Transmutation of Central Banking Policies and the Legal Implications of Adopting Central Bank Digital Currencies (CBDCs)

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Abstract

Central Banks are sui generis institutions established by national or regional governments or economic blocks by the enforcement of relevant public and private law legislations. Central banking policies and practices, inter alia, revolve around promoting price stability; formulating monetary, fiscal and exchange rate policies; issuing currencies; and regulating the banking sector. These policies and practices have transmuted over the years due to the changing nature of national or regional policies on political and economic development; international trade; technological advancements in payment systems; and banking. The promotion of international central banking best practices by bodies such as the World Bank (WB) and the International Monetary Fund (IMF) have also influenced the changing nature of central banks. In the period prior to World Wars I and II, central banks were largely established as privately owned entities but transitioned into servants of the state during the world wars as they financed the monetary needs of their governments. However, after the world wars, most central banks globally transmogrified in nature to operate as autonomous sui generis public law entities that function independently from external political or corporate influence. The 2007/2008 Global Financial Crisis further affected central bank operations. In the last decade, the banking ecosystem has been transformed by changing consumer needs, technological advancements and increased global trade that has necessitated cross-border remittances. The growing interest in financial technologies 'fintech' and digital currencies could spell the next frontier of central banking practices. These transformations have impacted on central banking policies. This

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paper explores the transmutation of central banking policies and the legal implications of adopting Central Bank Digital Currencies (CBDCs).

Introduction

The Central Bank of Kenya (CBK), like most central banks globally, is a *sui generis* state-owned public law institution established in 1966 by an Act of Parliament.[1] The bank's legal establishment is further anchored in Article 231 (1) of the Constitution of Kenya, 2010. The constitution has charged the bank with the responsibility of "formulating monetary policy, promoting price stability, issuing currency and performing other functions conferred to it by an Act of Parliament".[2] Section 3 of the Central Bank of Kenya Act (1966) provides as follows:

> (1) "There is hereby established a bank which shall be known as the Central Bank of Kenya and which shall also be known by the alternative corporate name of the Banki Kuu ya Kenya.
> (2) The Bank shall be a body corporate with perpetual succession and a common seal, with power to acquire, own, possess and dispose of property, to contract, and to sue and to be sued in its own name.
> (3) The Bank shall exercise any type of central banking function unless specifically excluded under this Act, and shall enjoy all the prerogatives of a central bank.
> (4) The Bank may make its own rules of conduct or procedure, not inconsistent with the provisions of this Act, for the good order and proper management of the Bank.
> (5) The Bank shall not be subject to the Companies Act (Cap. 486) or the Banking Act (Cap. 488)."

In Section (3) sub-section (5), the Act establishes the *sui generis* nature of the CBK by excluding it from being subject to the Companies Act, despite being a "a body corporate with perpetual succession"[3]; and also absolves it from subjection to the Banking Act albeit it is a bank.

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[1] Central Bank of Kenya (CBK), 'Bank History' (2017) accessed <https://www.centralbank.go.ke/bank-history/#> 3 April 2021 [1].
[2] Article 231 (2), Constitution of Kenya (2010).
[3] Section 3 (2), Central Bank of Kenya Act (1966).

Historically, however, central banks were majorly privately owned in the seventeenth century and then largely transitioned to become 'servants of the state' during the first and second world wars.[4] Most of the early central banks to be established, for instance the Banque de France and the Bank of England were founded to finance the state during war-times although reliant on private capital.[5] The nationalization of most central bank started around 1935 but largely after WWII, but a few central banks are still privately owned to-date (either partly or entirely with varied shareholding structures), such as Greece, Japan, South Africa, Switzerland, Belgium and Turkey.[6]

The history of banking is quite fragmented making it difficult to establish the exact period when banking began; however, modern banking and central banking dates back to the seventeenth century.[7] The first central banks to be established in that era were the Amsterdamsche Wisselbank in 1609, the Sveriges Riksbank in 1668, and Bank of England in 1694 which were largely joint stock entities.[8] Although Wisselbank was closed in 1819, the Bank of England and Riksbank are still the central banks of the United Kingdom and Sweden respectively.[9] These two banks were initially established to provide war-time finance through debt to their governments and to be the clearing house for commerce, but metamorphosed to adopt new mandates and policies over the years.[10]

Over the centuries, the roles of central banks have revolved around the following key policy areas: financial stability support, monetary support,

[4] Tim Lambert, 'A Brief History of Banks' (Local Histories, 2020) accessed <http://www.localhistories.org/banking.html> 3 April 2021, [6].
[5] C.A.E Goodhart, 'The Changing Role of Central Banks', FMG, London School of Economics, 1.
[6] Jannie Rossouw, 'Should central banks have private shareholders?' (World Economic Forum, 30 July 2015) accessed <https://weforum.org/agenda/2015/07/should-central-banks-have-private-shareholders/#> 25 April 2021, [4] and [6].
[7] Michael Bordo, 'A Brief History of Central Banks', Federal Reserve Bank of Cleveland, December 2007, 1.
[8] *Ibid.*
[9] *Ibid.*
[10] *Ibid.*

fiscal support, payment system policy and macro-economic support.[11] Direct financial or revenue support to the state by central banks to finance extraordinary expenditures such as during wartime is one of the founding roles of most central banks.[12] This role has transmuted over the years with most central banks significantly limiting such support to governments or restricting instances of such direct support to only when extreme necessity arises, and its issuance tightly regulated by public law.[13]

The payment system policy function has also transmuted over the years moving from mere printing of banknotes or minting coins and subsequently circulating them, to the supervision and overall regulation of the banking industry, payment instruments, infrastructure and mechanisms.[14]

All the policy areas are instrumental in developing a strong economy and will be discussed in-depth later in this paper. For instance, many economists have often blamed the economic decline of Zimbabwe on the poor central bank policies among other things including lack of autonomy of vital public institutions such as the Reserve Bank of Zimbabwe which were led at the behest of the former president Robert Mugabe.[15] As a result, the country's economy started to decline and further sunk into hyperinflation. Of particular interest is Zimbabwe's involvement in the 1998 war in the Democratic Republic of Congo which cost the country an estimated ZWD 6 billion which was unbudgeted expenditure.[16] Some sources estimate that Zimbabwe spent USD 3 million every day of the war in unbudgeted expenditures, thus over-stretching the country's financial capacity.[17]

Poor central bank policies, such as printing money for purposes contrary to international policy standards, can lead to economic decline. A country can

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[11] Angela Reddish, 'Central Banks: Past, Present, Future' (2012) 30 *Ensayos sobre POLÍTICA ECONÓMICA 14, 14.*
[12] *Ibid.*
[13] *Ibid.*
[14] Perry Warjiyo and Solikin M. Juhro, *Central Bank Policy: Theory and Practice*, (Emerald Publishing 2019) 4.
[15] Chidochashe Munangagwa, 'The Economic Decline of Zimbabwe' (2009) 3 Gettysburg Economic Review 109, 110.
[16] *Ibid* 114.
[17] *Ibid* 114.

be tempted to print money for the following reasons: first, to service debts in this decade where many developing countries – especially in Africa – are burdened with high debts and keep piling,[18] for instance in the case of Kenya that recently secured a $2.34 billion loan from the International Monetary Fund (IMF) in addition to its ballooning public debt to finance Covid-19 relief efforts and support economic recovery.[19] Secondly, to cater for increasing need for public expenditures especially for developing economies with poor infrastructural development and large low income populations, for instance, in the case of Zimbabwe that printed money to finance expenditures post the 2008 financial crisis.[20] Over the years central banks have abandoned printing money for such reasons as practiced especially during the period when central banks were 'servants-of-the-state'.[21]

In order to investigate and determine the transmutations of the various central bank policies, this paper expounds on the progressions of the different policies, mandates and legal nature of central banks at different historical epochs while reflecting on case studies across the world.

The Post World-Wars Period Central Banking Mandates and Policies

The world-wars period influenced the mandates and policies of many central banks across the world.[22] The superficial identities of central banks in the world-war periods largely faded away to give room for a wave of new changes in central banking theory and practices.[23] Although the rationale for the establishment of various early banks were somewhat distinct, for

[18] Tony Watima, 'Printing money is dodgy economics' (Business Daily, 15 December 2020) accessed <https://www.businessdailyafrica.com/bd/opinion-analysis/columnists/printing-money-is-dodgy-economics-3228916> 8 April 2021, [13].

[19] Antoinette M. Sayeh, ''IMF Executive Board Approves $2.34 billion ECF and EFF Arrangements for Kenya' (IMF, 2 April 2021) accessed <https://www.imf.org/en/News/Articles/2021/04/02/pr2198-kenya-imf-executive-board-approves-us-billion-ecf-and-eff-arrangements> 8 April 2021.

[20] N 15 [8].

[21] N 9, 14.

[22] N 9, 14.

[23] Gerald Epstein, 'Post-War Experiences with Development Central Banks: The Good, the Bad and the Hopeful', (UNCTAD, G-24 Discussion Paper No. 54, February 2009), 14.

instance: the Bank of England was mainly established for fiscal purposes; the Bank of France for fiscal and monetary support; the Bank of Japan for fiscal, monetary and financial stability; the Federal Reserve for monetary and financial stability; and the Bank of Canada mainly for political stability, in the post-world wars period ,their salient functions aligned with the economic and/or financial objectives of their respective states.[24] The symbiotic relationship between central banks and states in the war periods was largely at the detriment of the banks because they had no independence and were marred with political influence.[25] The nationalization of the central banks post World War II (WWII), such as the Bank of England and the Bank of France, resulted to increased autonomy with less political influence and a focused mandate for price stability.[26]

The wave of influence of central banking practices by the early establishments such as the Bank of England is what seemingly framed the nature of central banks in Africa. The Central Bank of Kenya, for instance, evolved from the East Africa Currency Board (EACB) after a failed attempt to create a single central bank for Kenya, Uganda and Tanganyika.[27] The EACB was established after World War I in 1919 and mandated as the sole currency issuer in the East African region during colonial period and at independence.[28] The currency board performed some central banking roles at independence including providing credit to the government and lending to commercial banks for the purpose of crop financing.[29] The CBK has made significant milestones characterized with evolution of policies and functions towards achieving its mandate over the last five decades.[30]

Modern central banking is built around a number of international best practices and standards from institutions such as the International Bank for

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[24] Angela Redish, 'The History of Central Banks, Monetary and Banking Policy in Latin America' [2012] 30 PE [32].
[25] *Ibid* [34].
[26] *Ibid* [36].
[27] N 1, [12].
[28] 'The Paper Money of the East African Currency Board' accessed <https://africanbanknotes.com/articles/jun07-eastafrica.php> 25 April 2021, [1]. Also see N 1, [12].
[29] N 1, [13].
[30] N 1, [4].

Reconstruction and Development (the World Bank)[31], the IMF, the Basel Committee on Banking Supervision (BCBS)[32] and also from regulatory institutions and prominent economists.[33] The recipe for the new era of central banking is significantly distinct from historical legal nature, mandates and policies of central banks. The components for this recipe include: central bank autonomy, use of indirect monetary policy approaches such as short-term interest rates instead of credit ceilings, and a focus on financial stability and fighting inflation.[34] Central banking policies in the post-war era have increasingly shifted away from directly financing government expenditures, and according to Epstein:

> "This recipe – no support for the government expenditure, reluctance to manage exchange rates and opposition to use of capital controls, and a refusal to engage in credit allocation policies to support economic sectors – is a highly idiosyncratic one in the sense that, as a package, it is dramatically different from the historically dominant theory and practice of central banking, not only in the developing world, but, notably, in the now developed countries themselves"[35]

In the post-world wars period, the policies and mandates of central banks have progressively transmuted in response to three key dynamic factors:

1. **The existence of other or alternative sources of funds for states** – States relied on the central banks to finance its war-time needs and its economic objectives. The central banks provided fiscal support

[31] The establishment of the United Nations and its various development, peace and security agencies after World War II, which also influenced the formation of other development organizations around the world such as the World Trade Organization (WTO) in furtherance of global peace and harmony has also significantly contributed to the progressive advancement of central banking. The achievement of sustainable peace greatly inspired many countries to refocus their central banking objectives from financing operations during wartimes to ensuring stability of their economies.
[32] 'The Basel Committee - overview' (Bank of International Settlement) accessed <bis.org/bcbs/> 25 April 2021.
[33] N 21.
[34] N 21.
[35] N 21, [4].

and were burdened to pay the debts of the state.[36] Contemporarily, however, governments have a myriad of bilateral and unilateral lenders that help fund their economic objectives.[37]

2.**The prevailing economic theory** – The development economic theory and philosophical beliefs have led to the rise of a new breed of economists with different perspectives of central bank establishment and mandates. These varied economic theories continue to advance and influence how central banks operate.[38]

3.**The technology of money and financial instruments** – In 1966 when the CBK was established, there was no complex payment systems and financial instruments to regulate, the bank's main roles were to issue currency and lend to banks.[39] Over the years, the meaning and nature of money has changed profoundly; from mere banknotes and coins to mobile money like Mpesa.[40]

The Central Banking Monetary Policy Mandate and Practices

The collapse of the Gold Standard and the Great Depression represented a gigantic failure for the central banks and their economies.[41] The objectives, the models and the operational frameworks of most central banks fell apart; then followed the subservience of the central banks to the socialist control

[36] This is evident in the case of the Bank of England, the Bank of France, the Bank of Japan, the Federal Reserve, Riksbank and even the Central Bank of Kenya (at its infancy at establishment) that all demonstrated in one way or another servanthood to the state. See N 22 above.

[37] **Examples**: IMF, World Bank, Africa Development Bank, Issuance of bonds, and treasury bills among many others.

[38] The economists of today have learnt from the profound mistakes of previous ones. For instance, the premise of economic analysis in monetary and fiscal policies are progressively being transformed with new proven models of managing national debt and governing central banks. See N 21 above.

[39] N 1 [3].

[40] The speed of money has increased tremendously. Money is increasingly becoming digital and the use of physical cash dwindling, much more in the wake of mobile money, cryptocurrencies and other internet-based money. This concept will be discussed further later in this paper when handling Central Bank Digital Currencies (CBDCs).

[41] N 5, 5.

by governments, especially during WWII.[42] Before the world wars, central banks did not attach great importance to maintaining the stability of their national economies.[43] However, there was a shift after WWI when central banks, under the auspices of the socialist controls, started being concerned about price levels, real economic activities and employment.[44] This shift reflected the changing nature of the political economies of many countries with fast growing suffrage and rising labour movements.[45]

Maintaining currency stability gradually became the primary role of many central banks in supporting the sustainable economic growth of their countries.[46] Initially, the monetary policy function was comparatively simple but has become increasingly complex in line with globalization and the development of domestic economies.[47] The monetary policy role has transmuted from mere commercial paper predominance to monetary operations targeted at interest rate moderation.[48]

By mid and late 1990s, most countries had enshrined, in their central bank laws, a provision that made monetary stability the principal objective of the banks and outlined the fundamentals of setting and implementing the policy; pragmatically a take-over of the monetary policy by governments.[49] In Africa, various studies show that this was a period of major shifts in central banking. The Central Bank of Kenya Act (1966), in a bid to establish monetary policy as the primary role, stipulates that:

> *"The principal object of the Bank shall be to formulate and implement monetary policy directed to achieving and maintaining stability in the general level of prices".*[50]

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[42] *Ibid.*
[43] N 6, 2.
[44] *Ibid.*
[45] *Ibid.*
[46] Perry Warjiyo and Solikin Juhro, *Central Bank Policy: Theory and Practice*, Emerald Publishing, 2019, 5.
[47] *Ibid.*
[48] *Ibid.*
[49] N 5, 5.
[50] Section 4 (1), Central Bank of Kenya Act (1966).

Economic pressures built up in 1970s pushing inflation to double digits in Europe and the US, often referred to as the 'Great Inflation'.[51] As a result of the Great Inflation, many of the affected economies experienced a sharp reversal of their central bank monetary policies, starting with the US.[52] The launch of the 'shock therapy' by Paul Voker in 1979 which was characterized with monetary tightening and raising the interest rates up to double digits, led to recession and a decline in inflation.[53]

Since the 1980s,S most central banks have implemented inflation targeting as the leading monetary policy framework.[54] For instance, the central banks for New Zealand, Canada, the United Kingdom and the Euro area have introduced explicit inflation targets.[55] Central banks in many developing countries are also transitioning from merely targeting a monetary aggregate to the more contemporary framework of inflation targeting.[56] AP Fuare defines price stability, generally known as inflation rate, as the non-volatile or low and stable changes in the general price levels.[57] Historical data has shown that when the inflation rate is low it also remains non-volatile thus the majority of the world economies, particularly the developed countries, have settled on an inflation rate of 2 -3% per annum (pa).[58] The logic behind settling on 2 – 3% pa rate is that (1) a rate of 0% pa is too close to deflation which often have a significant negative impact on investment and spending; and (2) that 2 – 3% pa is tolerable and can be easily managed from dropping down to deflation.[59] Most recently as concerns grew on the erosion of the monetary policy space with falling inflation expectations and dwindling

[51] Esther Jeffers and Dominique Plihon, 'The Historical Evolution of Central Banks: Are We on the Verge of a New Era?' 4.
[52] *Ibid*.
[53] *Ibid.*
[54] 'Monetary Policy and Central Banking' (International Monetary Fund (IMF), 16 March 2021) accessed <https://www.imf.org/en/About/Factsheets/Sheets/2016/08/01/16/20/Monetary-Policy-and-Central-Banking> 26 April 2021, [2].
[55] *Ibid*.
[56] *Ibid.*
[57] AP Faure, *Central Banking & Monetary Policy: An Introduction*, [2015] Bookboon, 11.
[58] *Ibid.*
[59] *Ibid.*

equilibrium interest rates, many central banks especially in developed countries started to review their monetary policy frameworks.[60]

This paper posits that central bank role of maintaining price stability is not isolated, rather, it is intertwined with other factors such as the stability of the financial sector, the health of the political environment and the general performance of the economy. The progressive transmutation of monetary policy mandates and practices since the 1980s over different economic and political epochs is evidence enough that it is a multi-faceted policy, for instance the transition to inflation targeting policies was influenced by many factors.[61] In the 1980s and 1990s, the central banking policy frameworks were largely based on two principles of the monetarist theory, (1) that the main cause of inflation is over-supply of money into circulation, and as a result, (2) monetary policy is the best solution for fighting inflation.[62] The independence of central banks is also a key factor that influences the ability of the bank to set achievable or realistic targets and work towards them. Lack of existential and operational autonomy may jeopardize the performance of the central bank policies.[63]

The factors that can influence the implementation and success of central bank monetary policies are vast, especially with increasing globalization and technology use. However, two key examples of such instances stand out:

1. **The Great Financial Crisis of 2007/2008** – It would not be far-fetched to assert that there is no country that did not feel the impact of the Great Financial Crisis. Against the backdrop of the financial crisis, most central banks in developed countries eased their monetary policies reducing the interest rates to the extent that short-term rates

[60] N 54.
[61] *Ibid*.
[62] N 51.
[63] Undue influence from political or corporate institutions on the central bank or its decision making bodies such as the Monetary Policy Board, may make it difficult for it achieve the policy objectives. The autonomy of the central bank should not be compromised. The central bank key employees such as the governor and the members of the decision making bodies should have security of tenure and other necessary elements of personal autonomy, to ensure they perform their functions of setting and/or implementing the central bank mandates and policies.

almost hit zero percent thus limiting the option to further cut policy rates.[64] In order to mitigate against the risk of falling into deflation, central banks implemented unconventional monetary policies such as buying long-term bonds in order to lower long-term rates and loosen monetary conditions.[65] This was the conversation across the globe, central banks taking unconventional actions to cushion their economies against the negative effects of the 2007 financial crisis.[66]

2.**The Covid-19 Crisis** – The Covid-19 pandemic has presented one of the most unprecedented socio-economic situations to the world in this decade. The negative impacts have extensively impacted the different aspects of the global economy from healthcare, manufacturing, hospitality, and supply chain. In response to the negative impacts of Covid-19 to the economy, most central banks have taken unconventional policy actions to ease the monetary stress, provide liquidity for funding markets, and maintain credit flows.[67] For instance, to mitigate the strain in the currency and bonds markets, several central banks in emerging markets used foreign exchange interventions and deployed asset purchases program for the first time.[68]

The Central Banking Financial Stability Policy Mandate and Practices

Financial stability became an important element of central bank policies especially after the Great Financial Crisis (GFC) of 2007/2008.[69] Every sector in an economy can be negatively affected if a country becomes financially unstable. Central banks have, over the last decade, accorded particular attention to the financial stability role especially after the 2007 GFC and the global efforts to combat climate change which was recognized by the 2015 Paris Agreement as a global issue.[70] The most recent global issue

[64] N 54.
[65] *Ibid.*
[66] Suchada Kirakul, 'Fiscal policy and its implementation for central banks' BIS Papers No. 67, 325, 327.
[67] International Monetary Fund, 5. See N 54.
[68] *Ibid.*
[69] N 54.
[70] N 51, 5.

that has also re-emphasized the vital role of central banks in promoting financial stability is the Covid-19 pandemic which has resulted in massive job losses, closure of businesses, record-high losses, and breakdown of national health systems.[71]

The GFC awakened central banks to the fact that countries ought to contain the risks that could destabilize the financial system in entirety by leveraging dedicated financial policies.[72] Over the years, the financial stability policies set out by central banks, although narrow at the beginning, have been expanded to cover macro-prudential policy frameworks.[73] Central banks in most countries are established autonomous body-corporate institutions that are thus best suited to conduct the macro-prudential policies of a country.[74] Maintaining financial system stability has become one of the key primary mandates considered on the same level as price stability or as one of the top in the hierarchy of policies.[75] As the global economy continues to change, with unprecedented phenomena such as Covid-19, central banks will continue to transmute the nature of their financial stability and macro-prudential policies to meet the economic needs of their countries.[76]

Central Banking Policies and Mandates in Combating Climate Change and Supporting Sustainable Finance

Climate change has become one of the greatest challenges that the world has to contend with in the 21st century with its far-reaching effects negatively impacting both developing and developed countries in pursuing their sustainable development goals.[77] Climate change is a key environmental goal in the United Nation's 2030 Agenda for Sustainable Development Goals thus making it an instrumental element of the development agenda of any country.[78] According to Kariuki Muigua, "climate change affects not only

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[71] N 67.
[72] International Monetary Fund, 7. See N 54.
[73] *Ibid.*
[74] *Ibid*.
[75] N 46.
[76] N 54 [11].
[77] Kariuki Muigua, 'Combating Climate Change in Kenya for Sustainable Development' (2021) JCMSD 6, 244, 245.
[78] United Nations 2030 Agenda for Sustainable Development Goals, 13, (United Nations).

national and global economy but also has a direct effect on the livelihoods of communities". [79] The conversations around climate change and environmental conservation ought to continue in every office or boardroom where decisions on sustainable development are made. Against the backdrop of the rising public awareness and campaigns against the risks that climate change pose to economies and humanities at large, and the universal political commitment to mitigate these risks as embodied in the 2015 Paris Agreement, contemporary central banking mandates and policies have tended towards supporting these mitigation efforts.[80] There is a growing number of central banks globally that have gone beyond the theoretical debate on addressing climate change issues, and started promoting the development of green finance as a key milestone in sustainable development.[81] Adoption of green finance policies by central banks into their core mandates and policies, and the incorporation of the climate change risks into their macro-prudential frameworks, is evidence of the transmuting roles of central banks. [82]

The conversations around combating climate change risks and promoting activities and policies that protect the environment continue to advance in Kenya. The enactment into law of the Climate Change Act 2016 provided a regulatory framework for the enhancement of national response to climate change challenges.[83] The Environmental Management and Co-ordination Act, 1999 (EMCA) creates avenues for climate change mitigation by providing for fiscal incentives.[84] The Act provides that the Cabinet Secretary in charge of Ministry of Finance can, upon recommendation by the National Council of Public benefit organizations, make proposals to the Government with regard to tax, fiscal incentives, dis-incentives, or fees meant to induce

[79] N 77, 244.
[80] Simon Dikau and Ulrich Volz, 'Central Bank Mandates, Sustainability Objectives and the Promotion of Green Finance', SOAS Department of Economics, Working Paper No. 232, January 2020, 2.
[81] *Ibid*, 2.
[82] *Ibid*, 2.
[83] Climate Change Act, No. 11 of 2016, Laws of Kenya.
[84] Environmental Management and Co-ordination Act, No. 8 of 1999, Laws of Kenya.

or promote the management and conservation of the environment and natural resources, or prevent their degradation.[85]

To the extent that climate change has far-reaching impacts on the national and global economy, its effects on the financial stability of a country cannot be ignored. Historically, central bank roles have considerably evolved, and often major strides in the evolution journey have been made in response to crises such as the Great Financial Crisis and Covid-19 crisis, and perpetual policy problems.[86] The campaign for central banks to participate in combating climate change led to the launch of progressive initiatives such as the Central Banks and Supervisors Network for Greening the Financial System (NGFS) and the Sustainable Banking Network (SBN).[87] Although the general consensus among central bankers and policy leaders is that central banks should not ignore climate change, there is no corresponding consensus on the extent of involvement of the banks and how much it should affect their policies.[88] The advancement of ideas of green finance would be a good way for central banks to support environmentally friendly policies and activities.[89]

Safeguarding the financial stability of countries has been at the core of central bank mandates, and post-crisis deliberations have birthed arguments that central banks should move away from narrow price stability policies and deepen their involvement in ensuring financial stability.[90] Climate change risks are a source of financial instability, therefore, promoting environmental sustainability is squarely within the scope of central banks' mandates.[91] A speech by François Villeroy de Galhau, the governor of the Banque de France demonstrated how much central bank governors are beginning to appreciate their role in combating climate change:

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[85] Environmental Management and Co-ordination Act, Section 57 (1).
[86] N 80, 2.
[87] NGFS. 2018. First Progress Report – October 2018. Paris: Central Banks and Supervisors Network for Greening the Financial System.
[88] NGFS. 2019. A Call for Action. Climate Change as a Source of Financial Risk. Paris: Central Banks and Supervisors Network for Greening the Financial System.
[89] *Ibid* 80.
[90] Esther Jeffers and Dominique Plihon, 13. See N 51.
[91] *Ibid*.

> "The first central bank in History, the Risbank, was founded in the 17th century to finance the Swedish government's war costs. Today, central banks must wage another type of "war" alongside the signatory states of the 2015 Paris Agreement—the fight against climate change and its consequences".[92]

The Central Banking Payment System Policy and Regulatory Mandate

Central banks roles have transmuted tremendously over the years and the evolution of the payment system function from merely printing and circulating currency notes and coins to regulating and supervising the payment instruments, mechanisms and the infrastructures.[93] Further, with regard to financial stability, central banks role as Lender of Last Resort (LOLR) has progressed into macro-prudential regulation and supervision.[94]

The Central Bank of Kenya issues regulations and guidelines that subject banks to certain restrictions, requirements and guidelines with regard to their legal existence, and scope of operations.[95] This regulatory structure is largely meant, *inter alia*, to create transparency between the banking institutions and individuals and companies they transact with.[96] Due to the interconnected nature of the banking industry, and the national economic reliance on banks, it is exceedingly important for the regulatory agencies to ensure the standardized practices and championed and adhered to by the banks.[97] Some of the key objectives of regulations include:

1. The Prudential role – to protect depositors by reducing their risk exposures in the deposit-taking institutions.
2. Reduce systemic risks – to reduce the risk of occurrence of disrupting events in the industry that may result from adverse trading conditions and could cause bank failures.

[92] *Ibid*.
[93] Perry Warjiyo and Solikin Jurho, 4. See N 46.
[94] *Ibid*, 5.
[95] The Central Bank of Kenya, 'Regulations and Guidelines', accessed <https://www.centralbank.go.ke/policy-procedures/legislation-and-guidelines/> 30 April 2020 [3].
[96] *Ibid* [4].
[97] *Ibid*.

3. Prevent financial crimes – to reduce the risk of misuse of banks for purposes of financing crime such as terrorism and child trafficking, and laundering of illegally acquired moneys.
4. Protection of banks' confidentiality credit allocation – to direct credit to the favoured sectors thus provide best customer service in a competitive business environment.[98]

The objectives and scope of the regulatory mandate of central banks continue to change in this age where the definition of money and banking are increasingly becoming ambiguous and financial technologies springing up rapidly. The macro-prudential and micro-prudential regulation and supervision by central banks are imperative for the maintenance of the financial system stability.[99] The purpose of micro-prudential regulation is to micro-regulate and supervise the financial institutions and emphasizes on the performance and soundness of the individual financial institutions.[100] On the other hand, macro-prudential regulation involves macro-regulating and supervising the financial institutions with focus on mitigating systemic risks for the achievement of financial stability.[101] In most countries the central banks have the macro and micro-prudential regulatory mandate, while in others the micro-prudential function was transferred to a separate authority, for instance in Australia, South Korea and Indonesia, micro-prudential role is undertaken by the financial services authority.[102]

In most countries, there are multiple legislations enacted to guide the central bank in its regulatory and supervisory mandate. In Kenya, the CBK is guided by the following legislations:

1. The Constitution of Kenya 2010 – The supreme law stipulates, in Chapter 12, the principles of public finance, and goes ahead to establish the CBK in Article 231. It further empowers Parliament

[98] *Ibid* [5].
[99] Perry Warjiyo and Solikin Jurho, 5. See N 46.
[100] *Ibid*, 5.
[101] *Ibid*.
[102] *Ibid*.

enact laws to provide for the "composition, powers, functions and operations of the Central Bank of Kenya".[103]

2. The Central Bank of Kenya Act (2015) – The Act establishes the CBK and empowers it to make subsidiary legislation and guidelines, *inter alia*, for the purposes of regulating and supervising banking institutions.[104]
3. The National payment System Act (2011) – This Act brings all the payment service providers including banking institutions and mobile money service providers under the regulatory auspices of the CBK.[105] It also makes the CBK the oversight authority over their products and activities to ensure safety and efficiency of their platforms.[106]
4. The Banking Act (2015) – The Act provides guidelines on the establishment and conduct of banking business in Kenya.[107] It also stipulates that any banking business, financial service and mortgage finance can only be conducted by institutions with a banking license.[108]
5. The Banking (Credit Reference Bureau) Regulations (2008) – The regulations are established under the Banking Act with the purpose of governing how the Credit Reference Bureaus are established and supervised by the CBK.[109]
6. The Microfinance Act (2006) – This Act provides the regulatory guidelines for all deposit-taking micro-finance institutions. These institutions fall within the regulatory and supervisory scope of the CBK.[110]

The rapidly changing banking or financial services environment with the emergence of disruptive financial technologies such as mobile money,

[103] Article 231 (5), Constitution of Kenya (2010).
[104] Section 3, Central Bank of Kenya Act, Cap. 491, Laws of Kenya.
[105] The National Payment Systems Act, No. 39 of 2011 (the long title of the Act).
[106] Section 2 of the National Payment Systems Act, No. 39 of 2011.
[107] Section 3 of the Banking Act, Cap. 488, Laws of Kenya.
[108] *Ibid* at Section 7.
[109] Section 34 (3A) (5) of the Microfinance Act, 2006, as read with Section 31 of the Banking Act.
[110] Section 3 of the Microfinance Act, 2006.

electronic money, cryptocurrencies, and Decentralized Finance (DeFi) among others, have transformed the nature of most financial services and the business models of some financial institutions.[111] In Kenya, investments in fintech businesses continue to surge thus stirring debates in the legal space on the applicable regulatory frameworks for fintechs.[112] The fintech companies in Kenya are actively lobbying to have a separate regulatory authority other than the CBK stating that a separate body designed for the fintech sector would help bolster innovation.[113] The rise of Mpesa as a dominant mobile money service provider has transformed mobile banking and transactions in Kenya and East Africa.[114]

Blockchain-based cryptocurrencies, particularly Bitcoin, are also growing in use in Kenya and causing a regulatory headache, with CBK and other regulators such as the Capital Markets Authority (CMA) only issuing cautionary statements to warn the public against dealing in the digital currencies.[115] Despite CBK leaving cryptocurrencies unregulated in Kenya, similar to many other countries including the East Africa Community (EAC) members, the number of individuals or companies transacting in cryptocurrencies is increasing. According to a report by Citibank, Kenya is among the countries having the largest bitcoin holdings, with the percentage holding estimated to be approximately 2.3% of the Gross Domestic Product (GDP).[116] These developments may require the involvement of the central bank in regulation and supervision, or rather, enactment of new laws to establish new a regulatory body as championed by the Kenya's fintech space.

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[111] Perry Warjiyo and Solikin Jurho, 5. See N 46.

[112] Esther Njiru-Omulele, 'Banking Regulations 2021: Kenya' (Global Legal Insights, 19 March 2021) accessed <https://www.globallegalinsights.com/practice-areas/banking-and-finance-laws-and-regulations/kenya> 1 May 2021 [22].

[113] *Ibid* [24].

[114] 'The M-Pesa Wonder: How it all began', (Safaricom Newsroom, 1 May 2017) accessed <https://newsroom.safaricom.co.ke/the-m-pesa-wonder-how-it-all-begun/> 1 May 2021.

[115] Central Bank of Kenya (CBK), 'Virtual Currencies – Bitcoin' in Circular No. 14 of 2015, 18 December 2015.

[116] 'Kenya among the few countries in the world with highest per capita holding of Bitcoin - Citi' (Kenyan Wallstreet, 8 October 2019) accessed <https://kenyanwallstreet.com/kenya-among-countries-world-highest-per-capita-holding-bitcoin-citi/> 1 May 2021.

The latest area of regulatory disruption in Kenya has been the digital lending sector. The high proliferation of the digital lenders such as Tala and Branch in Kenya, with some exploiting borrowers' data vulnerability and charging high interest rates, has become a challenge for regulators.[117] In 2020, the CBK revoked the approval of several digital lender and in effect barring the unregulated digital mobile lenders from listing loan defaulters with the Credit Reference Bureau.[118] In a bid to bring the digital lenders under the regulatory scope of the CBK, the Central Bank of Kenya (Amendment) Bill 2020 proposes to add the following:

2. Section 4A of the Central Bank of Kenya Act, 2014 is amended—

(a) in subsection (1) by inserting the following new paragraphs immediately after paragraph (d) —

(da) regulate and supervise the conduct of providers of digital financial products and services;
(db) regulate and supervise the conduct of digital credit providers and digital credit service providers;
(dc) regulate and supervise the conduct of providers of financial products and services;
(dd) regulate and supervise the conduct of financial services;[119]

These proposed amendments clearly demonstrate a fast changing business environment in the banking and financial services industry that will require transmutation of laws to cope with the evolution of markets and consumers, and to fill regulatory and oversight gaps. Other evolving areas that will influence the transmutation of central bank practices include the growing complexity of money laundering and use of decentralized digital currencies to finance terrorism.[120]

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[117] N 112 [27 - 28].
[118] John Mutua, 'New bid to place digital lenders on CBK watch' (Business Daily, 9 February 2021) accessed <https://www.businessdailyafrica.com/bd/markets/capital-markets/new-bid-to-place-digital-lenders-on-cbk-leash-3284284> 1 May 2021.
[119] Section 2 of Central Bank of Kenya (Amendment) Bill 2020.
[120] N 112 [57].

The Legal Implications of Adopting Central Bank Digital Currencies (CBDCs)

The last decade has seen disruptions in the financial services industry with the emergence of Blockchain technology upon which cryptocurrencies, stablecoins and decentralized finance (DeFi) runs on.[121] In about a decade, the number of cryptocurrencies listed on the coin listing platform, Coin Market Cap, has risen to over 9500 coins and tokens with a whopping market capitalization of $2.47 trillion. [122] These phenomenal and disruptive developments in the financial services sector are increasingly putting the control of the financial systems under decentralized control of individuals and startups running fintechs, and away from the regulatory scope of central banks.[123] This is the fundamental building block of Blockchain and bitcoin as expressly described by the pseudonym Satoshi Nakamoto in the 2008 whitepaper titled *Bitcoin: A Peer-to-Peer Electronic Cash System*.[124] The conversations about bitcoin and cryptocurrencies are growing faster globally with governments increasingly gaining interest and central banks gradually getting involved with Central Bank Digital Currencies (CBDCs) whether at research level, or at proof of concept, or at development, or at live market testing.[125] The Digital Currency Research Institute, a sub-division of the People's Bank of China has confirmed in several media reports that they are

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[121] Luisa Scarcella, 'Adopting a Cnetral Banking Digital Currency: A Tax Policy Perspective' (Afronomics Law, 2 December 2020) accessed <https://www.afronomicslaw.org/2020/12/02/adopting-a-central-banking-digital-currency-a-tax-policy-perspective> 8 May 2021 [1].

[122] Coin Market Cap, accessed <https://coinmarketcap.com/> 8 May 2021.

[123] This explains why central banks cannot afford to remain asleep with regard to participation in the current technological disruptions. For instance, the $2.47 trillion stored in the Blockchain network as per the market capitalization is running off the main financial systems regulated by the central bank. With most central banks only issuing cautionary notices against cryptocurrencies, it may be necessary to do more in participating and promoting a healthy development of the space.

[124] Satoshi Nakamoto, 'Bitcoin: A Peer-to-Peer Electronic Cash System' (Satoshi Nakamoto Institute, 31 August 2008) accessed <https://nakamotoinstitute.org/bitcoin/> 8 May 2021.

[125] Hedera Hashgraph, 'What is a central bank digital currency?' accessed <https://hedera.com/learning/what-is-a-central-bank-digital-currency-cbdc?> 8 May 2021 [1].

working with state-owned banks to test the China's new CBDC in Shenzen, Xiongan, Chengdu and Suzhou.[126]

Despite the increasing discourse and development of CBDCs, majority of people including professionals in banking do not yet comprehend what they are. CBDCs are explained by Hedera Hashgraph as "an electronic form of central bank money that citizens can use to make digital payments and store value" issued by central banks and are universally accessible.[127] The Committee on Payments and Market Infrastructures (CPMI), which is a body hosted by the BIS and comprises of representatives of various central banks, have stated that "CBDC raises old questions about the role of central bank money".[128] In trying to define CBDCs, the CPMI have stated that:

> "CBDC is not a well-defined term. It is used to refer to a number of concepts. However, it is envisioned by most to be a new form of central bank money. That is, a central bank liability, denominated in an existing unit of account, which serve both as a medium of exchange and a store of value."[129]

According a report by the Bank of International Settlement (BIS), over 80% of central banks are actively researching on CBDCs.[130]The contemporary central banks such as the CBK issue fiat currencies largely in physical notes and coins and are thus the recognized legal tenders within their jurisdictions; an adoption of CBDCs would be a new variant of central bank money thus redefining the legal tender.[131] According to the BIS Report, their survey findings show that most central banks are still trying to understand the implications of CBDCs on their jurisdictions while most central banks in

[126] N 121.
[127] N 125 [4].
[128] CPMI, Central Bank Digital Currencies, BIS, March 2018, p. 1.
[129] *Ibid*, 3.
[130] Codruta Boar, Henry Holden and Amber Wadsworth, 'Impending arrival – a sequel to the survey on central bank digital currency', Bank of International Settlement (BIS) Papers No. 107, January 2020, 2.
[131] *Ibid*, 1

emerging economies showing high likelihood of adopting CBDCs in the future.[132]

The most researched types of CBDCs are wholesale token-based CBDCs that are essential in facilitating interbank settlements, and a general purpose CBDC which is accessible by the public through tokens or accounts.[133] The author posits that the use of general purpose CBDCs would have profound legal implications on the way consumers of financial services interact with central banks, as it would make it possible for the general public to have accounts with the central banks bypassing the retail bankers. Central bankers and policymakers have raised important legal issues that would be associated with an introduction of CBDCs; in particular, the legal issues revolving around the fundamental relationship between the state, money and the law.[134]

The IMF has highlighted a number of areas of law and regulations that will most likely be impacted by the adoption of a CBDC; some of them include: private law including property law, tax law, contract law, insolvency law, payment system and settlement finality law, private international law, privacy and data protection law, and laws relating to Anti-Money Laundering (AML) and Countering Financial Terrorism (CFT).[135] These various areas of law, either directly or indirectly, fall within the regulatory scope of the central bank and other financial services regulatory bodies.

Various central banks have shared their motivation for developing a CBDCs, which include the following:[136]

1. Financial stability
2. Monetary policy implementation
3. Financial inclusion
4. Domestic payments efficiency
5. Cross-border payments efficiency
6. Payments safety and robustness

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[132] *Ibid*.
[133] *Ibid*, 2.
[134] Wouter Bossu, Masaru Itatani and others, 'Legal Aspects of Central Bank Digital Currency: Central Bank and Monetary Law Considerations', IMF Working Paper No. WP/20/254, 5.
[135] *Ibid.*
[136] N 130, 4.

The level of disruption that an adoption of CBDCs will bring to the performance of these roles or the achievement of the goals will most likely also have disruptive legal implications. In a research publication by Hossein Nabilou of Oxford University Faculty of Law, with regard to the legal implications of adopting CBDCs in the EU, he stated that:

> "*In addition to the potential legal impediments to issuing CBDC as* legal tender, *the introduction of such a virtual currency by the ECB would beget potential effects that might either undermine the ECB's mandate as well as its basic and ancillary tasks, or otherwise come into conflict with the constitutional constraints set by the EU primary laws on the ECB in employing its monetary policy tools."*[137]

The author posits that these implications will most likely be replicated in other parts of the world mainly because (1) the legal existence or nature of most central banks is similar and (2) the fundamental roles and primary policy mandates of most central banks are also similar. According to Nabilou, if the implementation of CBDCs is simultaneous with the abolishment of cryptocurrencies and physical cash, or other forms of digital money, the possible impact would be the removal of the Zero Lower Bound (ZLB) constraint on the implementation of monetary policies.[138] Any impact on the conduct or implementation of monetary policy and other central banking policies through the adoption of CBDCs will definitely have legal implications.

Conclusion

This paper has clearly demonstrated how the central banking mandates and policies have transmuted over the years since the inception of the concept in the seventeenth century. As the nature of global trade continue to change, social and economic activities advance, and environmental challenges continue to become the crux of global concerns, central bank mandates and

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[137] Hossein Nabilou, 'Central Bank Digital Currencies: Preliminary Legal Observations' (University of Oxford, Faculty of Law, 22 Feb 2019) accessed <https://www.law.ox.ac.uk/business-law-blog/blog/2019/02/central-bank-digital-currencies-preliminary-legal-observations> 11 May 2021, [2].

[138] *Ibid*, [5].

policies will continue to transmute.[139] In a Bloomberg post by Love Liman, where he discusses the need for the Sweden's central bank to change in order to act progressively to meet the demands of the changing economic times, he states that:

> *"The Riksbank's 352-year history gives it the distinction of being the world's oldest central bank. But the legislation governing it has yet to catch up with the kind of policy it needs to deliver to address the crisis triggered by Covid-19."*

This demonstrates the dire need to change the legislations governing the central bank for it to be efficient in addressing financial, economic and other policy areas. This paper has also demonstrated that the adoption of CBDCs will have far-reaching legal implications. The issuance of CBDCs and its implementation across different economies would impact on the functions and the powers of central banks.[140] It is, therefore, for the purposes of promoting sustainable development, imperative that legislations and other laws be developed to progressively and positively influence the development of central banks.

[139] This is a progressive change. It I highly likely that as technologies advance, the future roles of central banks may become leaner and the legal existence and mandates of financial institutions change.
[140] N 134.

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