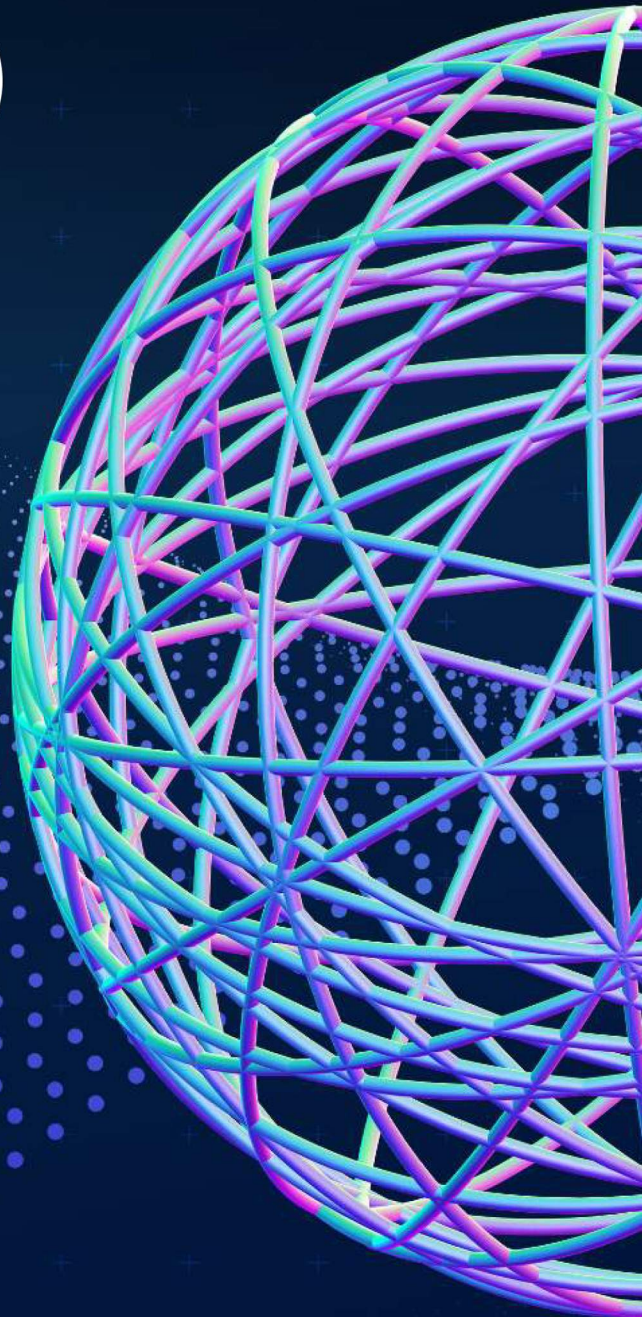


Agpaytech

Research Paper II

The Bahamas Sand Dollar - World's First Central Bank Digital Currency (CBDC)



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INTRODUCTION



JOHN A ROLLE

Governor, The Central Bank of The Bahamas,



Believes that the restoration process of the fi-

nancial systems after the natural disaster was clumsy, and the main reason for this was a dependency on cash.

The first country globally to launch its Central Bank Digital Currency (CBDC), The Sand dollar. This research paper intends to conduct a profound understanding of the Bahamas Sand dollar and the reasons behind establishing this CBDC.

One of the primary objectives of launching the Sand Dollar is to combat the financial problems originating from natural disasters. Recurring natural catastrophes shake the economy by inflicting cash losses and shutting the banking systems down.

In 2019, Hurricane Dorian inflicted significant damage on Abaco and Grand Bahama and had a massive impact on the local businesses. It presented a critical challenge to the Government towards the restoration of commercial activities. Consequently, citizens faced inconveniences as they could not access cash, and the relief attempts met significant setbacks. The project Sand dollar, a digital fiat currency based on blockchain technology, aims to address many such challenges for the Central Bank of The Bahamas.

John A Rolle - Governor, The Central Bank of Bahamas, believes that the restoration process of the financial systems after a natural disaster was clumsy, and the main reason for this was a dependency on cash.

On the contrary, the accessibility of a digital wallet that holds the currency will help solve a majority of logistical hurdles, the Sand Dollar is designed to tackle such challenges.

GENERAL UNDERSTANDING OF SAND DOLLAR



The Central Bank of The Bahamas launched the Sand Dollar in October 2020. In simple words it is a digital iteration of the Bahamian Dollar. The Sand dollar holds equal legal status as the standard currency. The Central Bank will issue this form of money and all residents will be able to access it through the digital wallet in the form of mobile application. The digital currency has a clear vision towards payment security and making financial services more affordable and build inclusion across age, gender and status. Furthermore it is expected to tighten up control on money laundering, currency counterfeiting, and other cash related frauds.

STRATEGY

The primary goal of introducing the Sand Dollar is to create financial inclusion. And for individuals to enjoy the ease of access for banking services, and to achieve this objective it is vital to offer mobile wallets that don't require to be connected with a bank account. However, the wallet must be provided by an Authorised Financial Institution (AFI), and the users are enrolled with that AFI.

The Central Bank of The Bahamas is encouraging AFIs to expedite and disclose their product development timelines to have a clear understanding of the strategy and time frame for citizens to conveniently access the Sand Dollar.

In line with it's goals, the Sand Dollar's technological architecture will provide the following features:

1. **Ease Of Use:** The application will be easy to use as The Central Bank of The Bahamas wants to promote financial inclusion and access, making the domestic payments system more efficient and non-discriminatory. This point is critical given the remoteness of some communities that remain outside the ambit of physical banking services for various reasons, including costs.

2. Offline functionality: Offline functionality implies that a person can transact without internet connection with a simple phone call to AFIs. It is a crucial feature, and this has been mentioned in the pilot reports of multiple Central Banks, such as the Riksbank, that are exploring CBDC.

Mr Kimwood Mott of the Central Bank of Bahamas has stated that they are achieving this functionality with the help of offline nodes. However, the sender and receiver will need to be in the same node while conducting the transaction. The offline transaction is recorded on that node and updated in the central node once the internet connectivity is restored.

3. Interoperability: Interoperability with other wallets systems will allow all authorised wallet providers who enrol in the Sand Dollar program, to be able to communicate with each other, send and receive funds and offer a seamless experience to their users. This feature will support both Business and Individual entities who are part of the Sand Dollar ecosystem.

4. RTGS/ACH Integration: The RTGS/ACH integration would allow the movement of Sand Dollars to and from bank accounts.

5. AML/KYC: Customer Due Diligence: The responsibility for Anti Money Laundering and Customer Due Diligence Procedures remains with the AFIs.

6. Distribution Mechanism: Different entities are expected to use the Sand Dollar for payments purposes, and will cover business to Business, Business to customer, and individual to individual use cases. Hence some operating limits for using this digital currency has been specified.



STIPULATIONS OF USING THE SAND

The Sand Dollar use cases have different tiers, and the usage limit has been decided accordingly. These are as follows:



BUSINESS/COMMERCIAL



INDIVIDUAL



NON RESIDENT/VISITORS

1. Non-resident/ visitors category will also be determined based upon their KYC. However, holding a local bank account is not a mandatory requirement to access the Sand Dollar in this scenario. The wallet holding limit for this category is set at \$500 with a \$1,500 monthly transaction limit. (Person I - Tier)

2. Individuals will have two tiers of wallet holding capacity depending on their KYC status. Those with KYC completed will be eligible for a wallet holding limit of \$8,000 with a monthly transaction limit amounting to \$10,000. (Person II - Tier)

3. Businesses can enrol for the Sand Dollar to be ready to accept it as payments. Enrollment in digital currency will always require a link between wallets and bank deposit accounts for these entities. The central bank of Bahamas has built the infrastructure, technology, and regulatory framework for this purpose. Merchants' wallets will have holding a limit of \$8,000 to \$1,000,000 with unlimited annual transactions. They will have to have enrolled with a bank account or possess valid business license and VAT certificate. (Business Tier)

Limit KYC/ Tier	Personal -I Tier	Personal -II Tier	Personal -III Tier
Holdings	\$500	\$8,000	\$8,000
Transactions	\$1,500 Month	\$ 10,000 Month	\$ 1,000,000

WALLET PROCESS

The Central Bank of Bahamas wants the Sand Dollar wallet process to remain simplified and compliant with its established procedural framework. Eventually, it will be possible to initiate the signup process through banks (eventually credit unions) PSPs or MTBs, however in all cases, it will be done using central bank pre-established account codes. Users will download the sand dollar app to mobile, and it will be offered for both Apple or Android devices. After that, the user will complete the account setup process through a licensed service provider.

THE EXPECTED BENEFITS OF SAND DOLLAR

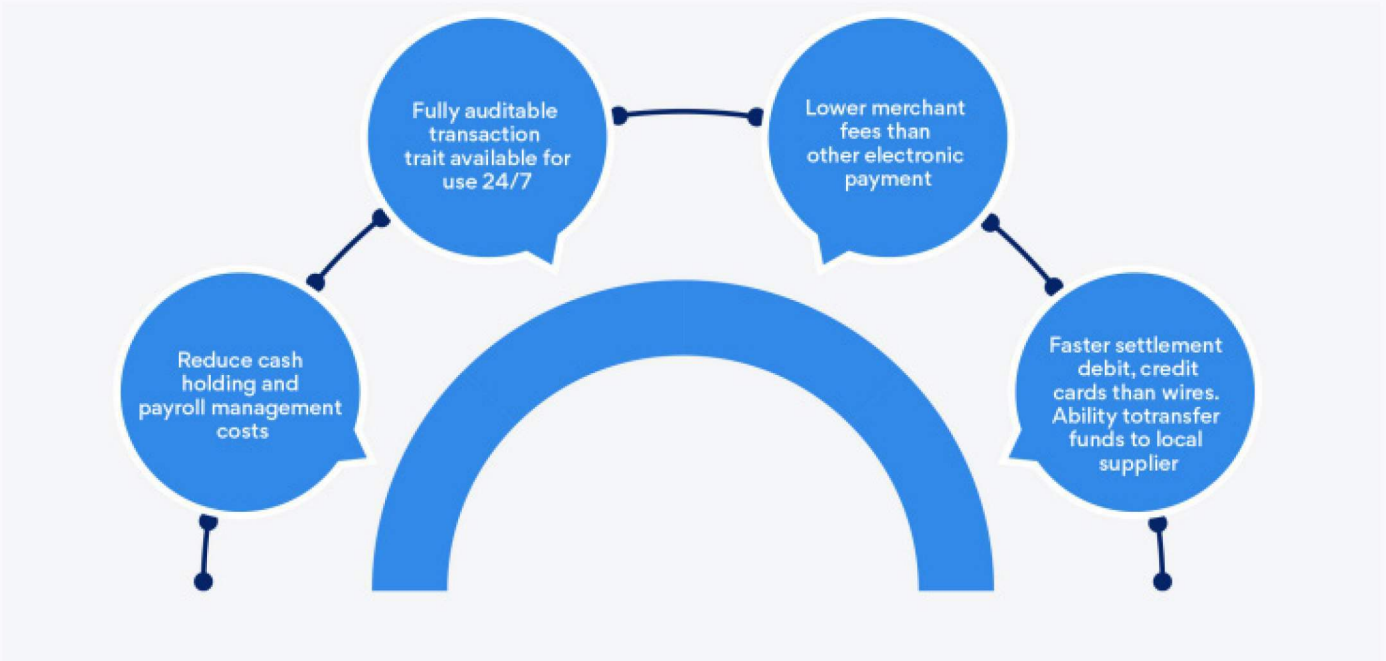
Sand Dollar is widely expected to provide benefits for residents living on the Islands. As mentioned earlier, some sections of the Bahamas' society live in remote locations and are outside regular banking services. It will be easier for Governments to reach out and distribute financial help to them directly in the aftermath of a natural disaster.

Furthermore, Mr John Rolle anticipates that the banking sector and other financial institutions will use this infrastructure to allow citizens access to their deposits and withdrawal services.

Mr Rolle has stated that this infrastructure will create an electronic Know your customer (KYC) network that will allow financial institutions to share information and make it easier for customers to utilise services offered by different institutions. Multiple financial institutions will be allowed to use the stored KYC information, and it will be easily transferable between financial institutions.

The benefits offered by the Sand Dollar are enumerated as follows:

- It will help reduce cash handling and payroll management costs.
- Reinforce the fight in implementing and ensuring robust Anti-money laundering processes.
- Provide a Fully auditable transaction trail.
- Faster settlement of payments when compared with wire-transfer, debit and credit cards.
- Ability to transfer funds to local suppliers in seconds.



INNOVATIVE PLATFORM

The world's first central bank digital currency in The Bahamas is accessible through mobile applications available for iOS and Android devices. This approach has allowed the Bahamas to leapfrog into the digital vanguard of global fintech innovation. The Bahamas territory spreads over 700 islands, and this geographical hurdle makes it unprofitable for commercial banks to have ATMs or physical branches on remote, sparsely populated islands. There is a pressing need to serve the unbanked and under-banked population and a drive to modernise the payment system. This objective was impossible to achieve if not for the introduction of the Central Bank Digital Currency.

In a recent interview, Mr John Rolle stated 'We focused on eliminating as many obstacles as possible for persons having access to the equivalent of a deposit account or a mobile wallet account to conduct transactions'.

He further stated that this effort is a successful pilot of the central bank distributing Sand Dollars to Bahamian commercial banks, payments service providers, and money transfer operators. In this system, funds are placed in clients' digital wallets, which allow access to various amounts of money and transaction thresholds.

INTEGRATING MASTERCARD AND ISLAND PAY

Mastercard and Island pay have introduced a new program designed to ensure that the Bahamas Sand Dollar prepaid card gives people the option to convert the digital currency to traditional Bahamian dollars instantly. It will allow paying for goods and services anywhere Mastercard is accepted on the Islands.

The Central Bank of The Bahamas empowers the Digital Sand Dollar with the same value and consumer protections as the traditional Bahamian Dollar. The geographical spread spanning over 700 small islands make cash movement extremely costly, thus providing the central bank digital currency (CBDC) the opportunity to be the preferred digital payment mode in the region.

Registered users can use the Sand Dollar to make payments at merchant outlets through its digital mobile application. Island pay mobile wallet users can decide if they want to transact in Sand Dollars or Bahamian dollars at a merchant using this mobile app.

“The Bahamas is leading the innovation in CBDCs, and we are thrilled to play an essential role in helping to democratise access to currency, especially in areas that are currently underserved.” Richard Douglas - Co Founder CEO, Island Pay

Furthermore, Island pay’s technology platform, combined with Mastercard technology and wide merchant acceptance, can help reduce the operational distribution costs of cash and modernise the overall payments systems in the Bahamas.

OBJECTIVES

The Sand Dollar was introduced to the islands of Exuma and Abaco in late 2019, and the central bank rolled out the e-currency nationwide in October 2020. It aims to make digital payments more accessible, especially on the far-flung islands that play a critical role in the tourism-dependent economy. The monetary authority has \$48,000 worth of Sand Dollars on its balance sheet, valued at 1-to-1 with the regular Bahamian Dollar. Users will be able to use it to make payments and transfer funds using their smartphones. It will be possible to pay in retail outlets using a QR code tied to the virtual wallet.

SAND DOLLAR AND UNREGULAED CRYPTOCURRENCIES

Although, CBDCs are far behind their better-known unregulated crypto counterparts, such as Bitcoin and Ethereum, in worldwide acceptance since there are a couple of things that work towards the reception of such decentralised tokens.

1. They have a significant first-mover advantage. Where-in, CBDCs are in the early stages of research, exploration and development.
2. Unregulated crypto-currencies provide relative anonymity to holders since they lack direct ties to conventional currencies and remain outside the ambit of regulators.

However, CBDCs are gaining significant traction with the general public interest. Keith Davies, the chief executive officer of Kanoo, a Bahamian PSP that is piloting the sand dollar states that unlike conventional PSP transactions, once a Sand dollar transfer happens, it's final and irrevocable because it's fiat currency. It is the essence of a settlement system.

This observation holds extreme importance as there have been instances even in major unregulated platforms where transaction reversal incidents occur.

CONCLUSION

The sand dollar is an electronic offshoot of the Bahamas dollar. It enables holders to use their mobile phones to make person-to-person or person to business transactions-even when they are offline. Furthermore, it makes the settlement process more straightforward for the payment service provider(PSP) facilitating these transactions.

Such CBDCs will have to promote financial inclusion and broader economic and financial development in their path towards widespread acceptance. The Central Banks will remain active with the Government and stakeholders to ensure that the financial inclusion outcomes are more efficient and offer secure infrastructure, as they will be susceptible to cyber-attacks. The banks and PSPs will also need to take necessary steps to assess the financial transactions undertaken and run them through robust AML/CFT processes to ensure financial criminals do not exploit them. Central Banks, the world over, will keep a keen eye on the developments and extract vital learnings from the progress achieved by the Sand Dollar in an actual use case environment.

ABOUT AGPAYTECH

AGPAYTECH is a company pioneering in the PayTech Space with a focussed approach on building robust technologies for Foreign Exchange, Cross Border Payments and Crypto Currencies.

We have partnered with multiple Banks, Non-Banking Financial Institutions and Corporates to create a solid service delivery model for them and their customers to ease their International Remittances and Payments concerns.

AGPAYTECH is regulated by the Financial Conduct Authority as a Payment Service Provider under PSD2 with six permissions that include online card acquiring business. It is a vital regulation that governs payment services businesses, consequently enhancing credibility and establishing consumer trust.

Such diverse exposure empowers us to enable local and global entities to overcome international remittances and settlements burdens they might face. We do it efficiently by merging our experience with cutting edge technology.

We have multiple offices across Europe, Asia, and Africa with a dynamic team of 100 professionals passionate about helping clients process millions every month in Fiat and Exotic currencies.

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