The Eastern Caribbean Central Banks Digital Currency (DXDC) – Rationale and Evolution

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Abstract:- This article seeks to provide a cursory historical overview evolution of money, in the Eastern Caribbean Currency Union and the Eastern Caribbean Central Bank's rationale for its Digital Currency (DXCD), Pilot Project.

The Eastern Caribbean Currency Union is a common monetary and currency space shared by eight members of a political and economic sub-regional regional trade area of the English Speaking Caribbean Members of the Organisation of the East Caribbean States (OECS).. These are all former colonies of Great Britain, who gained independence between 1974- 1983, except Montserrat who is a dependency territory with limited internal self-governance.

Since 1704, the region has been increasing its integration into the global monetary value chain through its political and economic association with Great Britain In 1983, the heads of Governments of the Organisation of Eastern Caribbean States, agreed to form a central bank to provide inter alia a common pool from which monetary policy guidelines, would emanate. Among its many achievements is the development and deployment of a common currency (Eastern Caribbean Dollar - XCD).

On March 13, 2019 after been Governor of the Eastern Caribbean Central Bank, Mr. Timothy Antoine, announced a pilot project on a central bank digital currency, which is expected to co-exist alongside of the bank's fist /paper money.

This paper discusses the evolution of the strategic thinking of the ECCB in arriving at such a critical technologically disruptive decision. The article, while unpacking the rationale of the ECCB for its venturing into such unknown monetary tropical waters, is also punctuated with the author's own analytical insights into the decision, by the ECCB,

Keywords:- *Eastern Caribbean Central Bank, Central Bank Digital Currency, Strategy, de-risking, Cryptocurrency, Block chain.*

I. INTRODUCTION

The World's economy has been increasingly digitized, which is due in part to the rapid and seismic rise in ecommerce and its accompanying technologies, globalization, and global demand for cheaper and cheaper ways for conducting business, especially cross border trading.. As the world's economy and payment methods and systems changes, including the emergence of privately mined currencies, Central Banks Money and the role of cash, like the United Sates Dollar and the ECCB Dollar have been shrinking, while been in great demand. As a consequence Central Banks have been challenged to consider and take appropriate actions, in order to be able to facilitate cross-border trade and help spur economic development. Some countries, such as Sweden has experienced significant decline in the use of cash, which has led to the development of the eKrona. Other countries such as, The People's Republic of China (PRC), the digital yuan, and Russia have also been active in this area. The ECCB has not been left behind that curve, as it implements its pilot project.

According to the ECCB Strategic Plan, 2017 – 2021, the ECCU has a total population of approximately 628,000, a combined Gross Domestic product (GDP) of EC$18.4 billion (2016) and an average per capita income of EC$29,372 (2016).

Unlike traditional central banks Which focus almost exclusively on monetary and financial stability issues, the purposes Of the ECCB as articulated in Article 4 of its Agreement Act 1983, embody the key foundational concepts of stability, development and integration. More, specifically, the aims of the ECCB are to;

- regulate the availability of money and credit;
- promote and maintain monetary stability;
- promote credit and exchange conditions and a sound financial structure conducive to the balanced growth and development of the economies of the territories of the Participating Governments; and
- actively promote through means consistent with its other objectives the economic development of the territories of the participating Governments.

On March 13, 2019, Governor Timothy Antoine, of the, Eastern Caribbean Central Bank (ECCB), announced the launch of its pilot project, **on "Blockchain Technology & Digital Currencies**." This pilot project is undertaken in partnership with a Barbados-based Financial Technology Company (Fintech)- Bitt (Barbados). On October 11, 2019, the Governor in a well-choreographed, regional video conference announced the launch of the East Caribbean Digital Currency, herein referred to as, DXCD.

This is certainly a bold-action undertaken on the part of the ECCB, which aims to be the Caribbean first central bank issued digital currency, running, on the "Blockchain Technology".

Before getting into the explanation/rationale/justification articulated by the ECCB for this bold initiative, it is useful to explain the following;

- The evolution of money in the Eastern Caribbean ?
- What is the rationale for including a CBDC into the ECCU?
- What is a Central Bank Digital Currency (CBDC)?

➢ *The Evolution of Money In the Caribbean and Eastern Caribbean Currency Union*

Formal attempts to introduce coin based method of valuing goods and services, and used as a medium of exchange, was initiated in 1704, by Queen Anne's Proclamation, who introduced the Gold Standard to the West Indies, in basic coinage. There were three fundamental factors, which converged to provide the catalysts, which gave rise to this proclamation, they were;

- the emergence of the industrial revolution,
- the need to resourced and sustain the triangular slave trade;
- The lead provided by China, in that as early as 1100 BC, China was already minting coins and using same for commercial transactions, and no doubt British and European visitors to China, were curious and sought to adopt this form of exchange.

Therefore by 1822, the British Sterling Coins were introduced, into the United Kingdom.

In 1825, the British Government introduced the ¼, 1/8 and 1/16 fractional"anchor dollars". This was followed by a copper coin. That year, also marked the first move to introduce the British Sterling Silver Coinage to the British West Indies with an imperial Order in Council, A second Imperial Order in Council was passed in 1838, four years following the act to abolish slavery, with a rating of EC$1 equal to 4 shillings, 2 pence.

1946 marked another significant event in the evolution of money in the Commonwealth Caribbean. In that year, a West Indian Currency Conference comprising of Barbados, British Guiana, the Eastern Caribbean, formalized arrangements to introduce the British West Indian Dollar at a rate of £1 to equal, EC$4.80 cents. This fixed rate conversion remained until the gold standard was abolished, and the Eastern Caribbean Dollar, became pegged to the United Sates Dollar, at fixed exchange rate of US$1 = EC$2.70, on 7 July, 1976 (Wikipedia.org).

By 1950, the British Caribbean Currency Board (BCCB) was established for purposes of overseeing the supply and demand of the currency. In 1955, the British West Indian Dollar, only existed in Bank notes and covered the entire English Speaking Caribbean, including Jamaica. However, by 1964, Jamaica, and indeed Grenada and Trinidad ended the legal tender status of the British West Indian Dollar (BWI$).

1965, marked a significant year for the evolution of money, in the Eastern Caribbean area, when the BWIS was replaced by the, "East Caribbean Currency Authority (ECCA) was established and, in 1968, Grenada, returned to the ECCA, since it has been using the Trinidad BWI, since 1964.

In 1983, the Eastern Caribbean Central Bank (ECCB) was established and the Eastern Caribbean Dollar as we know came into existence. Since then we have experienced, the use of different types of paper and coins in circulation, including the recent polymer notes.

➢ *What is A Central Bank Digital Currency - CBDC?*

The issue of cryptographic technology-based digital currency, is much talked about today, especially in the Eastern Caribbean Currency Union, where we are about to experience the full-rollout of our own DXCD. The newness of this method of payment, has not resolved the multiple definitions, of a CBDC, which is based on, cryptographic technology. However, I have no doubt that we are approaching a uniform or definitive definition. It is nevertheless possible to identify, CBDC, as "an electronic, fiat claim on a central bank that can be used to settle payments or as a store of value taxonomy defines a CBCC as an electronic form of central bank money that can be exchanged in a decentralised manner known as *peer-to-peer*, meaning that transactions occur directly between the payer and the payee without the need for a central intermediary." (Meaning et al. 2017).

➢ *According to the, Bank for International Settlement,*

"The 2018 report by the Committee on Payments and Market Infrastructures (CPMI) and the Markets Committee (MC) defines CBDCs as new variants of central bank money different from physical cash or central bank reserve/settlement accounts. Based on four key properties, the CPMI-MC report provides taxonomy of money ("The money flower") which delineates between two broad types of CBDC: general purpose and wholesale – with the former type coming in two varieties. The four key properties of money are: issuer (central bank or not); form (digital or physical); accessibility (widely or restricted); and technology. In terms of technology"

More would be discussed on the taxonomy in future articles. But for it is important to publish this taxonomies, in order to lay the foundations for better understanding of the broad topic, as we discuss this important topic.

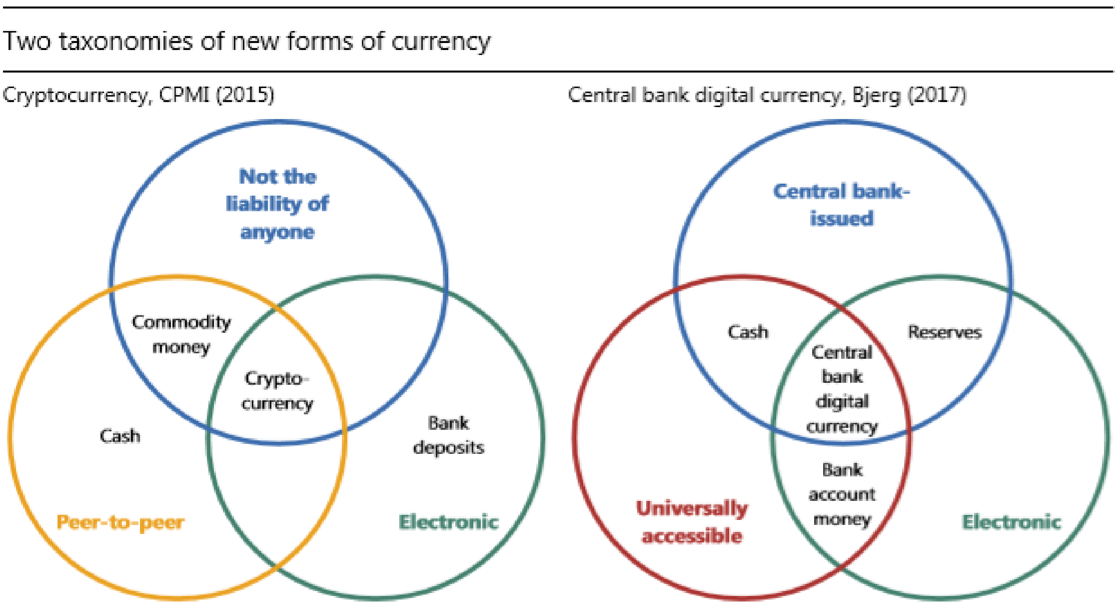

Fig 1:- two taxonomies of new forms of currency
Source. BIS Quarterly Review, September, Bjerg (2017)

This later definition will guide the analysis through the remainder of this and forthcoming articles.

In announcing the Pilot Project, Governor Antoine, differentiated the Eastern Caribbean Digital Currency (DXCD) from other forms of Cryptocurrencies as thus:

"The pilot project will include a securely minted and released digital version of the East Caribbean dollar……This is not an academic exercise. DXCD will not only become the world's first digital currency of legal tender to be released by the central bank on the blockchain , but this pilot project will also be deployed in real time based on CBDC for the purpose of gradual public introduction , "said ECCB Governor Timothy N. J Antoine.

➢ *Moreover, the Governor argues, that*

"The development of a digital Eastern Caribbean Dollar using distributed ledger technology with a blockchain platform specifically designed for a safe and secure digital financial ecosystem. Essentially, [it] would be a proof of concept, designed to demonstrate the viability and functionality of the ECCB issuing Digital Eastern Caribbean Dollars".

So fundamentally, the DXCD will exist alongside the current fiat (paper-polymer and coins) currency. Customers would have a choice in electing what portion of their money, they are desirous of hold in fiat currency Vs., DXCD. This would be a choice and would be determined by multiple factors, not least are; the general acceptance and public confidence of the public in the use of the new method of payment, financial circumstances of the individual or business, the cost of internet services, the availability, rigidity and stability of the internet infrastructure; this later factor will be the elephant in the room of this project it is the Achilles hill.

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PART 2: Continuation of: What is A Central Bank Digital Currency - CBDC?

This new payment instrument (DXCD) would be disruptive to the existing payment architecture which currently exists in the ECCU. Why? The ECCB, has proffered the view, that the DXCD Caribe is not a replacement digital currency for the fiat ECCB Dollar, but would rather exist alongside it. This argument might be laudable in the short to medium term, but this technology holds such disruptive potential, that it can obliterate the fiat Eastern Caribbean Dollar (EXCD) in the longer term. This later statement must be tempered by the reality of the digital divide in the ECCU, which would be a major factor insulating vast sections of the population from digital inclusion.

The developments in digital currencies are occurring due to quantum leaps which are taking place in the conversion of multiple technologies which have combined to making the digital currencies a reality, these include, informational technology, Blockchain technology,

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increasing internet-based share of eCommerce (retailing and all other forms of business transactions), the growth of populism-anti-establishment movements around the world against the existing governing political and monetary establishments. Increasing numbers of people are demanding the removal of governments in their lives, except in a limited way.

The IMF Working (W19/252) has described CBDC as, a new type of fiat money that expands digital access to central bank reserves to the public at large, instead of restricting it to commercial banks." This forecast is not just theoretically possible, but practically attainable and feasible.

Within the ECCU context, this possibility is linked to the extent to which the following conditions exist; expansion of the local economies and the degree to which the masses are lifted out of poverty, acceptance of digital currencies (preference for various forms of money), the dilution of the relationships between the commercial banks, credit unions and the population – the extent to which the DXCD Caribe, serves one of its main purpose as an instrument for financial inclusion. These issues would be further discussed in future articles and would provide proof of works, as the ECCB digital currency project unfolds.

Globally, the ever expanding use of block chain technology which has become synonymous with the explosion of crypto-currencies, such as; Bitcoin, Litecoin, Ethereum, Cash, NEO, Ripple and DASH, provides the technological catalyst for Central Banks and State Financial Regulators and actors to rethink their attitude towards cryptographical currencies. Central Bankers are keen to ensure that their payment systems and instruments remain stable and that public confidence in their fiat currencies is not undermined.

Prior to the advent of "Squeeze Cash" (On November 22, 2019, a regional team (St. Lucia & St, Vincent) of Fintech announced the launch of "Squeeze Cash"- a digital wallet. This wallet is intended for use to facilitate global cross border trade and money transfers. Currently, the innovators of this digital wallet are positioning "Squeeze Cash" as an alternative to the established money transfer companies like Money Gram.

- *What is the rationale for including a CBDC into the ECCU?*

The emergence and availability of, Blockchain Technology provides the ECCB, with the technological justification for its entry into the CBDC. A block chain is a way or medium for one internet user to transfer digital property to another internet user, in a safe, secure and trusting internet ecosystem, where everyone is informed whenever a transfer takes place. Blockchain is not new technology; it is a set of mainly three proven technologies that are used in new ways. According to Coin desk, the three technologies on which the blockchain is built are; cryprography, P2P Newtwork (like Bitcoin – most noteable of allthe P2P Networks) and programmable protocol (blockchain)

Blockchains are built from 3 technologies		
1. Private Key Cryptography	**2. P2P Network**	**3. Program (the blockchain's protocol)**
Cash vs. Plastic	**Tree falls in a forest**	**Tragedy of the commons**
Identity	**System of Record**	**Platform**

Table 1:- The Technological pillars of Blockchain

Klaus Schwab, founder and executive chairman of the World Economic Forum, provides this summary in his book on the Fourth Industrial Revolution: "In essence, the blockchain is a shared, programmable, cryptographically secure and therefore trusted ledger which no single user controls and which can be inspected by anyone."

The birth of the Blockchain Technology is attributed to a group of programmers, who operated under the pseudo-name of , Satoshi Nakamoto in 2008. A white paper was published in the name of Nakamoto on " Bitcoin A Per to Peer Electronic Cash System" Bitcoin became available to the open source computing community in 2009 (Bernard Marr, Feb,16, 2018)https://www.forbes.com/sites/bernardmarr/2018/02/16/a-very-brief-history-of-blockchain-technology-everyone-should-read/#1b3f6d5e7bc4) It is this technology, that Biotcoin is built and driven upon.

It is this technology which the ECCB is deploying as its backbone to its digital currency, The ECCB seems to be adopting this technology as the basis for defending and securing its control as the sole issuer of currency in the ECCU. In business strategizing I use phrases "offensive defensive strategy", which is interpreted to mean, a series of offensive actions/moves which are aimed at defending a marketing or business position. It is an attempt to prevent or delay competitive actions aimed at your current and future maket position.

Despite the recent "boom and burst" of Bitcoin, it continues to be a much sort after digital currency and store of wealth by various individuals and organisations around the world. BItcoin is one of hundreds (including XRP, Erhereum, tether, litecoin,TEzos) of crypto-currencies, which forms part of the peer-to-peer payments systems which is traded on online crypto-markets around the world, such as in Singapore, USA, UK. The population of the ECCU is not insulated from the popularity of and demand for Bitcoin as an alternative form of money or store of wealth. The learning and knowledge gained by the citizens of the OECS, overtime would provide the personal and systemic confidence needed to embrace Bitcoin or other forms of digital currencies as alternatives to the fiat currency of the Estern Caribbean Currency. It is only a matter of time before Bitcoin or any other private crypto currencies, become widely used as a peer-to-peer form of payment rather than as an investment vehicle as is currently obtains. As a consequence it is a matter of financial prudence and efficient monetary management that the ECCB should and must embark on an investigation of the development and deployment of its own digital currency.

Additionally, there are a number of other internal and external political and economic factors which have provided the impetus for such an action by the ECCB,. Some of those are articulated by the ECCB,, while others are not. But it is the opinion of the author, that factors, other than what has been opined by the ECCB provide an equally critical bridge and leap to the future of the DXCD.

A comprehensive or even a cursory review of the current state and future prospective of economies of the ECCU provides the rationale for such an offensive--Defensive" move on the part of the ECCU.

The factors that provide the catalyst for the DXCD will be addressed below.

II. ECCB RATIONALE FOR DXCD

The origin of the ECCB's current DXCD project can be traced back to two major localized context (1) ECCB strategic objectives to remain relevant in light of the seismic and systemic movements that are occurring in the ECCU and globally – need for renewal and transformation of the ECCU, and (2) the debilitating effects of external forces and shocks on the ECCU, such as blacklisting, money laundering and its associated risks and de-Risking.

- ❖ The Strategic Plan of the ECCB 2017-2021, entitled "**Transforming The Eastern Caribbean Currency Union Together"** – enunciates the strategic objectives of the ECCB. The Strategic Plan is punctuated with the expressed urgency to transforming the economies of the ECCU. using appropriate and leading edge technologies for achieving this.

The plan contains five goals;

- "Maintain strong and stable EC Dollar
- Ensure a strong, diversified and resilient financial sector
- Be the advisor of choice to the participating governments in pursuits of fiscal and debt sustainability
- Actively promote the economic development of our member territories
- Ensure organizational effectiveness"

(Transforming the ECCU together" – ECCB Strategic Plan 2017-2021)

Therefore, the advent of the DXCD is in aligned with the fulfillment of the above strategic goals . But, the real socio-economic rationale for the DXCD was further clarified, in a presentation, made by Ms. Sybil Welsh – Advisor to the ECCB on Blockchain Technology & Digital Currency on the "Drivers & Influencers of the bank's decision to embrace digitization of the Eastern Caribbean Currency ,during the "High-Level Forum on ECCB Blockchain Technology & Digital Currency", on September11.2019 in St,George;'s Grenada.

During the presentation, Ms. Welsh provided detailed rationale for the ECCB's project on ECCU the digital currency. Table 2 (below), provides a comprehensive matrix for the shifts that are required in order to achieve enhanced and sustained economic development of the ECCU region. Number 11, seems to provide the key highlight for the development of the digital currency. In table 2, the ECCB identified crypto currencies as an economic challenge and ascertain that the shift that is required as a "proactive strategy/plan to address the paradigm change that technology has brought to the financial sector". This DXCD is the response, to this challenge, I ascertain

If it is the intention of the ECCB to be the first to introduce a digital currency in the ECCU (Private or Public) or to delay, divert the emergence of an ECCU Private Digital Currency (Cyrptocurrency), they are behind the crypto currency innovative curve, as a private fintech company has recently announced the launch of its digital currency.

- ➢ *Advent of "Squeeze Cash"*

On November 22, 2019 the leadership of " Squeeze Cash" announced the launch of its "New Digital Currency" which has been described, by Chief Executive Officer, Kendrick Quashie, "as an alternative to the money transfer businesses that we have , the traditional money transfer businesses. It is cheaper than every single one of them"

The launch of "Squeeze Cash" is welcome news to the ECCU digital ecosystem. At the minimum level, it represents expanded opportunities for the citizenry to become more familiar with the digital world, and certainly the internet of things. This product would aid in acquiring one of the fundamental shifts which is required, to transcend the OECS into a successful future.

Certainly, the ECCB is not necessarily in competition with anyone in providing "legal tender" and therefore, do enjoy some latitude with regards to the time span to respond to such emerging challenges. However, they should continue to persevere and indeed ramp up their efforts to bring to fruition the DXCD It is very important that the ECCB exercise much caution and take robust actions to protect the integrity and stability of the region's monetary system. The threats posed by some of these private currencies have not gone unnoticed by certain central banks. For example, The European Central Bank(ECB) in light of the perceived threats posed by Bitcoin and Facebook Libra has recently announced plans for a ECB digital currency to rival the likes of facebook. This following much criticism of cryptocuurencies by the ECB and other central Bank Governors , the outgoing ECB executive board member Beneoit Coeure, last year described Bitcoin as the "evil spawn of the financial crisis".

He opined the view, that " A central bank digital currency could ensure that citizens remain able to use central bank money even if cash is eventually no longer used".

The decision by other central bankers to adopt the use of digital currencies is further evidence (proff-of – work) that the ECCB is moving in the right direction,

The following table provides, provides a synopsis of the fundamental shifts that are required in order to enhance the future success of the digitization of the region and economic success. According to the ECCB, there are 11 economic challenges which impedes the economic development and prosperity of the citizens of the ECCU, and needs fundamental transformation if the region is to remain relevant and" in-play" for the future.

Table 2.Provides the list of challenges and contextual shifts required to achieve the future success of the economies of the ECCU.

ECONOMIC CHALLNGES IN THE ECCU	SHIFTS REQUIRED
1.Analog economy – inadequate use of technology to execute activities better, faster and differently than before	1.Technology driven digital economy
2.lack of competitiveness (Low Ease of Doing Business)	2.High level of investment in innovation
3.Relatively high cost and inefficiencies in domestic and cross border payment instruments	3.Payment system modernization inclusive of reduction of cash and a more accessible, secure, real-time , innovation driven payment instrument
4.Poorer households and microbusinesses largely excluded from the formal economy due to limited access to the financial systems	4.Financial inclusion
5.Growth levels below the baseline target of 5%	5.New paradigm to drive increased productivity and competitiveness
6.High unemployment particularly among youth	6.Knowledge skills and innovation
7.Negative profiling of the region's financial sector leading to sanctions from international bodies/countries	7.mechanisms and systems to increase governance and transparency
8.decline in the international business	8.new paradigm to drive increased productivity and competitiveness
9.Factor economy concentrated in few industries	9.innovation driven economy
10.High debt levels	10.Agile, sustainable and resilient economic systems and infrastructure
11.cryptocurrencies	11.Proactive strategy/plan to address the paradigm change that technology s bringing to the financial sector

Table 2:- Challenges and Contextual Shifts Required to Influence Future Success
Source: ECCB Drivers & Influencers of ECCB Blockchain Digital Currency – September 11, 2019

The ECCB's rationale was further expressed in this graphical format, shown below/ It establishes that the fundamental economic rationale is based on resilience & competitiveness, Financial Inclusion, Economic Growth. What does this really means.

➢ *Resilence & Competitiveness*

The above issue is of critical importance to the region, since as a Small Island Developing State (SID), the region remains vulnerable to external and internal economic shocks and natural environmental fluctuations, which are increasing in frequency and intensity. Such external shocks include fluctuating and reduced international demand for the products and services from the region and the frequent reoccurrences of natural disasters such as hurricanes.

The individual member states is also a victim of self-imposed inadequate, lopsided, improper and ill-considered economic /fiscal measures. Examples, include, reliance on single export commodities (Tourism) and reliance on "tax raiding" measures, such as VAT, and ill-considered measures - the Citizen by Investment Programme(St. Vincent & the Grenadines, is one of the few ECCU members that is not part of the CBI Programme). The inability to pursue a competitive diversified economic structure/pillar is critically required if the ECCU is to become competitive and resilient.

The region is littered with the socio-economic consequences of undiversified economies. Such examples include the case of some countries in the region onetime

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excessive reliance on export of bananas to the UK. In 1992/3 the banana exporting countries of the region were forced to retreat from the UK Banana Market when the World Trade Organisation (WTO), ruled that the Caribbean –UK Trade Regime was ultra vires its free trade rules and contravenes the world free trade regime in bananas.

Prior to the advent of Hurricane Ivan in Grenada in 2004, the island had exhibited significant reliance on the agriculture sector for employment and foreign exchange earnings. However, Hurricane Ivan had a 200% negative impact on the island's GDP, From then on the services sector led by tourism overturn the dominance of agriculture as the island's leading economic engine..

On September 18, 2017, Dominica was virtually destroyed by Hurricane Maria, (a category 5 Hurricane). Both the agricultural based economy and most of the natural environment were devastated, setting the island's economy back by decades

As a consequence, the region needs to develop and implement robust economic and environmental structures to enhance its ability to maintain its economic growth trajectory when such disruptive forces affect the region.

On the matter of "**Financial Inclusion**". The ECCB argues that, currently poor households and small businesses are largely excluded from the formal economy due to limited access to the financial system, it is therefore anticipated, that the DXCD would be the much needed catalyst for facilitating the inclusion of these persons into the financial system.

In order for this desirable objective to become reality, the ECCB would of necessity has to become proactively involve in influencing the regions pro-growth (with employment) policies. Inclusion has two aspects to contend with; availability/opportunity and accessibility. The former refers to the availability of economic opportunities that are sufficiently broad in scope and depth to allow for poor-households and small businesses to meet the standard requirements which would allow them to enter the relevant markets (employment and business) allowing them to become players and beneficiaries of such inclusion to materialize. The poor must have access and be able to participate in order to allow them to become earners and participants in this new financial space.

The ECCB is tending towards providing a tested view, which argues that, the DXCD would be the panacea for the economic woes of the ECCU member states. This view must be tempered. To date the real world is void of empirical evidence to support this view.

It is therefore necessary for both the ECCB and Member Governments to be "lock-in-step" on economic and development issues for such objective to be met. The Chinese market became attractive to global capital, only after millions of people were lifted out of poverty and became consumers. The attractiveness of the Chinese market was not base on the singular fact of a large population. But includes the positive impact of sound economic policies. African countries such as Kenya would not have been able to expand the number of participants in their financial space, had the economies not expanded to provide opportunities for financial inclusion.

Therefore, the existence of a potential market (people who are potentially capable of becoming consumers – has money to back their demand) and mobile phones, were necessary but not sufficient conditions for the success of their mobile and digital money systems. This is a crucial lesson for the ECCU, to reflect on. If not "Financial Inclusion" would not become a reality.

- *Economic Growth*

The ECCB in its strategic plan (2017-2021) and subsequent pronouncements on the region's economy has lamented the "low growth" as a major economic challenge facing the region. The ECCU member states have been hit by a combination of low – growth (1.9-2.0%) and high unemployment 23% - and low or stagnant productivity growth of 9.0% . According to the ECCB, productivity growth remains stagnant at an average growth of 0.2 %. This according to the ECCB, means, that 91.0% of the ECCU growth is attributed to increasing population size (ECCB Strategic Plan, 2017-2021). It is therefore, the optimistic view of the ECCB, that the DXCD, would reverse this trend and propel the economies out of stagnation.

The novelty and limited use of cyrptocurrenncies and the absence of any regulated and authorized currency in the monetary system of any country leaves an "impact deficit" and as such there is no proven tested evidence on the likely economic impact of such currencies on economic growth and employment of countries

Whereas, the developers and activists of cryptocurrencies have taunted the "financial inclusion" argument as a panacea for fixing this issue economic history has shown, that changing the form/type/structure of a currency are not necessarily the solution, but is the opportunity afforded to communities to rise from poverty; through expanding economies with job growth, sound, sensible, pro-poor and rigorous economic policies, financial stability and predictability are the critical elements for economic inclusion. Countries such as Malta, Seychelles, China and India, are proven examples of "proof-of-works" in that regard.

In order for the above to become reality, the ECCB would of necessity have to immersed itself in proactively exerting unparalleled influence on the regions governments pro-growth (with employment) policies.

The following graph (Graph 1) depicts the ECCB's view of the inter-relationships between the three (3) core areas of the ECCU Economic Imperatives for adopting the DXCD.

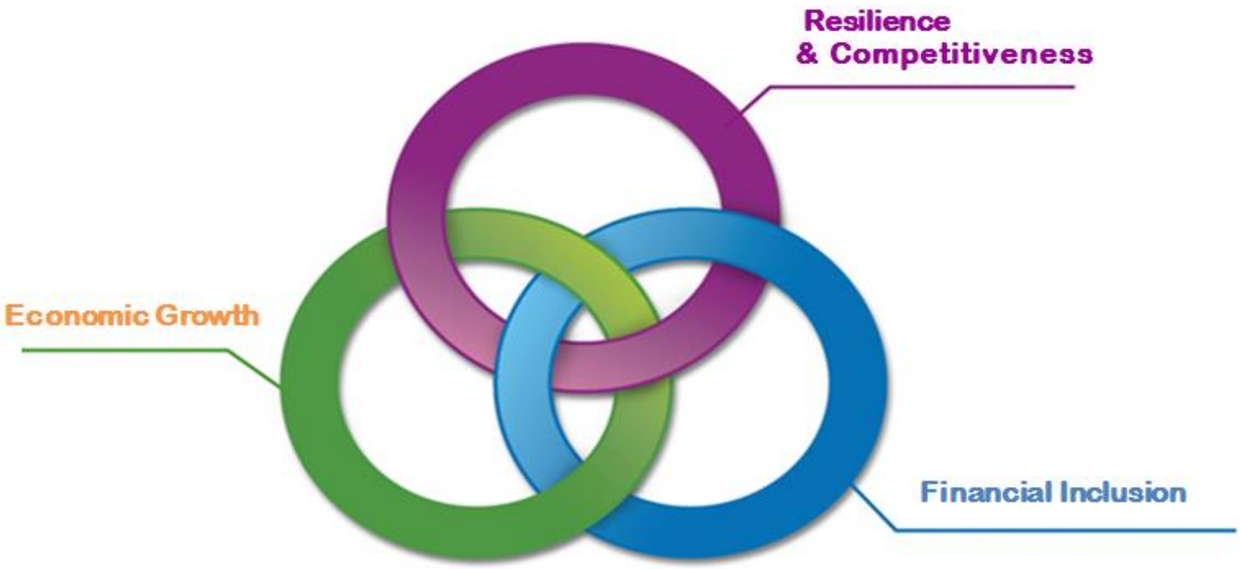

Fig 2:- ECCU Economic Imperatives/DXCD Objectives
Source. ECCB Strategic Plan 2017-2021, p.

- **The debilitating effects of external forces on the ECCU – blacklisting, money laundering and withdrawal of foreign owned banks from the region.**

The attack on the USA Financial Twin Towers (9/11) and the resolve of international governments and International Organisations - operating in the economic and financial spaces - have placed unprecedented focus on the operations of the global financial infrastructure, not least the ECCB. This focus has resulted in and led to a surge in new compliance and regulatory frameworks.

Such regulatory measures include; measures from the Financial Action Task Force (FATF), Foreign Account Tax Compliance Act (FATCA) Common Standard on Reporting and Due Diligence for Financial Account Information (CRS), Anti-Money Laundering (AML) and Know your Customer (KYC). As a consequence, member countries in the ECCU have been made to develop and implement accompanying regulations and measures in order to remain compliant with these global measures while retaining and protecting their local banks corresponding relationships with their foreign banking partners.

What are some of the consequences of these measures on the ECCU Countries.

- **Flight and or change of ownership of foreign banks from the region**. Most if not all of the foreign operating banks in the region are left-overs from the colonial period. These banks are head quartered in Canada and United Kingdom. They brought banking and money into the region, over 260 years ago. However, in recent times, the region has been experiencing a reversal in the desirability of these foreign owned banks to remain in the region. This flight started with the sale of Barclays (Caribbean) in 2006. In October 2002, the Canadian Imperial Banks of Commerce (Caribbean Holdings) merged with Barclays Bank (PLC) Caribbean Holdings and formed the , "First Caribbean International Bank". In December 2006, the CIBC acquired the shareholdings of Barclays PLC, thus becoming the majority shareholding of First Caribbean. In June 2011, the First Caribbean Bank was co-branded to become the CICB First Caribbean at the time of the merger in 2002, both banks had a combined operating experiences of 250 years (Barclays 1836-2002) and Canadian Imperial bank of Commerce (1920-2002). Source. https://www.cibcfcib.com/about-us/corporate-profile/history.
- The merger led to the combination of their retail, corporate and offshore Caribbean banking operations and the Canadian bank gained majority control after Barclays exited its stake in 2006. https://www.reuters.com/article/us-cibc-m-a-gnb-financial/canadas-cibc-to-sell-stake-in-caribbean-operations-for-797-million-idUSKBN1XI1O9

Barclays justified its sales at the time on the basis, that they were, preparing to exit the Caribbean because of better business opportunities outside the region, an official from Barclays Bank told BNamerica" https://www.bnamericas.com/en/news/banking/Barclays_to_exit_Caribbean_for_better_opportunities.

The saga of sales and re-selling with the CIBC continued and in November 8, 2019, they announced, that the CIBC will sell its majority stake in First Caribbean for C$797 Million to the GNB Financial Group " GNB is owned by the **"Starmites Corporation**", the financial holding company of **the Gilinski Group**, which has banking operations in Colombia, Peru, Paraguay, Panama and Cayman Islands". (https://www.nasdaq.com/articles/canadas-cibc-to-sell-stake-in-caribbean-operations-for-%24797-mln-2019-11-08.

- The Sale of Scotia Bank to Republic Bank

On October 31, 2019 the ECCB announced that its Monetary Council has approved the sale of the Bank of Nova Scotia (Scotia Bank) in the ECCU to Republic Financial Holdings Limited (parent company of Republic Bank). The ECCB justified its agreement by stating that, "The ECCB is resolute about its mandate to protect the EC dollar and will continue to maintain high levels of foreign reserves while protecting the stability of the banking system." (https://www.eccb-centralbank.org/news/view/acquisition-of-bank-of-nova-scotia-eccu-operations-by-republic-bank-finalised).

- **The Sale of Royal Bank of Canada branches in the Eastern Caribbean**. On December 12, 2019, the Royal Bank of Canada announced that it has entered into definitive agreements to sell its banking operations in the Eastern Caribbean to a consortium of indigenous banks, the operations sold include the branches of Royal Bank of Canada in Antigua, Dominica, Montserrat, St. Lucia, and St. Kitts and Nevis, as well as regional businesses operating under RBC Royal Bank Holdings (EC) Limited in Nevis, Grenada and St. Vincent and the Grenadines. Collectively, these operations are referred to as "RBC Eastern. In justifying the sales, RBC Rob Johnston, Head, RBC Caribbean, stated , "Consistent with our strategy of being a competitive leader in the markets where we operate, RBC is always evaluating opportunities for our business. Earlier this year, we were approached by a consortium of indigenous banks with their proposal to acquire all RBC Eastern Caribbean operations,(http://www.rbc.com/newsroom/news/2019/20191212-eastern-caribbean.html)

The indigenous banks, which are involved in the above purchase are; The consortium of five financial entities: 1st National Bank of St. Lucia, Antigua Commercial Bank Ltd., National Bank of Dominica Ltd., the Bank of Montserrat and Bank of Nevis Ltd.

The evidence of the region's financial unattractiveness, to banks of long standing in the region is mounting and suggests that the ECCB's decision to embark on its digitization strategy is in the right direction, and should turn-out to be a worthy investment, cetris paribus.

Why this exodus is occurring. After 259 collective years in the region?

Without the benefit of corporate explanation from the above mentioned banks there is sufficient evidence in the public space to suggest that there are two major converging factors, which can be attributed to these moves

- The declining financial attractiveness of the region to these banking corporation; increasing regulations by FATF, the scourge of money laundering, perceived inability of the region to prevent, stop and reduce money launders, etc. these factors have combined to spur these foreign banks to embark on the road to; de - risking (breaking correspondent banking relationships with local indigenous banks) and on-shoring – returning to their home bases.
- Unloading of international regulations and compliance with its associated costs.
- **Declining Financial Attractiveness**. Up to November 2019, Three of Canada's largest international banks operated in the region (the region banks include the English and Latin American Countries).

Table 1. presents a snapshot of the overall financial position of the; Scotia Bank, Canadian Imperial Bank of Commerce (CIBC) and Royal Bank of Canada (RBC).

The table highlights that while the region's contribution ot the bank's head offices are generally low (44 %-0.25 %) lowest, its impaired loans (bad or loans approaching that categorization) ranges from 35.2 % 4.0%). These positions are financially unsustainable. Whereas, the numbers in table..are not necessarily directly comparative, but they serve the purpose of telling the story of the region as a place of less than desirable return on shareholders investments.

In the case of Scotia Bank. The region contributes $1,2B or 5.0 per cent of the bank's total revenue of $23.6B. However, the regional also contributes $1,5B or 35.0 per cent of its impaired loans. In the case of CIBC , the region contributes %593M or per cent of the banks total revenue of $13,4B, while its total impaired loans amounts to $835M or 17 per cent of $1.43B of total impaired loans. Finally in the case of RBC, the region contributed $861M of total revenue of $34.1 B, but contributes as much to its impaired loans - $800M of its 1.83B

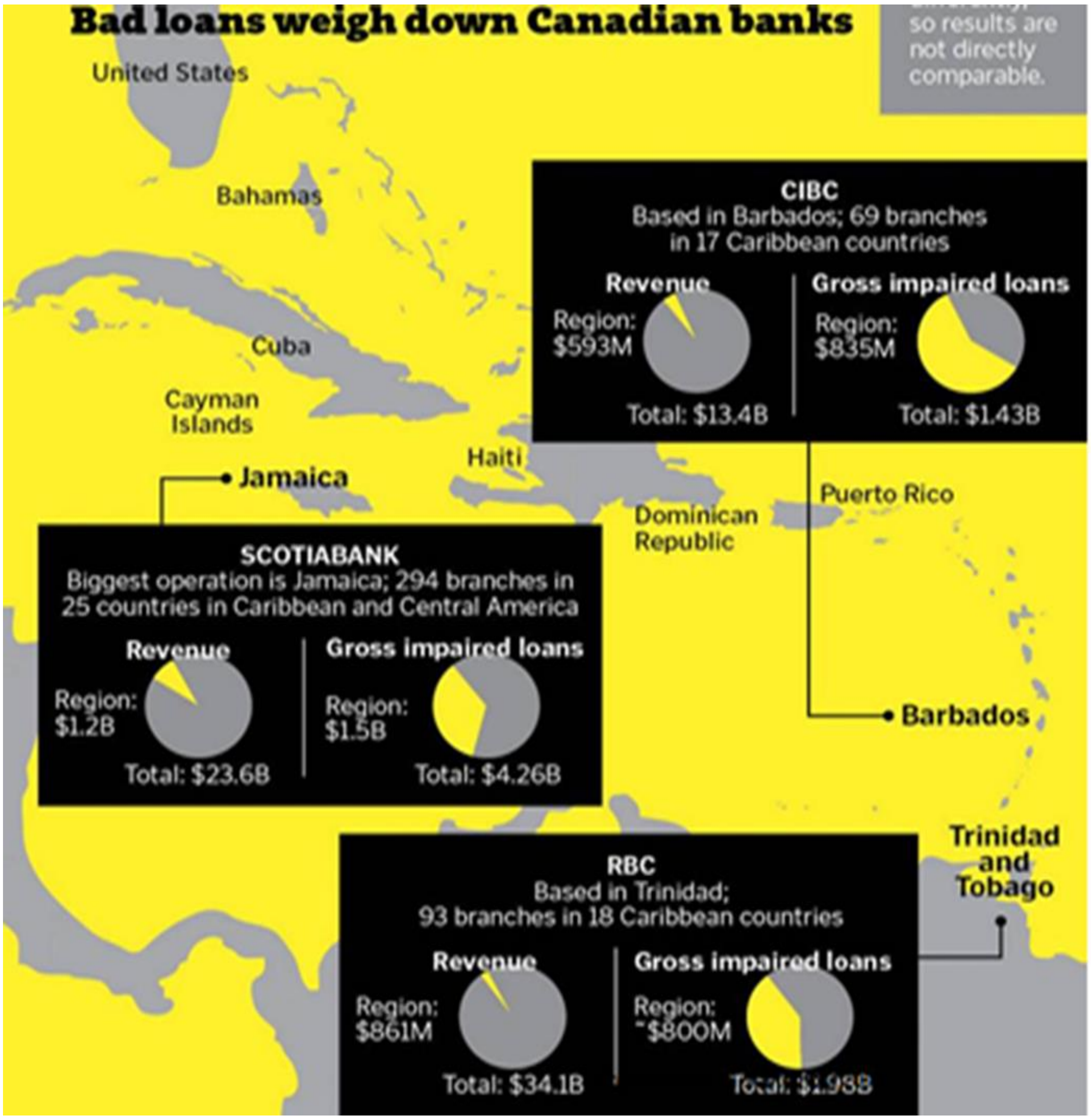

Fig 3
Source. Mail Newspaper

The retreat of the above mentioned banks does not provide the region with sense of confidence , the region remains at the economic mercies of these external financial institutions, as they manage for the benefits of their shareholders and home offices and not for the economies of the ECCU.

➢ *Unloading of international regulations and compliance with its associated costs*

The raft of international regulations which unfolded on the region following the terrorist attack on the twin towers in NY on 9/11, the use of the international banking system for financing of terrorism, economic crisis of 2007-2008 and the floodgate of money laundering, converged against the region's financial attractiveness as no other man made or natural disasters have done before.

One of the most daunting issues to affect the region was triggered the existence of what the OECD and EU refer to as the existence of tax havens in the Caribbean, such as obtains in ; Cayman Island, Bermuda, Barbados, Turks & Cacois Islands. The tax havens - so called - involved the establishment of non-disclosed banking accounts in those territories; confidentiality of the details were secured and guaranteed, which allowed corporations and individuals to move their cash from their home countries to these tax-free countries. The main benefit to these mainly foreign accounts holders is the fact that they did not have to pay taxes on their income.

They were referred to as "Tax dodgers" by those who were unable to have access to these accounts for tax purposes. As a consequence, the OECD, followed by the EU, initiated a global economic attack on the economic sovereignty of these islands. The main instrument employed in this attack is their demanding and imposing creation of "tax compliance rules" – regulation and compliance with their laws, in their own image and likeness.

➢ *Negative Listing/Non-compliance Jurisdictions and Its Impact on ECCU*

The concept of Negative Listing/Non-Compliance - commonly referred to in public media as, "Black listing", Call For Action" (Non-Cooperative/non-compliance Countries and Territories – NCCTs) of countries is the creation of the G7 – Financial Action Task Force (FATF), which was an outcome of their meeting held in Paris in 1989. One of the main objectives of the FATF is to establish norms and standards of "legal, regulatory and operational measures" to fight against money laundering, terrorist financing and other related threats to the security and integrity of the international financial system" (https://www.fatf-gafi.org/about/)

There is also the Caribbean Financial Action Task Force, which is an organisation of twenty-five (25) states of the Caribbean Basin, Central and South America, which have agreed to implement common countermeasures to address money laundering. It was established as a result of meetings convened in Aruba in May 1990 and Jamaica in November 1992 (https://www.cfatf-gafic.org/index.php/home/cfatf-overview)

Since 2000, the FATF has been issuing these listings of countries who have not complied with the recommendations of the organisation. During this period a number of Caribbean Countries, such as Antigua & Barbuda, Barbados, Grenada, and Trinidad & Tobago have all made the listings.

In addition to the non-compliance listings provided by the G20, the European Union (EU) in 2015 also started issuing its own "non-compliant list". On March 12, 2019 the EU Council of the 28-nations European Union (EU) placed 15 small territories on a list of what it calls 'non-cooperative jurisdictions".

The responses by the leadership of the affected countries to such developments can be characterised by strong defiance and call for redress.

Why the EC considers these territories to be "non-cooperative" , This move has been characterised as "the raw exercise of power by the strong over the weak. The firm intention of the EU is to impose its tax policies upon other nations through strong-arming. Sir Ronald Sanders https://www.barbadosadvocate.com/columns/eu-blacklist-co-operation-or-coercion.

As early as July 2015, The Heads of Government of (CARICOM) expressed their strong objection to the recent decision by the European Union to "blacklist" eight Member States and all Associate Members of CARICOM on the pretext that there was no co-operation on tax matters with the countries of the European Union. They viewed this listing as being without foundation or merit, in light of their continued efforts to comply with the onerous and unilateral regulatory measures developed by the Organisation of Economic Co-operation (OECD) which sets international standards on tax co-operation They further stated, that

"In light of the potential adverse effects of such a listing on the financial services in the region and the implications for economic growth, Heads of Government demanded that the European Union withdraw the listing immediately" (https://caricom.org/media-center/communications/communiques/communique-issued-at-the-conclusion-of-the-36th-regular-meeting-of-the-head.).

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Again in 2017, the EU financial ministers named four CARICOM Member states (St Lucia, Grenada, Barbados and Trinidad and Tobago) among 17 countries worldwide, which they claimed had done little to improve their status as tax havens.

In response CARICOM Leaders again expressed 'deep concern' about the inclusion of CARICOM member states in the lists of non-cooperative tax jurisdictions."(https://stluciatimes.com/leaders-caricom-cuba-criticise-eu-tax-haven-black-list/).

In addition to the economic consequences of placing some of the region's countries onto these non-compliance listings, the region also suffered serious reputational damages (brand damages). This is a microcosm of the deep reliance which our region has on the developed world, and as such we are at the mercies of their economic strong arming, they can strong us at will. This situation is untenable for robust, stable and predictive economic growth, and requires a studied response from the Governments of CARICOM in order to maintain the very existence of their peoples and countries.

The legal, non-corrupt and transparent tax relief opportunities which the region have offered to the companies and individuals of the developed world, represents one of the few industries (if not the only one), in which the region may hold some competitive advantage over the rest of the world, and for that, they are made to suffer untold economic and social consequencies.

Notwithstanding the above, the region's leadership failure to act on substantial, informed and scholastic advise have served to compound the challenges posed by the developed north. This act by the OECD and EU of publishing (naming ^ shaming) non-compliant jurisdiction is synonymous with the non-trading barriers, which developing countries have been made to suffer whenever they embark on producing value-added products for the markets of the developed world.These actions represent nothing less than restrictive barriers to trade. Overall, it can be concluded that de-risking emerged from low-profitability of foreign owned banks and the international raft of regulatory and compliance measures.

III. IMPACT OF DE-RISKING

The issues surrounding de-risking and de-banking may appear to be complex and not clearly understood. However, De-risking is seem as, a general phenomenon where an organization seeks to limit its exposure to risk by ceasing activities in a wholesale rather than a case-by-case fashion. For example, an international organization could de-risk by ceasing to operate in a region, such as the Caribbean, as a whole. In the Caribbean, "De-risking" is also used in a more general sense, to refer broadly to the process of reducing exposure to risk in a jurisdiction. De-marketing is the exit from a CBR and the provision of CBS solely on the basis of profit irrespective of market circumstances and the risk context. De-banking occurs when a bank unilaterally closes the account of an individual or institution. This could happen as a result of de-risking
Source: CGD (2015) and FATF (October 2016).

The consistency of the negative branding of the Caribbean (Non-Compliant Countries) , as well as allegations of money laundering, the global financial crisis of 2007-2008, which showed up the weak underbelly of the global financial infrastructure, and increasing money laundering and the financing of terrorism (the later was discovered in the aftermath of the 9/11) using the international banking system, combined to provide the emergence of a raft of international compliance measures from the FATF, including measures on Anti-money Laundering – AML- which have significantly increased the cost of compliance for banks operating in the region, especially the locally owned (indigenous) and operated banks. Correspondent banking relationships have always existed in the region as long as the foreign banks commenced their operations. It was and is the way of transacting cross-border trade in the absence of any other model. This may change if and when ecosystem of digital currency becomes accepted and engraved itself into the regional and international trade infrastructure. The region has therefore earned the unfortunate reputation as high cost, low profitability, high risks and challenging area in which to operate. The correspondent banks on examining their risk-reward model, might have concluded, that the rewards for operating in the region does not justify the risks. This re-evaluation eventually led to some of the correspondent banks reducing or terminating their relationship with the indigenous banks in the region. . This by practice is de-risking/
(Source: CGD (2015) and FATF, October 2016).

As a consequence de-risking has led to:

- Increased regulatory and compliance costs and therefore the cost of operations. There is a general feeling in the ECCU, that such costs are likely to keep increasing.
- Increased difficulties in conducting cross-border business.
- Delays in the execution of investments

Source. Sheldon McLean Ydahlia Metzgen Ranjit Singh Nyasha Skerrette (https://repositorio.cepal.org/bitstream/handle/11362/43310/1/S1701290_en.pdf)

According to studies conducted by the IFC, World Bank Group (2017) the implications of Correspondent Banking Relations may be quite serious:

- CBR stress threatens to undermine economic stability and growth, financial inclusion and development goals. CBR stress can affect multiple channels of an economy, including trade and remittances.
- Without CBRs, trade is often not possible, putting at risk the import of critical goods and ultimately economic growth.
- Without CBRs, remittances could be hindered, blocking income that families depend on.
- In order to adapting to external challenges, banks report that they are reducing benefits to their customers, raising fees and reducing credit limits. This will spill over into their economies.
- Banks are also cutting customers; importers/exporters and families appear to be the hardest hit. Banks also noted declining geographic coverage, including intra-country and cross-border.

The above descriptions are quite familiar to the ECCU. They are identical to the experiences of the ECCU, such as, the increasing fees by banks and the closure of branches by Republic Bank and RBTT in Grenada, and on the flip side the purchase by Republic Bank of Scotia Bank in some countries in the ECCU, and the sale of Royal Bank of Canada of its holdings in the Eastern Caribbean Area.

Equally reminiscent of current happenings in the ECCU are some of the three (3) major perspectives on the way forward, which is shared by the IFC's survey: (i) harmonized regulations across jurisdictions, (ii) a centralized registry for due diligence data and (iii) assistance with understanding and adapting to the new standards.(http://documents.worldbank.org/curated/en/895821510730571841/pdf/121275-WP-IFC-2017-Survey-on-Correspondent-Banking-in-EMs-PUBLIC.pdf.)

With regards to the above recommendations, it can be argued that the ECCB and the OECS are already well aligned to safeguard the region's financial architecture, in the short to medium term.

- The ECCB has an established set of uniformed set of banking rules and regulations that covers the ECCU jurisdiction. These include but not limited to;
- The ECCB Agreement Act, 1983, According to the ECCB,The ECCB's FinTech pilot project (*i.e. issuance of a digital EC currency herein referred to as DXCD*) is consistent with the ECCB's monetary and financial stability and economic development mandates as enshrined in Article 4 of The ECCB Agreement Act 1983, which seeks to ;

- To regulate the availability of money and credit;
- To promote and maintain monetary stability;
- To promote credit and exchange conditions and a sound financial structure conducive to the balanced growth and development of the economies of the territories of the participating governments; and
- To actively promote through means consistent with its other objectives the economic development of the territories of the Participating Governments.

With regards to perspective ii - a centralized registry for due diligence data. The ECCB has opined that the DXCD would be aligned within its current monetary frameworks which include three critical regulatory entities.

- The ECCB- ***Regulates and supervises all commercial banks, non bank financial intermediaries that are licensed under the Banking Act, the interbank market and the Payment System***
- Eastern Caribbean Securities Regulatory Commission – which regulates the Eastern Caribbean Securities Market (ECSM) and its participants; regulates and supervises securities intermediaries
- **Single Regulatory Authority, which r***egulates and supervises offshore financial services and all non bank financial intermediaries which are not licensed under the Banking Act. The latter includes the insurance, pensions and credit union sub-sectors*

With regards to item iii - assistance with understanding and adapting to the new standards (of global financial regulatory changes, etc), it is assumed , that, the ECCB through its fulfilment of the above two forward thinking perspectives, especially in the implementation of its regulatory functions, is well aligned in the fulfilment of same.

- *A Snap Shot of Other Central Banks and Digital Crypto currencies –*

It must be noted that Central Bankers around the globe, were caught off-guard, when Bitcoin using blockchain technology, entered the financial and monetary system. It was the first attempt at a global private currency, which did not sought, nor required the authorisation of any central public monetary authority. Since then, there have been a rash of similar currencies. These cyrptocurrencies, are proving to be disruptive powers to the current monetary system, as they offering similar characteristics of the definition of Fiat Currencies. This must be concerning to the current drivers of public global money. The announcement by facebook, of its cryptocurrency, Libra, has further served to create much nervousness in the global monetary space, since it has a base of millions of global customers and the potential to be very disruptive of the established global monetary system.

According to Martin Arnond in FT.com (December 5, 2019), Central Banks talk of launching cryptocurrencies are all “bluff”. In the same article, he cited Christine Lagarde (Governor of the European Central Bank), as having advised European Parliamentarians that central bank-issued digital currencies were “an area where we have to rush slowly”.

This issue of “rush slowly” is critical to the stability and trust of the global monetary system, since the landscape for digital currencies have transitioned from whole scale digital currency to retail digital currency. It is important to be cognizant of this most important point, as forms of payments are driven by consumers preferences. Since consumers are moving increasingly to internet purchases, the demand for the complementary form of payment has also risen, thus pushing the banks to consider digital payments as the next best alternative to other forms of payments. The recent (2019) joint study conducted by the, Official Monetary & Financial Institutions Forum (OMFIF) and IBM, revealed that whereas cash is the only form of universally accessible public money, its use is declining , in favour of alternative forms of payment that are developed based on private infrastructure in some form or the other. Customers are therefore moving towards digital forms of payment, notable in Sweden, where the use of cash has been dramatically reduced.

The study found that between 2018 to 2022, the use of cash would decrease from approximately 30.0 to 15.0 per cent, whereas the use if eWallet would dramatically rise from 15.0 to 28.0 per cent

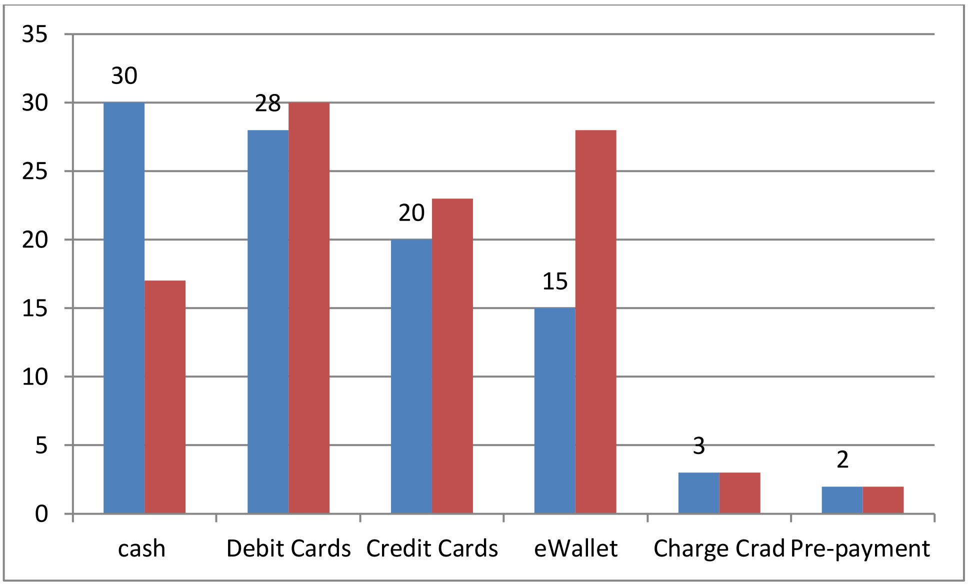

Fig 4:- Comparison of Use of Payment Method 2018 - 2022
Source. OMFIF IBM Report 2019.

In addition to the above rationale for Central Bankers giving due consideration to a digital currency of their own is based on four critical factors;

- The declining use of cash, especially in developed economies has encouraged central bankers to consider other forms of payment,
- Cost of producing cash and the logistical challenges of handling cash, gas led to development of financial technological solutions, such as blockchain,
- Perceived challenges to the financial stability and the dominance of fiat currency posed by potential issuers of non-banking private currencies,
- Customers have come to expect fast, reliable, low-cost, easier payment systems anywhere and anytime.

The above factors combine to provide central bankers with the impetus to get-off their insulated air-proof offices and give due consideration to adopting new thinking which is inline with the current and future advances in financial technologies. Failure to adopt to these the new technologies, would lead to serious upheavals in the global monetary system.

Notwithstanding the general move or consideration towards the adoption of central banks Digital Currencies, it is happening at different speeds. This multispeed approach is influenced by the motivations of the various authorities' consideration of the matter.

Here are a few examples of what some Central Banks are doing with regards to Digital/Cryptocurrencies.

China: is seen as the world leader in this area. It is reported to have developed and soon to launch its digital currency (digital yuan), which has the backing of the, Peoples Bank of China (Central Bank) This has emerged as a natural response ot the explosive rise in in the use of digital payments such as , Wechat.

Europe: There is an initiative by about 20 large European banks including BNP Paribas and Deutsche Bank to create a new digital payments system — dubbed the Pan European Payment System Initiative, or Pepsi. The idea is to enable instant cashless payments through a European rival to ApplePay in the US and Alipay in China.

Kenya - Mpesa, which is more of a digital mobile wallet has been launched a few years and has been used widely by farmers to trade their farm produce

South Korea – on December 26,2019 the South Korean Central Bank (announced the formation of a "CBDC Task Force" to study the the effects of distributed ledgers, cryptocurrencies and CBDCs on financial settlements and security"

Sweden - On December 13, 2019 Riksbank announced a two-year partnership with Accenture, one of the world's major consulting firm, to develop a digital currency ,the e-Krona.

Switzerland, **-** on December 13, 2019,In a statement following a cabinet meeting, the government said: "Universally accessible central bank digital currency would bring no additional benefits for Switzerland at present. Instead, it would give rise to new risks, especially with regard to financial stability." (https://www.coindesk.com/new-risks-swiss-government-skeptical-on-central-bank-digital-currency).

Uruguay – piloted am e{peso which successfully ended in 2918

USA **- Philadelphia Federal Reserve bank president Patrick Harker said it is "inevitable" for the central banks, including the U.S. Federal Reserve, to start issuing digital currency**

(https://www.coindesk.com/fed-official-says-digital-central-bank-currency-is-inevitable).

On October 16,2019. Coinndesk, Bradley Koun, announced that a top Federa Resrve Official said that the U.S.Central Bank is actively looking at and debating issuance of a digital currency**.** In the meantime, facebook has announced the proposed launch of its privately developed Libra digital currency.

- *In addition to the above cited examples, the Brookings Institute has published, hereunder*

Other initiatives taken by 11 other central banks on CBDCs. The following table provides a brief summary of such actions, as compiled by the source.

Central BNAKS	**Actions**
Bahamas	Sand Dollar to be rolled out by the end of 2019.
Barbados	Blockchain-based version of the Barbadian dollar released in 2016.
China	Digital Currency Electronic Payment (DCEP) expected to launch soon.
France	Bank of France plans to start pilot testing a CBDC in early 2020.
Marshall Islands	Marshallese Sovereign (SOV) to be released in near future.
Saudi Arabia and United Arab Emirates	Central banks of the two gulf nations will jointly issue a digital currency named “Aber” for interbank money transfer.
Sweden	E-krona project started in 2017 to study the need and feasibilities for a CBDC.
Thailand	Prototype developed for a wholesale CBDC used for real time interbank settlements. Testing of cross-border transfer under way. No immediate plan for retail or general purpose CBDC for consumers.
Turkey	Pilot test of digital Lira expected to be completed by the end of 2020.
Uruguay	E-peso successfully piloted from Nov. 2017 to Apr. 2018.

Table 3
Source . Ye C and Desouza, K, 2019

The U.S.A is growing increasingly concern about rise of an international acceptable digital currency, as such occurrences are likely to erode the U.S. dollar continuing prominent role in international trade and commerce, and by extension the U.S. global influence.

IV. SOME PRELIMINARY CONCLUSIONS

- The ECCB has embarked on a very ambitious but pragmatic venture to be one of the leaders of Central Bank Digital Currency. It is quite obvious that unlike some other central banks, the ECCB has the inherent mandate to introduce digital currencies, but unlike other -Central Banks, financial inclusion is not a high priority for introducing a CBDC.
- The current trends of financial de-risking which is mainly associated external economic shocks which are inherent within the financial economic ecosystem provide sufficient motivation for introducing a digital currency, which would co-exist along the fiat currency.
- The indigenous financial institutions in the ECCU need to actively pursue strategic alliances, aimed at solidifying their premier status in the region’s financial landscape, and thereby protect the region’s financial infrastructure.
- The global payment systems are on the crust of experiencing major disruptions. The ECCU would not be immune to such changes; however, a significant number of consumers would have to wait for quite a while to become users of the DXCD Caribe.
- The proposed DXCD is a fiat digital currency.
- The ECCB would be best advised to proceed with caution. Despite the research findings, which show that over 20 central Banks are considering providing a digital currency, a smaller number are aggressively pursuing implementation, since they are not quite convinced that the benefits justifies the costs.

- The blockchain technology on which the cryptographic technology is built is yet to deliver on its promises. 2020 could be the year for this breakthrough, which would expand the rate of adoption of blockchain and the explosion of digital currencies, financial instruments and other related technologies.

The advent of private sector led digital currencies or cryptocurrencies must not be constewed as a passing fad, but as a logic evolution of a medium to transfer wealth, store wealth and make payments. This revolutionary movements, especially the prospective launch of Facebook Libra, have provided the catalyst for Central Banks, such as the People's Bank of China and the Risksbank of Sweden, to launch their own CBDC.

The Easetrn Caribbean Central Bank, though a small bank, is well on its way to launching the Caribbean first CBDC.

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