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Interest-based Retail CBDC

One of the key policy decisions related to Retail CBDC is whether the central bank will choose to adopt a model for CBDC that allows for the application of interest rates. Giori Digital has evaluated the issues involved for an interest based CBDC model to be implemented in a CBDC solution.

> Giori Digital has examined the issues involved in supporting an interest-based Retail CBDC solution.

One of the functions for a Retail CBDC considered by some central banks is to serve as a tool of monetary policy for the central bank. The decision to apply interest rates to Retail CBDC is taken by the central bank. It is beyond the scope of this paper to consider the economic issues and policy impacts of an interest-based Retail CBDC.

Giori Digital has considered what it means to implement a Retail CBDC that includes interest rates if it should become a requirement of a central bank. Giori Digital works to provide flexible Retail CBDC solution, the **Global Solutions for Money Technology (GSMT®),** to meet the needs of central banks and the institutions authorized by the central banks to operate the distribution of CBDC and their user transactions.

The key characteristics to implement interest-based Retail CBDC includes a variety of business process controls, administrative functions, as well as technical design:

- **Support for both positive and negative interest rates:** To be effective as a tool of monetary policy, both positive and negative interest rates may be imposed depending on economic policy.
- **The source and destination of the interest funds must be designated and administered:** The funding source to provide positive interest to the CBDC holders must be arranged and supported.

  Since most central banks will implement Retail CBDC through authorized intermediaries, the business process and technical capabilities must include functions such as calculating the interest amounts, securing the funds from the funding source, and executing the transactions for interest payments. developed. Similarly, the path to collect funds from user wallets in the case of negative interest rates must be designated for the return of the user funds to the appropriate government institution.

- **In some cases, interest may be conditionally applied.** It may be necessary to apply interest rates to a subset of the entire monetary base, such as on geographic basis or some segments of users. This requires that the affected users for the interest rate can be identified and administered accordingly. This may be the case within monetary unions where policies may differ from one member country to another.

- **Applied interest (positive or negative) must be integrated into business and administrative processes.** Implementation for interest-based Retail CBDC goes beyond the wallet transactions and also involves changes in the business rules and administrative reports. For example, business rules applied to wallets for the maximum amount of funds held or the maximum size of transactions must be adjusted to account for the movement of interest transactions. Validating whether sufficient funds exist in a wallet for a transaction must also be aware of the impact and timing of the interest movements.

- **Interest rates are executed differently for account-based and value-based CBDC systems.** As is common in Retail CBDC, many countries will have their own specific and custom requirements to reflect their intended policies. Solution providers must support a variety of approaches and remain flexible to adjust a solution to meet the needs of each central bank becomes critical.

Global Solutions for Money Technology (GSMT®) provides a flexible transaction API that is further adapted to the unique requirements of each central bank. Many of the considerations involved in applying an interest rate to Retail CBDC may also apply to other government requirements such as the automatic collection of taxes, such as VAT, with certain retail transactions.

Interest-based Retail CBDC requires special planning.
Handling of the movement of interest funds into and out of wallets together with the administrative and auditing controls are special considerations for interest-based Retail CBDC.