenized environment, requiring just the mobile phone, or the dedicated point of sales terminals that businesses and other receipting entities deploy. The simple payment process will utilize QR codes generated on the payer's digital Sand Dollar Card or the mobile device. An in-person payment would then be executable in one of three forms:

1. A scan of the payee's static QR code, then entering the amount required on the next screen;
2. A scan of the payee's dynamic QR code with an embedded amount, and then confirming at next screen; or
3. A transmission of payment amount to the payee via their Sand Dollar unique handle, alias or address

Potential high volume originators of mobile payments for payroll, social assistance and other purposes will also have access to batch transactions processing capability, utilizing the Sand Dollar Infrastructure and platforms developed by the PSPs. This includes the Government, NIB and private businesses. These would be akin to batch transactions currently processed through the ACH but with gross and net settlements occurring in digital currency.

## 5 THE BAHAMAS' IMPLEMENTATION PLAN

The Exuma Pilot will parallel intensive work to develop and refine the regulatory framework for digital financial services. The Pilot will launch on December 27, 2019, with the enrollment of wallet users through each of the participating financial institutions. In the period leading up to launch, the Bank and NZIA held intensive one-on-one conversations and group discussions with financial institutions to clarify expectations around their participation in the Pilot. In November 2019, a special session of the National Payments Council (NPC) convened with key stakeholders to reaffirm the approach to the project, with emphasis on KYC standards for onboarding, zero cost carve out for the P2P payments, and outlines of the intended regulatory standards on data protection.

NZIA has tested and pre-installed portions of the private communications network for the Sand Dollar Payments system. The Sand Dollar systems will also use existing public communications infrastructure to process payments messaging over standard internet connections.



As the pilot engages, work will mature on the proposed legal and regulatory reforms for the digital currency, taking account of enhanced governance and consumer protection standards needed generally for a modernized Bahamian infrastructure. The consultation process and promulgation of regulations is expected to be completed by mid-2020. This process, alongside any modification which the lessons from the Pilot dictate, will precede any generalized national deployment of the Sand Dollar. A key legal reform will be enactment of the new Central Bank Bill early in 2020, to provide the framework for digital currency regulations and access of credit unions, PSPs and MTBs to direct settlement accounts with the Central Bank. Reforms are also anticipated under the Payment Systems Act, to similarly strengthen digital consumer protection standards; and the AML/CFT Regulations and Guidelines will need amending to accommodate the eKYC portability.

The Central Bank has already acknowledged the importance of promoting the restoration of Abaco's financial system, through early deployment of the digital currency on the island. This will commence in February 2020.

## 6 GAUGING POTENTIAL BENEFITS AGAINST COSTS

While the financial costs of establishing and maintaining a digital currency framework are measurable on the Central Bank's balance sheet, many of the benefits will accumulate off balance sheet. On balance sheet, the Central Bank's currency printing costs are expected to moderate, in proportion to the rate of adoption in digital payments. But most of the benefits will accrue in the wider economy.<sup>17</sup>

### 6.1 Improved Financial Inclusion

The potential to improve financial inclusion, especially for remote communities, is significant. More centralized and portable KYC data, coupled with digital channels for both deposits and withdrawals, would permit banks to provide basic deposit services remotely, and to rely on the digital infrastructure to extend credit. The reach of banking services would be extendable beyond the physical branch, and banks would be further enabled to reduce costly branch networks.

### 6.2 Reducing the Ill Effects of Cash Usage

A reduction in cash use, coupled with enhanced financial transactions monitoring, would also effectively strengthen national defenses against money laundering, terrorist financing and other illicit abuses of the financial system. Further enhancements to the AML/CFT regime would also favour the standing of the international financial services sector and cut into national risks assessments that affect the ease of access to correspondent banking relationships. Cash usage

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<sup>17</sup> See Summary Table in the Appendix





also imposes physical security risks on businesses and creates more exposure to fraudulent losses relative to electronic point of sales transactions. As it relates to physical safety, a widely adopted CBDC would also place users at less risk of violent crimes that target holders of cash, and potentially reduce security and insurance cost associated with keeping cash on business premises.

### 6.3 Reduced Transactions Costs

The Central Bank is also directly tacking transactions costs to promote more widespread adoption of electronic payments, and wider access to real-time payment settlements. Increased transfers in digital currency would reduce costs incidences arising from current use wire of transfers, cheques, inter-bank transfers, and existing bill payment mechanisms. The ACH processes thousands of transactions on a daily basis. Although the fees assessed within the ACH are minimal, banks attach addition direct costs to transactions, while merchant fees are levied for debit and credit transactions. While a digital currency will not eliminate these forms of transactions, it would offer a lower cost alternative to a broader cross-section of the public.

### 6.4 Strengthened Economic Surveillance

By drawing out more commercial activity into the formal economy and strengthening general accounting information systems within businesses, wider adoption of digital payments would also benefit revenue administration systems within the Government. In particular, it would strengthen the information and enforcement systems that the Government relies upon for tax collection. Moreover, increased digital financial inclusion would improve overall estimation and monitoring of economic activity, with better attendant input to evidence-based policy making.

## 7 EDUCATION AND MARKETING STRATEGY

Public education and marketing will focus on creating business and consumer awareness of the digital currency, the wallet signup process and cyber security. PSPs will actively participate in this process, and orient users to their tailored or branded experiences. The simplified customer due diligence process for enrollment will be highlighted, along with the proposed portability of eKYC data. In addressing general consumer comfort around the security of electronic transactions, a heavy focus will be placed on educating users on the encrypted protections for funds stored in the payments network, and on minimum security and password protection standards that would be required on personal mobile devices. The Bank will use a number of promotional outlets, including print, broadcast and social media outreach. Promotional presence at cultural and recreational events will also be pursued; along with regular presentation to business and civic groups .



## 8 CONCLUSION

A widely adopted Bahamian central bank digital currency would promote financial inclusion and wider economic and financial development. A successful rollout hinges on making the instrument accessible to all residents of the archipelago on a non-discriminatory basis and ensuring that the experience, in practice, resembles cash. It also requires that major participants such as the Government, public utilities and the National Insurance Board actively participate from the outset, as the largest originators and recipients of retail payments in the country.

This undertaking will rely on an evolved regulatory structure for domestic payments and other financial services. The Central Bank will, therefore, remain actively engaged with the Government and other stakeholders to ensure that the legal framework develops in tandem with payments system needs; that the country achieves positive financial inclusion outcomes; and that the commercial sector benefits from a more efficient and secure infrastructure. The Bank will also ensure that adequate safeguards and policies are imposed to address the integrity of financial transactions, in line with best international standards for AML/CFT; and that resilient mechanisms are instituted to preserve financial stability and maintain private financial institutions' central role in the financial intermediation process. Engagement and outreach will intensify in the months ahead, as the Exuma pilot provides the instructive feedback to extend the digital reach to the rest of The Bahamas.



## APPENDIX :

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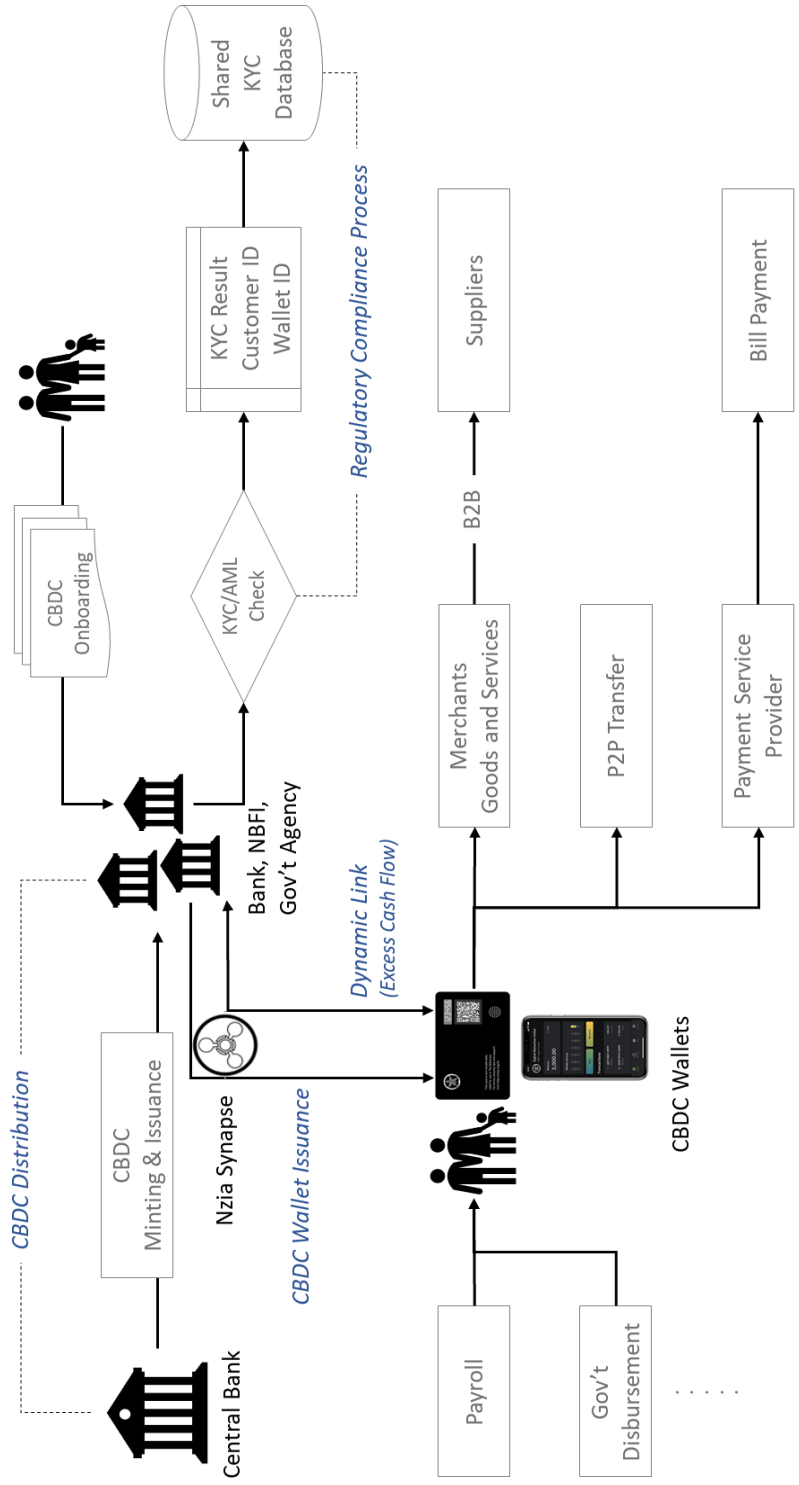
## A1. Tables and Charts

<b>Table 1</b>			
<b>Bahamas—Selected Indicators of Financial Access</b>			
<b>Surveyed Knowledge and Use of Products<sup>18</sup></b>			
Product or service	% of respondent answering “yes”		
	Heard of	And own jointly or personally	Want to learn more
i. Savings Account	93	80	30
ii. Debit card	91	70	24
iii. Checking Account	85	37	25
iv. Insurance policy	87	59	34
v. Pension Fund	82	33	36
vi. Mortgage	88	31	29
vii. Credit card	89	48	21
viii. Mobile Phone banking	70	40	26
ix. “Asue”	89	33	20
x. “Numbers” Account	56	19	20
xi. Bonds	60	13	35
xii. Stocks and shares	71	24	39
xiii. Investment Account	62	22	41
xiv. Mutual Funds	60	15	35
xv. Equity Funds	51	13	37
<b>Select data from G20 countries</b>			
<p>In comparison to The Bahamas, the G20/OECD INFE report on financial literacy in G20 countries indicates that, on average-</p> <ul style="list-style-type: none"> <li>• 63% of persons own a savings or retirement product</li> <li>• 52% have insurance</li> <li>• 51% have a credit product</li> </ul>			

<sup>18</sup> Central Bank of The Bahamas, [Bahamas Financial Literacy Survey 2018](#)



### Digital Sand Dollar Eco-System





<b>TABLE 2: Summary of Costs and Benefits of Digital Currency</b>	
<b>Costs</b>	<b>Benefits</b>
Cost of services provided by the Technology Solutions Provider	Financial Inclusion – improved access to digital payments for the unbanked and underbanked
Ancillary costs related to preliminary work for the launch of the pilot	Lower transactions costs – reduced transaction costs for retail and institutional payments
Legal fees for external expertise on the required amendments to facilitate the issuance of digital currency	Economic growth and digital innovation – creation of new digital ecosystem can result in greater economic activity which can spill over into other technology sectors
Infrastructure expenses	Technology efficiency – faster settlement speed due to not having to rely on banks
Shared costs to establish a national identity infrastructure	Reduced rate of increase in cash production, storage, transportation and costs.
	Improved information and enforcement for government tax administration; more efficient expenditure delivery for low value payments
	Can encourage more competition in private payment systems and between financial institutions
	Better data coverage of economic activities for evidence-based policy making



## A2. Tiered KYC Requirements.

<b>Tiered KYC Requirements for Sand Dollar Accounts</b>			
	Description	Threshold/Limit	Customer Due Diligence/KYC Requirements
<b>Simplified (Level 1)</b>	<p><b>Low-Value Accounts</b></p> <p>1) The accounts can be opened online via preset online form, email or face-to-face through any of the authorized commercial banks, (credit unions eventually) payment service providers (PSPs) and money transmission businesses (MTBs) through their respective designated agents.</p> <p>2) No initial upload amount is required for opening this account.</p> <p>3) Each digital account will be linked to a physical device such as a payment card (issued to applicants) and mobile phone.</p> <p>4) Funds can be credited or loaded the by account holder or by 3rd party transfers, but withdrawals can only be made by the account holder.</p> <p>5) Operation of the wallet is valid only within The Bahamas.</p>	<p>Maximum Holding Limit: <b>B\$500</b></p> <p>Maximum Transaction Limit per month: <b>B\$1,500</b> As either the sum of payments or receipts.</p> <p>All transactions except for; cash withdrawal, disbursement for government services, utility bills, school fees, post-paid telephone/broadband internet bills, or such transactions as determined by Central Bank from time to time, shall count towards the 'Maximum Transaction Limit'. Thus, the limit restricts the aggregated value of:</p> <p>1) Deposit to own or someone</p>	<p>1) No official ID is required to open a digital account at this tier.</p> <p>2) Basic customer information required to be provided are:</p> <p style="margin-left: 20px;">a) Full Legal Name b) Date of Birth c) Physical Address/P.O. Box d) Telephone number associated with the customer (which must be mobile if the account is access through mobile device) e) Photo provided by applicant or taken by an on-boarding agent.</p> <p>3) This information may be sent electronically to authorized entities to be processed.</p> <p>4) Minors under the age of 16 years old will be required to evidence consent of a parent or guardian with an acceptable form of ID<sup>19</sup>.</p>

<sup>19</sup> Categories of acceptable forms of ID documents are outlined in 'Streamlined Requirements for Account Opening, Provision of Financial Services and Customer Identification' (<https://www.centralbankbahamas.com/download/054392600.pdf>).



Tiered KYC Requirements for Sand Dollar Accounts			
	Description	Threshold/Limit	Customer Due Diligence/KYC Requirements
	6) International transfers of funds are prohibited.	<ul style="list-style-type: none"> <li>else's account;</li> <li>2) Physical or online merchant payments;</li> <li>3) Person to person transfers; and</li> <li>4) Any other type of transactions not explicitly exempted by this paragraph.</li> </ul>	
<b>Regular (Level 2)</b>	<p><b>Medium-Value (personal) Accounts</b></p> <p>1) The accounts must be opened face-to-face through any commercial banks, [credit unions eventually] payment service providers (PSPs) and money transfer businesses (MTBs) through their respective designated agents.</p> <p>2) No initial upload amount is required for opening this account.</p> <p>3) Evidence of basic customer information and ID verification are required.</p> <p>4) Each digital account will be linked to a physical devices such as a payment card (issued</p>	<p>Maximum Holding Balance: <b>B\$5,000</b></p> <p>Maximum Transaction Limit: <b>B\$10,000</b> per month or <b>B\$100,000</b> per annum</p>	<p>1) ID requirement waived if applicant already has an existing relationship with any of the authorized commercial banks &amp; the financial institution is either a sponsor of the wallet or enables attachment of the wallet to a deposit account of the wallet holder at the financial institution.</p> <p>2) If the applicant has no existing account relationship with any of the authorized financial institutions, then he/she must provide all of the above (in Level 1) KYC information <b>plus</b> any one of the following:</p> <ul style="list-style-type: none"> <li>a) Valid Passport [of any nationality]</li> <li>b) Driver's License issued in the Bahamas</li> <li>c) Bahamas issued National Insurance Board (NIB) Card</li> <li>d) Bahamas issued Permanent Residence Card, or permit for Work, Residency, Spousal Permit</li> </ul>





Tiered KYC Requirements for Sand Dollar Accounts			
	Description	Threshold/Limit	Customer Due Diligence/KYC Requirements
	<p>to applicants) and mobile phones.</p> <p>5) Deposits can be made by account holder and 3rd parties, but withdrawals must be made by account holder only.</p> <p>6) Operation is valid only within Commonwealth of the Bahamas.</p> <p>7) International fund transfer is prohibited.</p> <p>8) Not interest bearing.</p>		<p>3) This information may be sent electronically to authorized entities to be processed.</p>
<b>Enhanced (Level 3)</b>	<p><b>High-Value/Business Accounts</b></p> <p>1) Authorized on-boarding entities must obtain, verify and maintain copies of all required documentations for account openings.</p> <p>2) The accounts must be established face-to-face through any of the authorized commercial banks, payment service providers (PSPs) and money transfer businesses (MTBs) through their respective designated agents.</p>	<p>Maximum Holding Balance: <b>B\$8,000</b>, or 1/20<sup>th</sup> of annual sales, up to an annual limit B\$1 million.</p> <p>Maximum Transaction Limit per month: <b>B\$20,000</b> or 1/8<sup>th</sup> of annual revenues whichever is greater.</p> <p>NB: Annual sales are based on VAT or Business license filing.</p>	<p>Applicants are required to comply with the Enhanced Due Diligence measures published in the AML/CFT Guidelines, 2009<sup>20</sup> (as amended) issued by Central Bank of the Bahamas.</p> <p>Evidence of current existence on the business license register is required VAT TIN.</p> <p>Enrollment details must correspond to official records</p> <p>Due diligence procedures undertaken by wallet providers should establish that person acting on behalf of commercial and other entities are duly authorized to do so.</p>

<sup>20</sup> See <https://www.centralbankbahamas.com/download/032474800.pdf> for 'Central Bank's Guidelines for Supervised Financial Institutions on the Prevention of Money Laundering, Countering the Financing of Terrorism & Proliferation financing'.



<b>Tiered KYC Requirements for Sand Dollar Accounts</b>			
	<b>Description</b>	<b>Threshold/Limit</b>	<b>Customer Due Diligence/KYC Requirements</b>
	<p>3) No initial funding is required to open this account.</p> <p>4) Evidence of basic customer information and ID verification are required.</p> <p>5) Each digital account will be linked to physical devices such as payment cards (issued to applicants) and mobile phones.</p> <p>6) Operation is valid only within The Bahamas.</p>	<p>*Limits may be adjusted on a case-by-case basis.</p>	<p>Wallet(s) must be linked to an active bank account.</p>



## A3. Market Research on Exuma

### **Introduction**

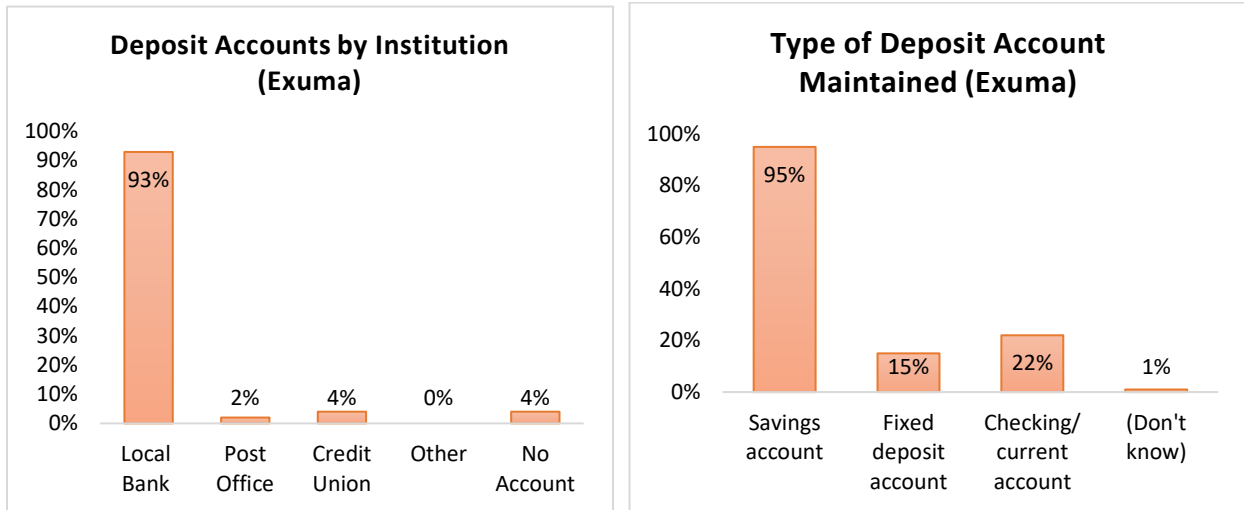
Following the March 1, 2019 selection of the preferred technology solutions provider for the digital currency project, the Central Bank started the groundwork for the launch of the Exuma Pilot, undertaking a baseline financial inclusion survey on the island. The survey attempted to assess the level of financial services available to residents relative to their needs; and to determine the willingness of residents to adopt digital payments via a mobile or online platforms. Overall, Exuma exhibits levels of financial access comparable to the national averages, with a high mobile phones usage rate. While there is openness to greater use of digital payments services, there are existing pockets of reticence, linked mostly to the convenience of access or security concerns of using digital financial services.

### **Methodology**

The Exuma survey was administered randomly to 519 residents, via telephone and door-to-door interviews in July 2019. The sample results were then weighted to reflect the demographic distribution of the latest population census. Persons were polled on their access to banking/financial instruments, whether they have used a mobile device or internet service to perform transactions with a bank or credit union, as well as the likelihood of them using a mobile device to conduct various electronic transactions.

### **Access to Banking/Financial Institution**

Respondents indicated a higher rate of usage of basic deposit facilities than the national average. Some 93% indicated that they operate a deposit account within a local bank, compared to the national average in the 80% range. Some 2% indicated that they held a deposit account with the local post office, while 4% stated that they have a deposit account with a credit union, and 4% informed that they did not own a deposit account.

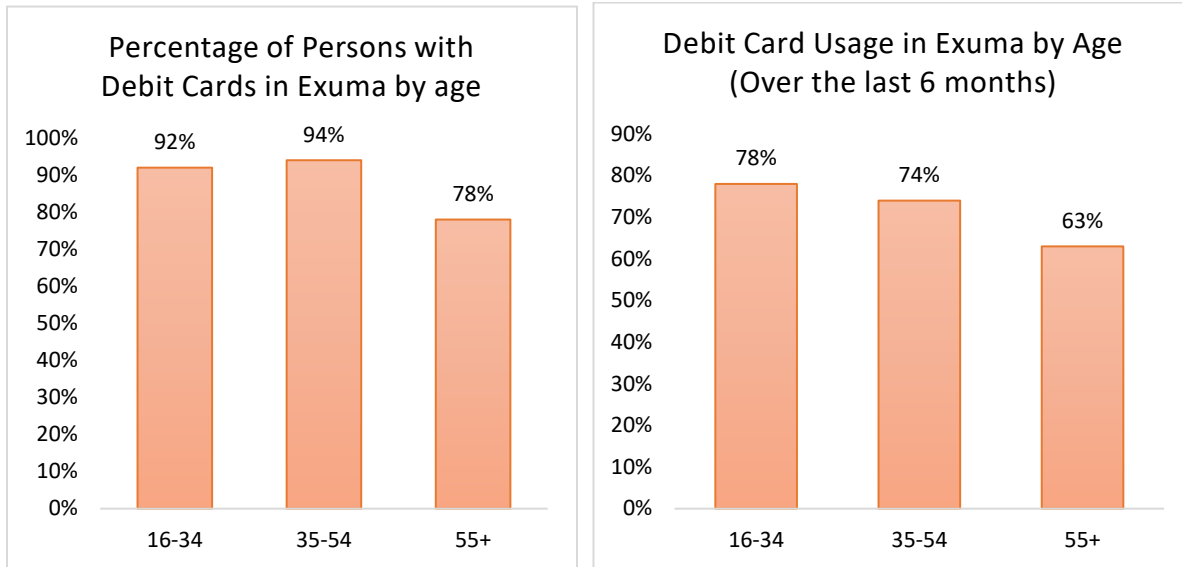


When asked what type of deposit accounts they maintained, 95% of persons disclosed that they had savings facilities, with a higher fraction of men (97%) than women (94%) indicating such. Further, an estimated 15% disclosed ownership of fixed deposits; and 22% maintained checking accounts.

On the method frequently used to access deposit accounts, the majority surveyed (92%) used a local bank branch on the island; some 4% of persons frequented the post office; and 3% utilized an on-island credit union branch. Only 10% of respondents stated that they used online banking to access their deposit accounts.

In an attempt to determine if residents' basic financial needs were being adequately addressed by banks, the survey queried individuals on the reason why any of them used web shop accounts. Half of the residents surveyed indicated that they did not own such accounts, with a higher rate for women (54%) than men (46%). Further, while 36% admitted that web shops were used strictly for gaming, some 9% of respondents disclosed that they used these accounts for both gaming and savings; and 3% strictly for storing their savings. The results showed that the greatest percentage (12%) of individuals who used web shop accounts for both gaming and savings were between 16-34 years.

As for debit card ownership, 90% of individuals answered in the affirmative. Queried on their use of these cards to make purchases within the last 6 months, 92% of the holders said yes, with the rate of usage highest among the 16 – 34-year-old category (97% of such responses), and the lowest for those 55 years of age and over (79%).



As to the means by which money was deposited into accounts, a majority (66%) of those surveyed received salary payments. Separately, cash and cheques were also disclosed as deposit instruments for 56% and 36% of personal accounts; while a small percentage (15%) indicated that monies were deposited from pension payments. About 15% of account holders disclosed that no funds were being deposited into their accounts.

On the withdrawal side, 80% of persons indicated that they use ATM facilities. Also 57% of persons disclosed that some withdrawals were done in-branch; some 11% wrote cheques, but only 13% used online banking.

For respondents that indicated that they did not have an account with a bank or a financial institution, 12% stated that the reason for such was that they did not trust financial institutions. A lesser fraction (5%) stated that services were located too far away, while 4% said that they did not wish to take up any services.

### **Mobile Device/Internet Banking**

As an indication of the potential for a wider embrace of digital services, respondents were asked whether they owned a mobile device. The disclosed ownership rate was 96%. Half of the owners indicated that they did not use their mobile devices to perform any transactions during the last 6 months, while 40% used their devices to pay bills and 39% used them to make purchases. Transactions with a mobile device were mostly conducted by individuals between the ages of 16 and 34 years of age. In addition, the survey revealed that females use mobile devices more frequently to carry out transactions than males in all of the instances identified.

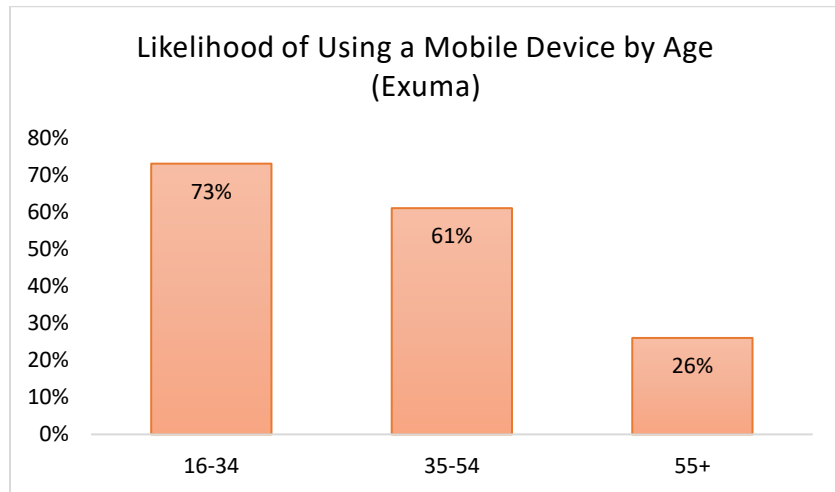
Respondents were also asked if they have used any other mobile phone or internet services other than banks and credit unions to carry out transactions. About 60% answered in the negative. An analysis by gender showed that this was the case for 61% of males and 59% of females. Only 30%



of persons stated that they used other mobile or internet services to make purchases; and 29% indicated that they used the devices to pay bills. Moreover, 27% of persons admitted using the devices to check their deposit balances, while 23% used them to send money.

Regarding the likelihood of individuals using their mobile devices to pay bills in the future, 37% of those surveyed were so inclined. Nearly half of the younger respondents (16 and 34 years of age) were in this category. Moreover 37% of respondents said that they would be very likely to make a future purchase on their mobile device.

Meanwhile, about 34% of respondents said they were very likely to receive mobile payments, whereas 26% indicated that it would be very unlikely. About 35% of residents indicated that they were very likely to make mobile payments, in contrast to 25% who indicated that they were very unlikely to do so.

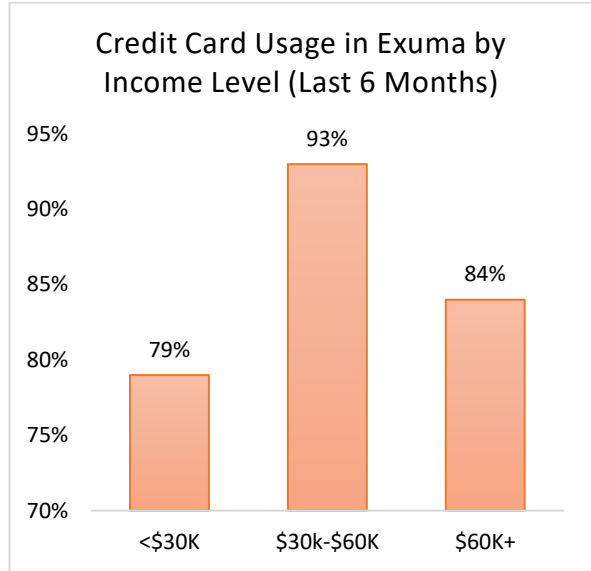
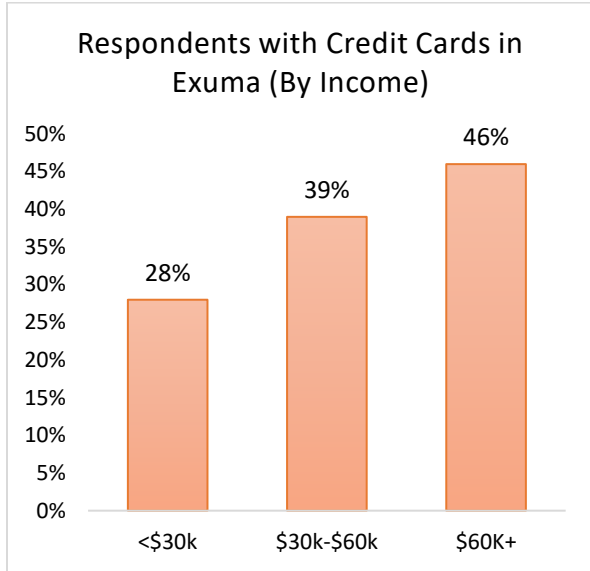


### Credit

On access to credit facilities, the majority (75%) of Exumians surveyed indicated that they had no loans with any financial institution, while 23% responded positively. As to the admitted credit products in use, more than half (51%) of respondents identified credit card balances; 35% stated residential mortgages; and 30%, automobile loans.

Respondents were further queried on the type of credit or loan products they had used in the last 5 years. About two-thirds stated that they did not have any loans within that period; 21% indicated credit card usage; and 11%, automobile loans.

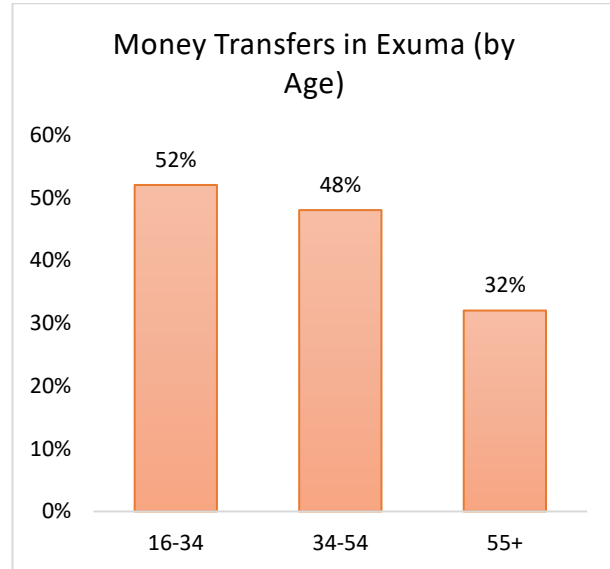
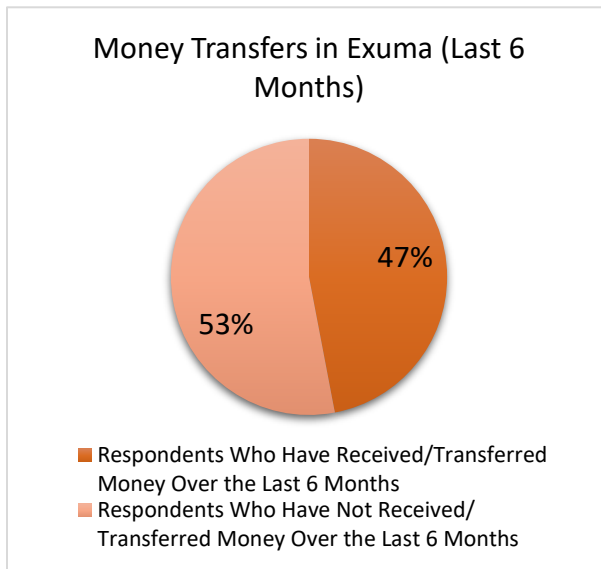
The respondents were also asked whether or not they possessed a credit card. This was confirmed for 34% of individuals. Asked if they had used their cards within the last six (6) months, the majority (86%) of card holders said “yes”, with more females (92%) than males (80%) indicating such.



## Payments

Various questions were used to gauge the respondents' payments behavior, touching on issues such as receiving and transferring funds, making utility bill payments; the forms of payment used; receipt of funds from employment and the method of payment encountered for salary disbursements.

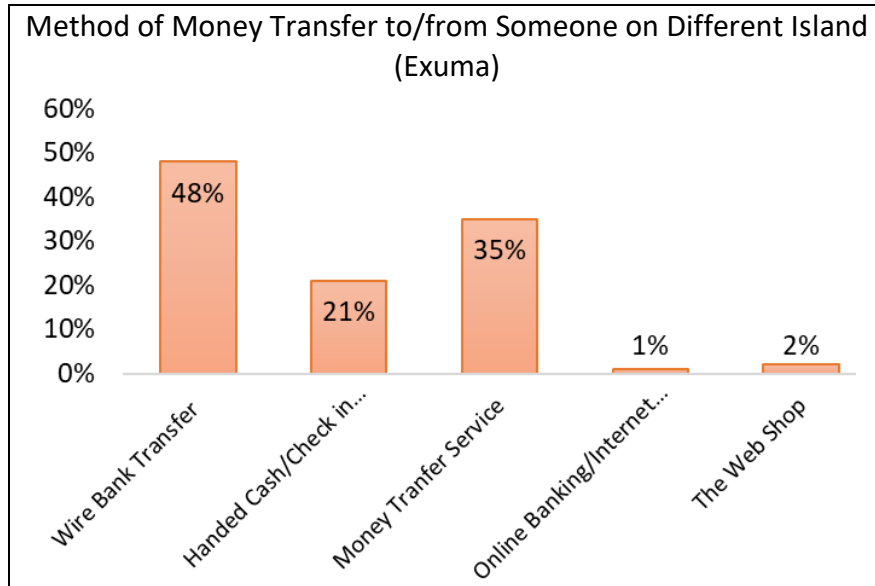
About 47% of persons disclosed that they had either received or transferred money to another person.



In terms of preferences for the transfer or receipt of funds, respondents relied heavily on formal financial services channels. Nearly half of respondents (48%) used a bank; 35%, money transfer



services; and nearly a quarter (21%), cash or cheques. Only about 2% of respondents admitted to using a web shop, while 1% used online banking/internet transfers.



Moreover, 82% of respondents noted that they paid utilities and other bills within the last six (6) months. Among them, persons between the ages of 35-54 years had the highest response rate (87%), followed by those over the age of 55 (81%), and then persons between 16-34 years of age (78%). Unlike the general transfer and receipt of payments, 60% of respondents settled bills in person via cash or cheque, while 41% used banks or formal financial institutions. Further, only 6% of persons disclosed using a money transfer service for bill payment, and only 1% of persons used online banking for this end.

In terms of receipt of wages, 80% of respondents confirmed receiving money from an employer in the form of salary or wages within the last six (6) months. Some 72% of residents received salary and wages via direct deposit to a bank/formal financial institution account. Nonetheless, some 32% of persons still received salary and wages via cash/cheque.

When asked about their willingness to use a mobile device to make or receive payments to conduct a number of activities, 56% of respondents stated that they were either likely or very likely to use a mobile device to pay a bill. Comparatively, 43% of respondents stated that they were either unlikely or very unlikely to use a mobile device to pay a bill. Among the respondents, females were more disposed than males to use mobile device to pay a bill. Age can in some cases be a determining factor for willingness to embrace technology, so much so that only 23% of





persons over the age of 55 were at least likely to use a mobile device for bill payments, while 57% of them were very unlikely to do so.

When questioned on their likeliness to use a mobile device to make a purchase, 34% of respondents said that they were very likely to do so, while 28% said that they would be very unlikely. It was found that persons ages 16-34 years were very likely to use a mobile phone to make a purchase (43%), which compared to 34% of persons of ages 35-54 years.

Similar to the responses for making a purchase, 32% of respondents said they were very likely to receive a payment via mobile phone, while 28% said they were very unlikely to do so. In terms of gender, 29% of males and 28% of females noted that it would be very unlikely for them to receive a payment via mobile phone. Again, the highest percentage (39%) of residents more likely to receive a payment by mobile phone were in the 16-34 years of age group, this compared to 33% for those between the ages of 35 and 54 years.

With regard to sending money and checking account balances, 35% of respondents indicated that they were very likely to use a mobile phone for these transactions. Additionally, by gender, females were more likely than males to utilize a mobile device for sending money (36% versus 33%) and checking account balances (36% versus 34%). Residents in the highest-income bracket (\$60,000+) were more likely to use a mobile phone to process payment transactions. When asked about any other payment transactions that they may conduct using a mobile device, 99% of respondents stated that they would not execute any payment transaction.

## **Conclusion**

Overall, the Exuma survey reveals a high rate of access to mobile devices and a willingness of more than half of residents to undertake more payment on digital platforms. It is revealed also that more convenient access to financial services could induce more individuals to partake in traditional banking services. In addition, there exist opportunities to target consumer education around approaches to being safe in the cyber world of financial services. For Project Sand Dollar, public awareness around security within the digital currency infrastructure will also have to be heavily emphasised.