

## CBDC Part 8: Wholesale Payments and DLT

### WEEKLY RECAP

- Total market cap. reached \$135bn (a 4.0% increase), and 7 day trading volume increased 27.2% for top 100 crypto

### THOUGHTS OF THE WEEK

Central Bank Digital Currency (CBDC) Wholesale Payment Systems (WPS) have seen wider and more rapid prototyping than CBDC Retail Payment Systems (RPS). This likely due to the more significant cost savings that may be possible via CBDC WPS. Furthermore, the interests of private financial institutions and central banks are generally aligned in the development of CBDC WPS, while CBDC RPS are viewed as possible competitors to existing RPS operated by private financial institutions.

A wholesale payment system “deals with inter-bank, inter-country large value, large volume real-time payments and related clearing and settlement systems governed by central banks integrating various globally accepted standards.” A CBDC WPS considers how digital currencies can be utilized to improve the efficiency of WPS. A simplified example implementation of a WPS is proposed in Project Ubin 1, and is outlined in the chart of the week.

In this system, banks hold special deposit accounts with the central bank. A bank can deposit funds into this deposit account from the bank’s RTGS account. The balance of this deposit is mirrored in a digital currency wallet on the permissioned blockchain system. Moving funds into the deposit account thus creates digital currency (in this case Deposit Receipts) in the wallet, and withdrawals from the Deposit Account burns Deposit Receipts in the wallet. Banks, with Deposit Accounts, can then transfer Deposits Receipts between bank wallets on the blockchain.

Such a system can be designed around DLT, and the specifics of the system depends on the digital ledger technology chosen. The options most commonly considered are R3’s Corda, Hyperledger’s Fabric, and JP Morgan’s Quorum, which were introduced in part 4, 5, and 6 of this series. Several WPS proof-of-concepts have been developed to date (see part 1 of this series).

The concepts tested in these projects using these systems have generally proven that DLT is able to execute transactions at a rate matching existing RTGS volumes and with finality, albeit often at the cost of limited privacy or system resilience. Further development would be needed to achieve more efficient trade-offs between these aspects. One must also note that a full-fledged CBDC WPS ought to include liquidity management and credit extension functionality. Concepts for both of these functions exist, but are considered beyond the scope of this introduction on the CBDC topic.

As more actors in financial markets consider introducing DLT based systems, the complexity of interoperability and the potential for new business models both increase. We will return to this topic as CBDCs see further development.

### TOP CRYPTO PERFORMANCE SUMMARY

Name	Price	7D%	Vol.	7D%	Mkt Cap.	% Total Mkt
BTC	\$3,951.60	2.80%	59.45bn	25.84%	69.48b	51.54%
ETH	\$136.76	3.66%	27.71bn	18.93%	14.38bn	10.67%
XRP	\$0.31	0.51%	4.28bn	7.50%	12.7bn	9.62%
LTC	\$57.18	18.67%	12.11bn	79.73%	3.47bn	2.58%
EOS	\$3.74	6.04%	10.47bn	37.20%	3.39bn	2.51%
BCH	\$132.84	1.52%	1.68bn	8.36%	2.35bn	1.74%
BNB	\$14.49	26.33%	1.17bn	91.69%	2.05bn	1.52%
USDT	\$1.01	-0.16%	53.24bn	25.99%	2.01bn	1.49%
XLM	\$0.10	15.84%	0.91bn	29.29%	1.92bn	1.43%
TRX	\$0.02	1.96%	0.99bn	8.89%	1.54bn	1.14%

### TOP NEWS AT A GLANCE

**Invesco partners with Elwood Asset Management to launch blockchain ETF on London Stock Exchange.** The ETF consists of a portfolio of 48 companies utilising DLT.

**Amun AG’s XRP ETP to be listed on the SIX Swiss Exchange in two months:** The company has obtained clearance to issue ETPs in BCH, LTC, XLM, and EOS.

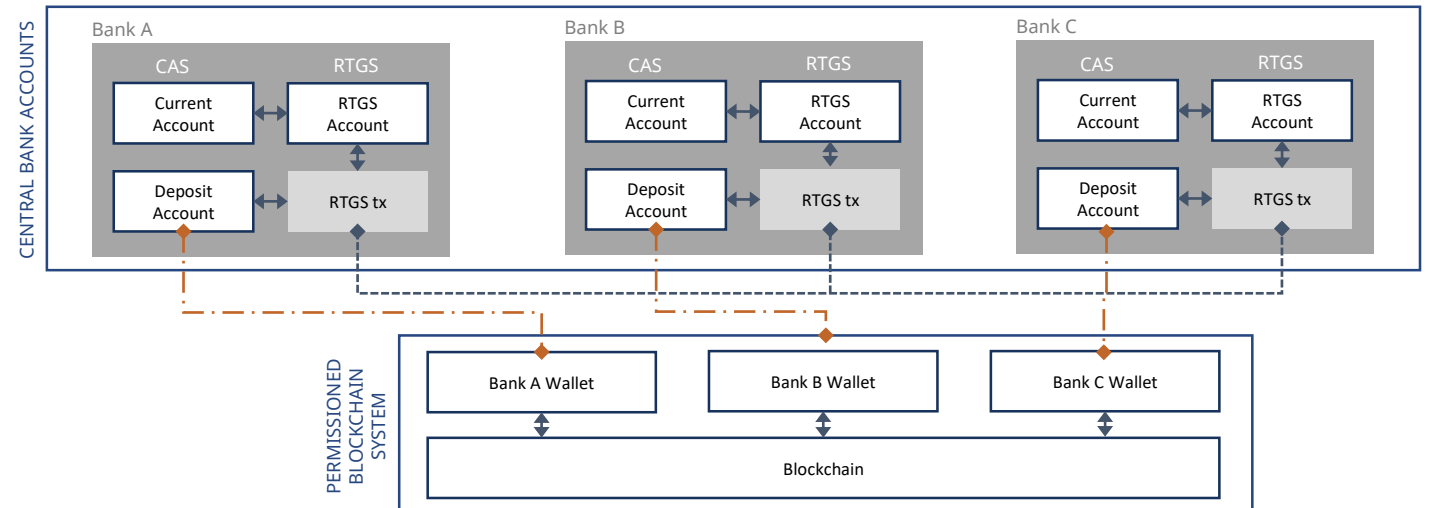
**CFTC imposes \$990k penalties on 1pool Ltd and its founders for illicit BTC transactions.**

### NETWORK FUNDAMENTALS

	BTC	ETH
<b>Hashrate</b>	43,408,528 TH/s (-0.6%)	149,365 GH/s (-1.7%)
<b># Wallet Users</b>	33,984,669 (+0.8%)	58,219,783 (+1.0%)
<b>Top 3 Miners</b>	BTC.com (18%) AntPool (12%) BTC.TOP (10%)	Ethermine (27%) SparkPool (22%) NanoPool (13%)

### CHART OF THE WEEK

Example CBDC Wholesale Payment System as Proposed by Project Ubin



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WEEKLY SUMMARY | 4 – 10 MARCH

## DISCLAIMER

**Abbreviations:** ADA: Cardano; BCH: Bitcoin ABC; BSV: Bitcoin Satoshi Vision; bn: billion; BTC: Bitcoin; Central Bank Digital Currency: CBDC; crypto: cryptocurrencies; ETH: Ethereum; ICO: Initial Coin Offerings; Market Cap: Market Capitalization; mn: million; RPS: Retail Payment System; Trading Vol.: Trading Volume; tx: transaction(s); US\$: United States Dollars; USDT: USD Tether; WPS: Wholesale Payment System; XLM: Stellar Lumens; XMR: Monero; XRP: Ripple

**Chart of The Week:** Sources: Project Ubin Phase 2 whitepaper, Standard Kepler Research

**Market Cap & Trading Vol.:** Sources: Coinmarketcap, Standard Kepler Research  
The horizontal axis represents the week number in 2018. For instance, W41 indicates the forty first week in 2018. W1 indicates the first week in 2019. The primary vertical axis represents total market capitalization; and the secondary vertical axis represents total trading volume.

**Network Fundamentals:** Sources: Blockchain.com, Blocktrail, Etherchain.org, Etherscan.io, Standard Kepler Research

**Thought of The Week:** Sources: The Riksbank's E-Krona Project Report 2, Quorum whitepaper, Project Jasper 1 whitepaper, Project Jasper 2 whitepaper, Project Jasper 3 whitepaper, Project Ubin 1 whitepaper, Project Ubin 2 whitepaper, Stella 1 whitepaper, Stella 2 whitepaper, Project Khokha whitepaper, Standard Kepler Research

**Top Crypto News At a Glance:** Sources: Blockcast.it, CCN, Coindesk, Cointelegraph, Standard Kepler Research

**Top Crypto Performance Summary:** Sources: Coinmarketcap, Standard Kepler Research

**Week Ahead:** Sources: Cryptocalendar.pro, Standard Kepler Research

**Weekly Recap:** Sources: Coinmarketcap, Standard Kepler Research

Past performance does not guarantee future results.

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The price of Bitcoin and other cryptocurrencies are highly volatile in nature. It is suggested that clients should perform their own due diligence and consult a fully qualified independent professional financial adviser before making any investments in cryptocurrencies.

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Unless otherwise stated, all data is as of March 10, 2019 or as of most recently available.

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