## EXECUTIVE SUMMARY

Financial sponsors are launching blockchain-based instruments using conventional (non-crypto) underlyings such as cash, commodities, and securities. These "blockchain securitizations" are expected to make blockchain implementations mainstream by bringing the efficiencies of blockchains to traditional markets.

While native Bitcoin and Ethereum coins remain relatively niche, blockchain-based securitizations over money markets, stocks, and bonds are expected to expand blockchain platforms to mainstream commerce and investing.

A number of firms have launched stablecoins linked directly to bank accounts and vault holdings of physical gold[1]. Project { - } is planning a global coin based on a currency basket, where the coin is to be used as both a storage of value and a transactional currency.[2]

The Arca U.S. Treasury Fund is the first U.S. Securities and Exchange Commission regulated '40 Act fund launched entirely on a blockchain platform. The fund operates like a traditional bond-based mutual fund, but transactions are executed on a purpose-built Ethereum platform, with on-chain settlements, subject to centralized ledger values.[3]

ILLUSTRATIVE APPLICATION
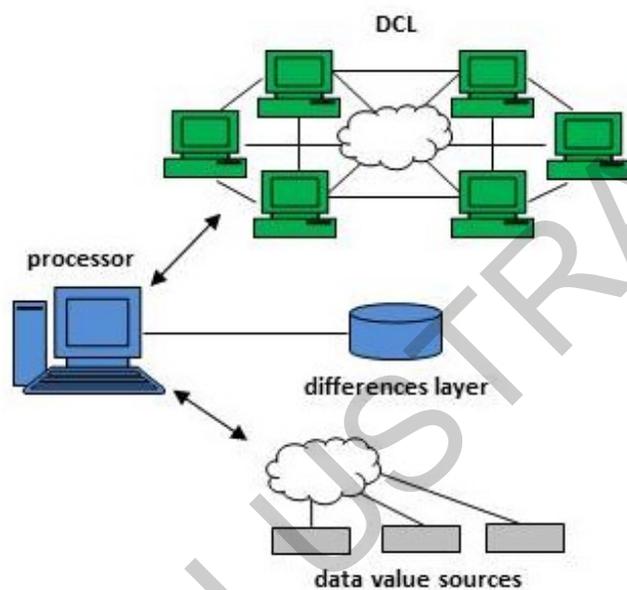
the figure illustrates a basic system with components which include:
(i) a distributed computer ledger (DCL),
(ii) a centralized or decentralized differences layer (DL),
(iii) data values (DV) and data value sources (DVS), and
(iv) a processor which executes inter-component operations

in a financial services technology implementation:

(1) an entity operates and manages a fund's holdings and holders,

(2) a holder registry is maintained with a traditional centralized transfer agent bank (data values and DVS),

(3) fund holdings are priced with reference to public sources (data values and DVS) and related price values are stored (DL),

(4) the holder values and valuation values are written to a distributed blockchain ledger (DCL),

(5) all blockchain share/unit transactions (DCL) are first "proofed" against the centralized transfer agent database (DV and DL).

'797 UNIQUE BENEFITS

'797's technology enables products and systems where transactions and transaction records are maintained on a blockchain or alternative distributed ledger, but where the processes and storage of critical descriptive and/or numerical values are maintained "off-chain". Traditional "smart contract" arrangements are built around "on chain" operations and "on-chain" external data calls which raise problematic storage, efficiency, and security concerns. '797 benefits include blockchain efficiency, system-wide security, data integrity, and the ability to properly validate, secure, and recreate books and records in a blockchain distributed system.

1. "The Top 5 Gold-Backed Crytocurrency Tokens", CrytoBriefing.Com, Paul de Havilland, April 8, 2020
2. "Welcome to the Libra Project", Libra.Org, https://libra.org/en-US/
3. Arca U.S. Treasury Fund SEC filing, prospectus dated 2020-07-06, https://sec.report/CIK/0001758583

CURRENT AND PROJECTED SIZE

Classic native blockchain platforms are hampered by their arcane protocols, and their strict orthodoxy to fully de-centralized ledgers. The adoption of hybrid ledgers is expected to both speed-up transaction cycles and increase commercial and consumer adoption by making transaction processes safer and more familiar. While smaller firms are leading in stablecoin platforms, many payment processors, banks, and credit card companies are launching pilot projects based on hybrid storage and linkages which are expected to expand the use of blockchain-based technologies.