Analysts Data Services and Resources
...making data intelligent

POLICY **BRIEF**

NO. **025**

FEBRUARY 2023

KEY POINTS

- The first step is always to be conscious of the possibility that there may be an unexpected side effect of a policy and envisage how citizens will act in response to the policy.
- The incentive of receiving new notes that will continue as the legal tender is simple enough, but it is complicated by the dis(incentive) of setting a withdrawal limit.
- Phasing the implementation of a policy and experimenting with varying incentives and sanctions can also address the problem of *Cobra effect*.

Cobra Effects and Naira Redesign: Lessons for Policymakers

The Cobra effect[1] describes a situation where policies aimed at solving a problem only manage to create other unintended, and often worse, problems. Policies with new reward or punishment systems can complicate existing problems or create new ones. Just like the British government was worried about the number of venomous cobras in Delhi, the Central Bank of Nigeria (CBN) is worried about the volume of currency outside banks in Nigeria. Therefore, the CBN is implementing new policies on currency redesign and cash withdrawal limits to reduce currency counterfeiting, make monetary policy more effective, encourage cashless economy and reduce incidence of illicit financial activities.

As laudable as these goals are, the implementation and outcomes so far appear problematic, unearthing new challenges. In many locations around the country, there are reports of citizens experiencing difficulty in depositing their old naira notes and/or withdrawing already deposited money in the banks. Long queues and struggles are commonplace at banks' premises, with citizens spending productive hours trying to access cash by all means.

In the middle of these challenges, some banks are reported to hoard the new currency, many digital financial platforms are experiencing infrastructure breakdown, local money-changing agents and Point-of-Sale (POS) vendors have seen opportunities for exploitation and there are tensions and agitations among the citizens. These definitely are unintended consequences which the new CBN policy has shown and therefore need to be analysed to draw relevant policy lessons.

For ease of analysis, we can classify the phases of *Cobra effect*[1] into five (5), namely; i) incentives design, ii) seemingly effective, iii) exploitation, iv) wake-up, and v) reversal. The Nigerian analysis is also be fitted into each of these phases below.

1. The incentive for the *Cobra effect* is to offer citizens financial reward for providing dead cobras. For the CBN, the incentive is to grant citizens access to new currency which will continue to serve as the legal tender while the old note becomes useless over time. However, the CBN introduced a major disincentive to depositing money at the bank by placing restriction on the amount of cash that someone who must first deposit his/her money can withdraw with time.

   While access to new and cancellation of old currencies tend to encourage citizens to deposit old currency, difficulty to withdraw cash, especially in a highly cash-dependent economy, caused delays in depositing money. This is the typical Parkinson law[2] as most citizens were waiting for the deadline to approach before depositing their money. As an evidence, when the policy was announced in October, 2022, currency outside bank was N2.84 trillion and only reduced to N2.57 trillion in December; but reduced drastically by 72% to N788.92 billion around the first deadline in January, 2023.

2. The Cobra incentive policy appeared as successful initially as citizens brought in dead cobras, decreasing their numbers on the street while they earned their incentives. In the Nigerian case also, citizens, especially those that had fully embraced formal financial system, responded positively by depositing their cash into their existing bank accounts while they encourage those around them to open bank accounts and do likewise. A major problem was that observers, especially those transacting largely in cash, quickly noticed that it was becoming increasingly difficult for those that deposited their money to withdraw same, true to the cashless policy.

   During this period, some level of progress was made, leading to reduction in money in circulation and adoption of cashless transactions. Thus, it was easy for the CBN to reiterate its resolve not to shift the deadline. Meanwhile, this might have provided those targeted with illicit cash to use same in buying assets such as properties and foreign exchange from normal citizens or in certain cases pay their suppliers and consultants in advance with cash.

3. In the exploitation phase, citizens took advantage of the system to personally breed and exchange dead Cobra for money. It should be noted that the process of breeding often started by unscrupulous citizens who would later be joined by many others, having realized the ease at which the former group benefit from such acts. Similarly in Nigeria, hoarding of the newly redesigned naira notes became the norm. People began to withdraw large amounts of cash and stopped taking cash to the bank, causing more shortage of the

[1] The original Cobra effect describes an event when the British government was concerned about the large number of venomous cobras in Delhi and promised a financial reward for every dead cobra provided. The programme worked successfully until greedy businessmen started breeding cobra to take advantage of the incentive as a continuous flow of income. When the government discovered this and ended the programme, the greedy businessmen became angry and set the newly raised cobra loose on the street of Delhi.

[2] Parkinson's law states that "work expands so as to fill the time available for its completion". It can lead to procrastination, leaving tasks until right before they are due.

Naira; this is similar to the popular *magnetic effect* in stock prices[3]. The new notes' circulation process was slowed down and the country experienced a cash shortage, making the naira-to-naira parallel market flourish.

This led to further loss of confidence in the policy while many began to question its original intent. Some citizens would also use this period to replenish their cash holdings with the new currency. It is also not impossible that counterfeiters could take advantage of the situation as the new notes are limited in supply and many cannot really tell the difference between the original and fake at this stage. On the other hand, POS operators have also taken advantage of the situation to extort Nigerians by charging exorbitant amount on withdrawals.

4. Once the British Colonial masters realized that the programme was going for too long and cobras were still coming in with money paid out beyond their budget, they stopped the programme. In the Nigerian case however, the response was not to stop but to extend the deadline from January 31 to February 10. Approval was also given to allow the old N200 bank notes to be released back and circulate as legal tender with the new N200, N500, and N1000 banknotes for additional 60 days. In addition, a cash swap programme was launched in some rural and remote areas of the country to ease access to and facilitate the exchange of old to new currencies. Sanctions were also meted on erring banks and POS operators.

5. Having realized that the British colonials did not intend to continue with the plan of giving out money in exchange for dead cobras, the Cobra breeders released the venomous cobras they were breeding into the streets of Delhi. This increased the number of cobras significantly, which made the situation far worse than when it started. Fortunately, the case of Nigeria has not reached this policy reversal stage. There are attempts from different quarters, especially from the States governments, to stop or delay the policy but so far the CBN has been able to maintain its position.

   It is expected that the Bank will finally be able to exchange all necessary old notes for the new ones, and therefore the need for reversing the policy is unlikely to arise. However, what may not be totally guaranteed is the time frame within which the objective will be achieved, especially with the pressures from stakeholders. Going forward, the CBN and the banks will have to deal with possible citizens' loss of trust and confidence in the financial system, especially banks and platforms that did not treat citizens well during this challenging period. Some may, for some time to come, prefer to have their money in hand than in banks, thereby affecting the progress so far made on the country's cashless policy.

Applications of Cobra Effect Solutions to the Current Challenge

There are many solutions that have been proffered to address *Cobra effect* which Nigeria and CBN can learn from. Some of these are discussed below:

[3] The magnetic effect is used to explain a situation where price accelerates towards the limit as it gets closer to the limit due to the actions of traders who are afraid of illiquidity and behavioural investors who think the ceiling will soon be reached

- **Recognise the tendency of *Cobra effect* in policies:** The first step is always to be conscious of the possibility that there may be an unexpected side effect of a policy and envisage how citizens will act in response to the policy. Policymakers should generally avoid incentivizing outcomes that are detrimental to a policy objective. It is therefore important that the CBN evaluates whether the current challenges were adequately recognized at the planning phase of the policy. Multiple objectives can sometimes give a policy unintended impact. In this particular case, apart from the primary objective of currency counterfeiting, targeting other crimes such as vote buying, terrorism and kidnapping can be left for other relevant authorities, with information sharing though.

Without reflection we go blindly on our way, creating more unintended consequences and failing to achieve anything useful." - Margaret J. Wheatly

- **Design simple incentives:** Complicated incentives can complicate problems such that the incentives become the target themselves in place of the policy objective. The incentive of receiving new notes that will continue as the legal tender is simple enough, but it is complicated by the dis(incentive) of setting a withdrawal limit. To address this challenge, the CBN needs to make the new notes available in the right quantity. Other simple incentives can later be designed to further encourage the cashless policy and consolidate on its achievement over the years.

"When a measure becomes a target, it ceases to be a good measure" – Charles Goodhart

- **Adopt system thinking in place of linear thinking:** A major cause of the *Cobra effect* is linear thinking and this is because it is often seen as the most convenient way to move from one state to another. But real life is more complicated as there is no simple cause-and-effect relationship when dealing with humans, Furthermore, there are multiple loops with various elements in a system that communicate in multiple ways, such that a change in one part can cause ripple effects in multiple parts of a society system. Therefore second-level thinking should be employed to lay down possible outcomes and think through what to do if a policy becomes counterproductive or show unintended consequences.

"Every government intervention produces unintended consequences, which lead to calls for further government interventions." - Ludwig von Mises

- **Seek Multiple Perspectives:** Human beings have been shown to be deep in cognitive biases. Thus, the process of developing a policy that incentivize or sanction them requires inputs from various stakeholders, especially those that can identify the potential gaps and weaknesses. Policymakers, like the CBN, therefore need to conduct adequate stakeholder engagement in policies of this nature.

"Learn from the mistakes of others. You can never live long enough to make them all yourself." — Groucho Marx

- **Start small and experiment:** Phasing the implementation of a policy and experimenting with varying incentives and sanctions can also address the problem of *Cobra effect*. The policymaker must however ensure that such experiments are properly designed and the results are utilized in improving the policy implementation. The current evidence shows that Nigerians may not be ready for the level of cashless economy that the CBN envisages.

"Success is a staircase, not a doorway." – Dottie Walters

- **Apply a game theoretic approach:** This approach shows that in certain cases, a socially optimal outcome may be ignored even by rational stakeholders, particularly when they operate from a self-interested perspective. This is similar to the popular case of the *prisoner dilemma* which can only be addressed by reducing reward to the level that it balances the cost of taking advantage of a system. Therefore, citizens must be made to see the long-term benefits and be convinced to adopt the CBN policy.

"The point is, the "best" technology or idea doesn't always prevail. Sometimes chance and the law of unintended consequences win out." - Eric Weiner

- **Engage in nudging:** When incentives created by a policy can possibly lead to unintended consequences, nudging has been found to be effective. This is used to entice people into believing in a particular policy without necessarily forcing them to do so or creating an incentive. Nudging can be done by implementing a plan that supersedes the current plan whereby the people who key into the long-term benefits of the policy are convinced that it is for their benefits. In this case of naira redesign, a nudging plan may be to provide seamless financial services that will integrate both offline and online payment systems, making them accessible to all at minimum costs. It is equally important to encourage digital financial service platforms to improve their infrastructure and reach, to effectively meet the needs of the underserved segments of the society.

"So to put it simply, forcing people to choose is not always wise, and remaining neutral is not always possible" – Richard H. Thaler

These are among the approaches to address the Cobra effect that the CBN and other policymakers can draw lessons from to avoid or address the problem of unanticipated impacts which are typical of most policies that create incentives or disincentives in the society.

CONTACT

+234 7037470047
info@adsrng.com, mail.adsr@gmail.com
www.adsrng.com, www.adsranastat.com

Analysts' House,
Opposite University of Ibadan 2nd Gate,
Ibadan, Nigeria

Analysts Data Services and Resources
...making data intelligent