

Agpaytech's Research
10th May, 2022



Overview of Eastern Caribbean Central Bank Digital Currency: DCash

Executive summary

DCash is the first blockchain-based currency introduced by the world's currency union, Eastern Caribbean Central Bank (ECCB). DCash project was launched at the end of March 2021. This digital currency pilot phase expands on a large scale covering the eight Caribbean Islands. The ECCB is the Eastern Caribbean currency union (ECCU) that has the sole authority to mint, issue and redeem DCash. Besides,

DCash involves the secure minting of a digital version of the Eastern Caribbean dollar (DCash) as a legal tender. DCash is projected to increase financial inclusion, increase payment efficiency, and provide resilient payment systems for all member countries. The ECCU and the central banks partnered with Bitt Inc technology to provide the technology services.



Cash

Keywords:

DCash
Digital Currency
CBDC
Financial Technology
Payment System

Agpaytech

Methodology

This report is based on relevant literature, ECCB reports, news and DCash proof of concept papers. Besides, the report referred from ECCB papers and CBDC trackers to validate the DCash progress

Index

| | |
|--|----|
| Introduction | 3 |
| Financial Eco-system of the ECCU | 4 |
| Overview of DCash | 6 |
| Benefits of Using DCash | 6 |
| Description of DCash wallet | 7 |
| DCash is Required to Build a Digital Economy | 7 |
| Features of DCash | 9 |
| Technology Partner of DCash | 11 |
| Central Bank's Role in ECCB | 12 |
| Offline Usage of Transactions | 12 |
| Conclusion | 12 |

Objective

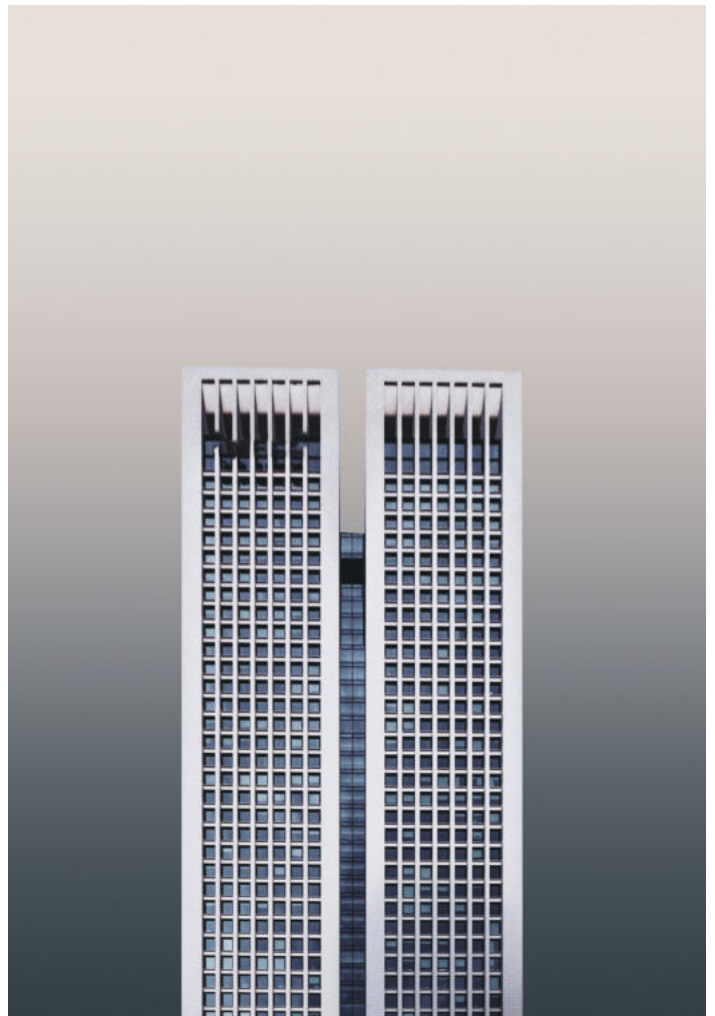
This paper provides an overview of ECCB digital currency (DCash) among the ECCU. First, the report highlights the structure of ECCU financial system, licensed financial institutions, and transaction patterns among member states. Secondly, the report presents DCash overview, its benefit and wallet features.

Introduction

The Eastern Caribbean Central Bank's (ECCB) DCash is the monetary authority for eight island economies, including St Lucia and Grenada. DCash was initially launched in Antigua and Barbuda, Grenada, Saint Christopher (St Kitts), Nevis, and Saint Lucia. However, the digital version of the Eastern Caribbean Dollar was initially launched in four Eastern Caribbean Currency Union (ECCU). The currency union member are Grenada, St. Kitts and Nevis, Antigua and Barbuda, and Saint Lucia. The ECCB has faced payment-related issues, such as frictions of cross-border transactions, mainly due to the reliance on US and Canadian correspondent banks to clear transaction in US dollars. Therefore, US dollar acts as a bridge currency between most Caribbean currencies, which has increased the complexity, cost, and latency in cross-currency transactions. Data Statista shows fourth quarter of 2020, the cost of sending to was as much as 5.56% of the total value of the remittance itself. In addition, the Caribbean country is most dependent on remittances. To remove the barriers to the payment process, ECCB launched the Dcash, which is transparent, cheaper, and faster resilience.

Financial Eco-system of the ECCU

The financial system in the Eastern Caribbean Currency Union (ECCU) comprises domestic banks, international financial services sector banks, credit unions, insurance companies, national development foundations, development finance institutions, building and loan associations and finance companies. The regulations of the ECCB banking framework it's two components. First is the ECCB Agreement Act, which regulates banking business on behalf of the collaboration with governments. Second, there are the Banking Acts of various government territories. Therefore, all commercial banks and other institutions must be licensed under the Banking Act, which the ECCB regulates. This act under 1983, however, all commercial banks and other institutions need to carry licensed under the Banking Act that the ECCB regulates. Therefore, licensed financial institutions



must submit monthly, quarterly, and annual returns to the ECCB. These return policies will help assess the institutions' performance and help better understand the financial system. In addition, there have some licensed financial institutions under the banking acy. The payment development structure mainly focuses on governance arrangements, Retail payment system, and Gross settlement system. ECCB needs to work on relicensing Payment infrastructure. The ECB's role in the payment system is multifaceted. The ECCB must ensure that the payment system supports a competitive private sector. However, there is a need to work on institutional arrangements like the Reestablishment of Local, National Technical Operating Committees (NTOC) in each of the eight territories.

On the other side, the Retail payment system needs ACH (Automated Clearing House) development and administration to Eastern Caribbean Automated Clearing House services. Therefore, another component is the Gross settlement system.

There must be a need to fix the funds settled between the commercial banks/participants in the payment system on an individual transaction basis. The ECCB accounting application (SAP) is interfaced with SWIFT, thus allowing straight-through-processing (STP) on the ECCB end. SAP (Straight Through Processing) receives and validates incoming messages and processes transactions accordingly by debiting the sending institution's account and crediting the beneficiary institution's account

Table 1: Licensed financial institutions under the banking act

| Member Territories | Commercial Banks | Non-financial Institutions |
|--|------------------|----------------------------|
| Anguilla | 2 | N/A |
| Antigua and Barbuda | 6 | 2 |
| Commonwealth of Dominica | 4 | N/A |
| Grenada | 4 | N/A |
| Montserrat | 2 | N/A |
| Saint Christopher (St Kitts) and Nevis | 6 | 1 |
| Saint Lucia | 5 | 3 |
| Saint Vincent and the Grenadines | 4 | 2 |
| Total | 33 | 8 |

Source: ECCB (Eastern Caribbean Central Bank)



Overview of DCash

DCash is a cheaper, transparent, and secure safety transaction within the ECCU. It helps to reduce the usage of cash. Enhance affordability and sustained access to financial services and new types of financial services. Digital marketplace enhances regional coordination-economic activities, regulation data analytics-Real time market and business intelligence. In addition, DCash must be used in three modes.

P2P: Person to Person

P2B: Person to Business

B2B: Business to Business



Benefits of using DCash

ECCB launched the DCash across the ECCU to achieve a resilient payments system that is faster and cheaper. The DCash application allows users to transfer funds quickly at significantly reduced costs. However, the benefits are not limited to these, and we have enumerated further advantages of using the DCash as follows:

- Instant settlement of transactions and transfer of funds across the ECCU
- DCash is safe even in the event of loss of device
- Contactless Features
- The DCash app can be downloaded and accessed by any person who has a smart device
- Mitigation of risks and costs associated with carrying cash
- Value backed by the guarantee of the ECCB

Description of DCash wallet

DCash is a securely minted digital version of the Eastern Caribbean Dollar. Issued by the ECCB, it is an innovative, real-time payment option available within the Eastern Caribbean Currency Union (ECCU). Notably, there are four participants in the ECCB currency union:

1. Consumers
2. Merchants
3. Financial institutions and
4. Individuals

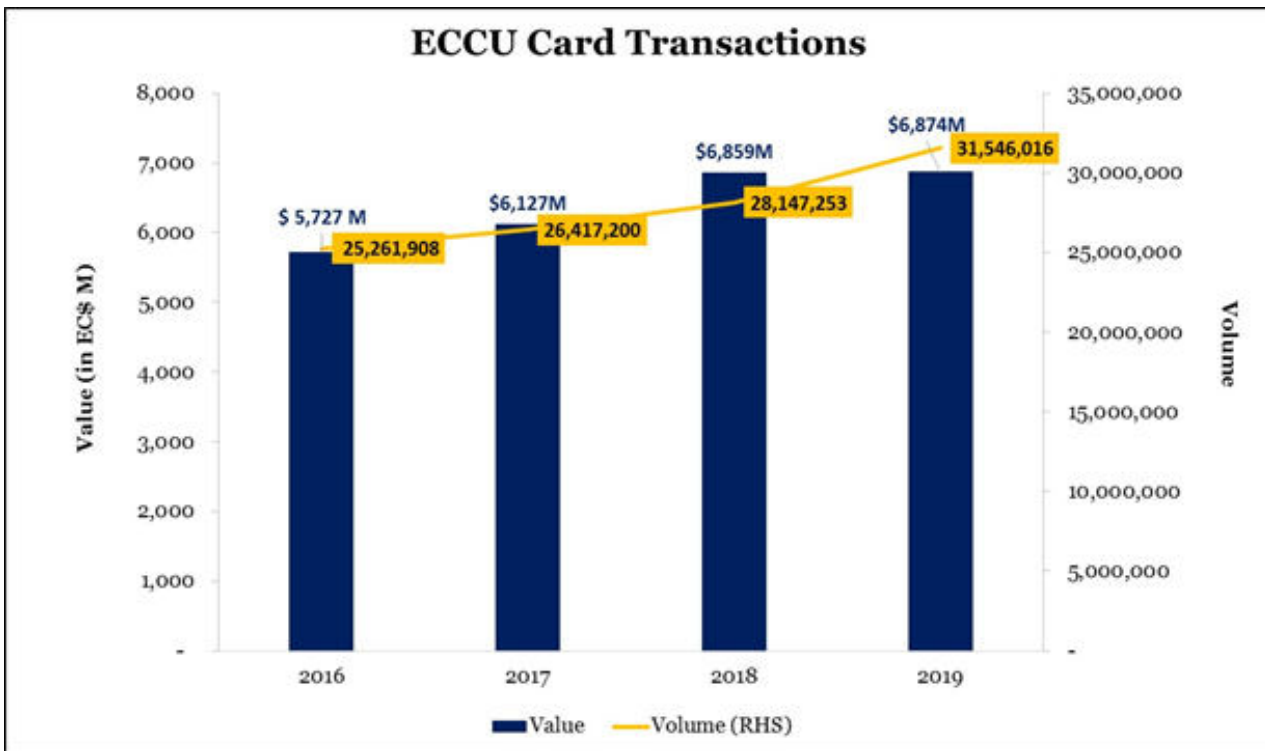
To use the DCash, Consumers have to sign up through a participating financial institution or an authorized DCash agent. Persons have converted the cash in physical notes and coins. The cash merchants approved service providers and converted funds from your bank account at a participating financial institution. DCash supports business and private transactions with vendors and merchants signing up for the DCash Merchant app. Users have been able to transfer DCash to other residents within the currency union.

If someone has registered with the DCash app and is shopping at a DCash pilot merchant, the individual to process the payment can scan the merchant's or recipient's QR code with a smart device and execute the transfer. The transactions and limits of the holder are examined by the KYC procedure or Anti-money laundering and combating financing terrorism (CFT) regulations. The wallet operates on a tier system with various transaction limits; the embedded blockchain code enforces all these application features.

DCash is required to build a digital economy

The transformation is required for the economies of the ECCU (Eastern Caribbean currency union). With the impact of the COVID-19 pandemic, countries have to be forced to adopt a new everyday life. The citizen of the ECCU has enabled to access digital technologies. However, in recent years, the increase in card payments usage has been very high. Below the figure shows the transaction card payment.

Figure 1: Trends in Card Transactions



Source: ECCB (Eastern Caribbean Central bank)

Therefore, the vast motivation and significant benefit of DCash is reducing the cost of financial transactions. The table below mentions how the cost of transacting, an extension of the cost of doing business, and using existing payment channels are relatively high. The ECCB has promised to fulfil the safety and integrity of the financial system. In addition, Bank has been cautious to observe and incorporate industry standards related to cybersecurity.

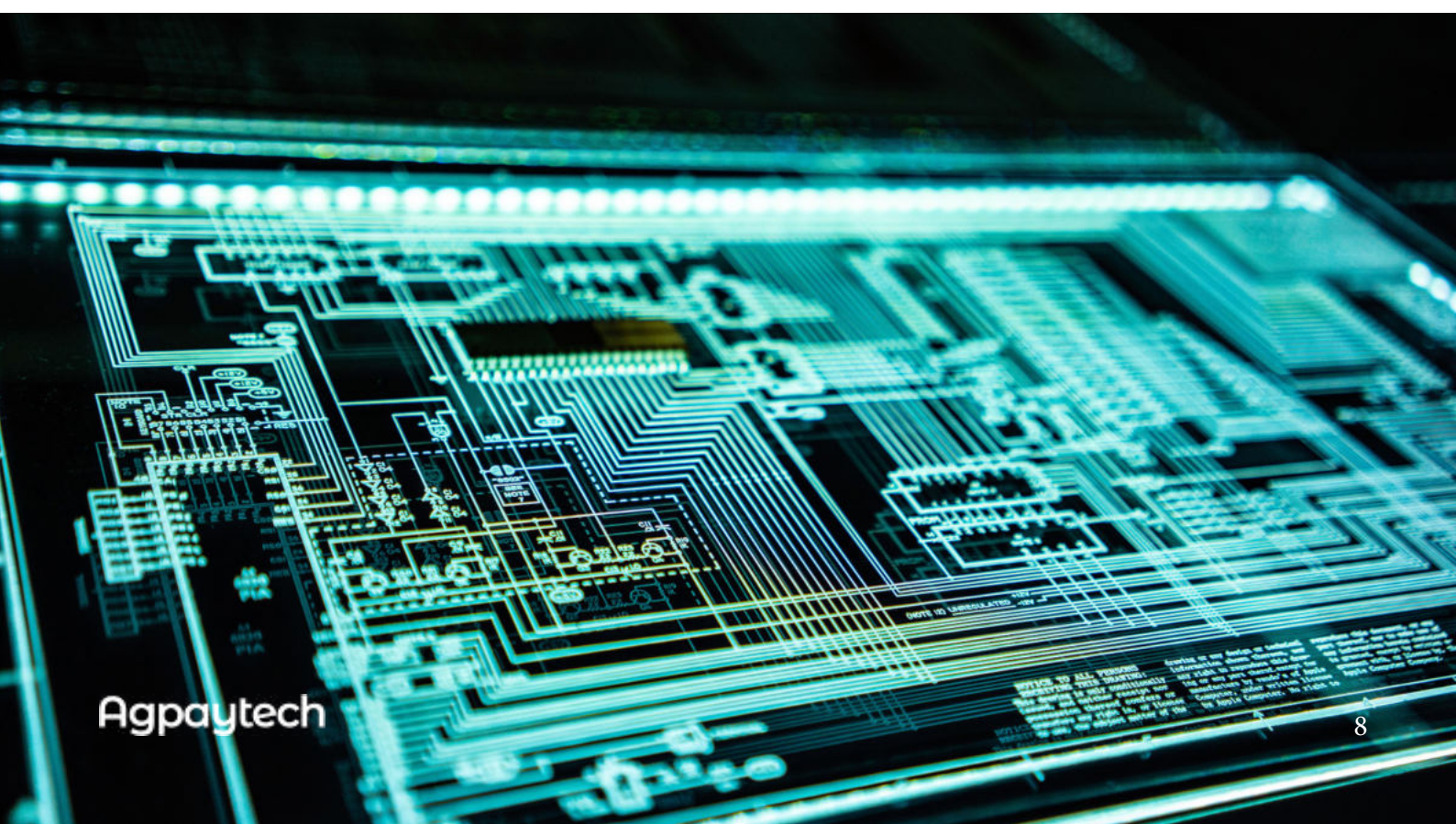


Table 2: Transaction Fees

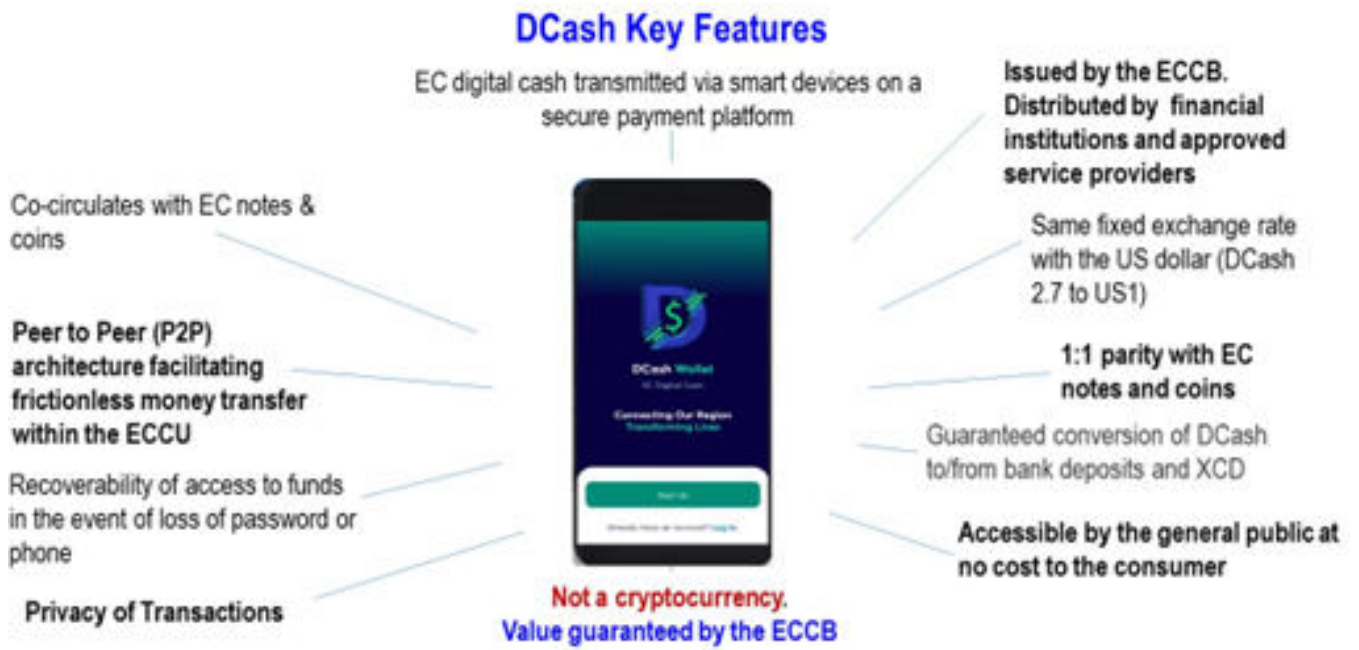
| Panel A: Domestic Transactional Fees Incurred by ECCU Bank Customers as at 12/2020 EC\$ | | | | | | | |
|--|---------------------|---------------------|--|---|----------------------------------|----------------------------------|------------------------------------|
| Regular Cheque Account Monthly Service Charge | The cost per Cheque | Stop Payment Fees | Encashment of bank's own cheque for customer | Encashment of bank's own cheque for non-customers | Incoming Regional Wire Transfers | Outgoing Regional Wire Transfers | Credit Card Annual Membership Fees |
| \$2.30- \$50.00 | \$0.10- \$5.00 | \$10.00- \$57.50 | \$0.00- \$10.00 | \$0.00- \$11.50 | \$10.00- \$68.45 | \$30.00- \$63.25 | \$77.13- \$403.23 |
| Panel B: POS Fees Incurred by Merchants | | | | | | | |
| <ul style="list-style-type: none"> Customers with point of sale machines or those who offer electronic payments are charged up to 3.5 per cent by financial institutions in addition to rental charges for the POS Machine. | | | | | | | |
| Panel C: POS Transactional Fees Incurred by ECCU Banks | | | | | | | |
| <ul style="list-style-type: none"> Visa and MasterCard charge on average 1.40 per cent-1.65 per cent plus an additional 2 cents USD per transaction. Caribbean Credit Card Corporation Ltd. (4Cs) negotiates charges with their respective client financial institutions. The financial institutions determine the rate charged to the customer. | | | | | | | |

Source: ECCB (Eastern Caribbean Central Bank)

■ Features of DCash

Digital cash (DCash) is helping to make better financial management through the reporting functionality in the DCash app. The DCash promotes financial inclusion by offering a solution that there is no need for to users have an account at a financial institution. Customers can access a value-based wallet (VBW) through an agent authorized by the ECCB.

Figure 2: DCash key Features



Source: ECCB (Eastern Caribbean Central Bank)



Furthermore, there is a description of the wallet's limit and documents requirements for using the DCash.

Table 3: Features of Eastern Caribbean Central Bank (DCash)

| Features of ECCB (DCash) | ECCB DCash |
|--------------------------|--|
| Launch Date | Pilot started on March 31,2021 |
| Platform Vendor | Bitt-Hyperledger Fabric |
| Expressions of interest | DLT private permissioned |
| Access | Smart phone only |
| Transaction fees | None |
| Interest bearing | No |
| User Tier | Value (Tier 1) and register based |
| Tier 1 requirements | Physical/email address, birth date/place, phone number and photo |
| Tier 1 transaction limit | EC\$1,000/m or EC\$2,700/m |
| Tier 1 holding limit | - |
| Tier 2 requirements | Full name, address, phone number and bank account |
| Tier 2 transaction limit | Ec\$3,000, EC\$5,000, EC\$20,000/depending on risk profile |
| Tier 2 holding limit | - |
| High value/business | - |
| Requirements | Business name, physical/email address, phone number |
| Transaction limit | EC\$25,000/d to EC\$300,000/d based on risk rating |
| Holding limit | - |

Source: Global Fintech Intelligence

Technology Partner of DCash

DCash was designed and developed by the international fintech company, Bitt in partnership with the Eastern Caribbean Centrals Bank, which became the world's first retail central bank digital currency to be publicly issued within a formal currency union. The DCash pilot has partnered with Bitt's globally financial eco-system. Bitt's financial institution solution allows financial institutions to manage typical banking and customer service relationships

for business and consumer clients. Bitt's is a free digital wallet solution that lets ECCU residents make in-person or remote transactions to and from other DCash Wallet holders or organizations.

Central Bank's role in ECCB

Central banks do not need to develop market strategies or manage marketing campaigns. Central banks must be considered local payment service providers (PSPs) participating in CBDCs pilots. The well-known payment applications integrated with a CBDC network have provided a quicker adoption and easier onboarding for consumers. However, the central banks have offered wallets to the market in some cases. On the other hand, in some cases, directly connect to open the CBDC network application programming interfaces and license a group of financial institutions and PSPs to integrate.

Offline usage of transactions

The party initiating the transfer (sender) must have an internet connection. If the receiver is offline, the Payment will still be processed, and they will see the change in their balance as soon as they are back online. The central Bank can see anonymized transaction data and outstanding stock of DCash in each digital wallet. Registered financial institutions can fully observe the identity of payers and payees and the purpose of transactions. However, regarding offline CBDCs, one of the challenges identified by many central banks is ensuring that the CBDCs are still accessed offline. CBDC service partners such as Bitt, G+D, Consensus, and Accenture have provided technical support to the digital currency projects. To resolve this issue, many central banks and private partners have developed offline CBDC solutions.

Conclusion

The Eastern Caribbean Central Bank is working towards increasing financial inclusion, competitiveness, and resilience across the Island's economies. The motivation to launch DCash also feeds the aspiration to reduce traditional notes and coins by 50 % by 2025. It will improve the payment system efficiency, enhance new financial services, and improve regional coordination in economic activities. The people of Saint Vincent and the Grenadines are next in line to benefit from a safer, faster and cheaper way to pay for goods and services with the imminent launch of the Eastern Caribbean Central Bank's (ECCB) DCash; the digital version of the EC Dollar.

References

- Antoine, T. N. (2001). Governor ECCB. The ECCB's Digital Currency (DCASH) is a critical Step in the buildout of a digital economyh in the EECU.
- Bank, E. C. (n.d.). ECCB Digital EC currency pilot. ECCB central Bank organization.
- Bank, E. C. (n.d.). Llcensed financial institutions under the Banking Act. financial stability.
- DCash resumes service with government to consumer payments on agenda. (2022). Global Governmnet fintech.
- ECCB. (2021). Bureau. Bitt Partners with ECCB to Develop World's First Central Bank Digital Currency in a Currency Union, 1.
- ECCB. (2021). ECCB launches digital currency. Bitt Partners with ECCB to Develop World's First Central Bank Digital Currency in a Currency Union.
- Features of Eastern Caribbean Central Bak (ECCB). (n.d.). The global fintech intelligencer, 1.
- Growth and Resilience Dialogue. (n.d.). power point presentation of Dcash.
- Managers, C. B. (2018). ECCU payment system development initiatives. Eastern Caribbean Central Bank.
- Product and service of DCash. (n.d.). BOSVG.

About Agpaytech

Agpaytech is a company pioneering in the Fintech Space with a focused approach on building robust technologies for eCommerce Card Processing Solution for Payment Service Providers (PSPs). Additionally, we provide Compliance and Regulatory Umbrella, Remittance-as-a-Service White-Label Solution, Foreign Exchange, Cross Border Payments, digital currency technology. We have partnered with multiple banks, non-banking financial institutions, and corporate organizations to create a solid service delivery model for them and their customers to ease their international remittances and payments concerns. info@agpaytech.com

AGPAYTECH LTD.
3rd floor, 86-90 Paul Street
London, EC2A 4NE, UK
info@agpaytech.com