SUMMARY OVERVIEW OF ISSUES CONCERNING CRYPTO-ASSET CUSTODY

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Custodying of crypto-assets is necessary in order to make a market.

Cryptocurrencies are essentially digital bearer instruments.

This creates unique challenges in terms of cybersecurity and governance.

It also generates a range of coping techniques, from procedural (‘transactional’ custody) to varying technological infrastructures.
CUSTODIAL RELATIONSHIPS VARY

- Non-custodial Wallets (Self-Custodian)
- Exchange-Based Custodial Wallets
- Third Party Custodians (Non-exchange based)
Customers become ‘weakest link’ in their own cybersecurity, of particular concern for retail investors and unsophisticated users of digital assets.

However, decentralized architecture creates lower paydays for cyber-criminals, and as such ‘harder’ targets.

Stymies liquidity insofar as systems are not interoperable.
EXCHANGE BASED WALLETS

**Advantages**
- Ease of use for customers; one stop shopping
- Greater cybersecurity and sophistication than customers

**Challenges**
- The “Honey Pot”
- Collapsed financial functions (market making, exchange and custody)
- Comingling of customer assets, front running, market manipulation particularly high risks in the absence of supervision and regulation
THIRD PARTY (NON-EXCHANGE) CUSTODIANS

Advantages

- Greater cybersecurity sophistication than retail holder
- May also alleviate (though not reduce) risks of exchange-based wallets where custodians are separately regulated affiliated entities

Disadvantages

- Liquidity challenges in the absence of interoperable infrastructures
- Monitoring challenges given larger number of services providers
CUSTODIAL INFRASTRUCTURES

**Hot Wallets**
- Connected to the internet
- Trade liquidity (and eased liquidity management) for increased cybersecurity risks
- Scaleable

**Cold Wallets**
- Offline
- Trade nominal safety (though still human risk) for illiquidity
- Challenging Scaleability
THE WIDE VARIETY OF (POTENTIAL) CUSTODIAL PLAYERS

- Banks, Trust Companies
- Broker-Dealers
- Investment Advisers/Investment Vehicles
- Futures Commission Merchants
- Derivatives Clearing Organizations
- Foreign Depositories
In theory, large incumbent custodians might have advantages given their brand and credibility.

However, many institutional players appear to be skeptical. Potential explanations:
- Inherent riskiness of asset
- Lack of familiarity with digital assets
- Questionable robustness of cybersecurity/technology
- Regulatory compliance, litigation risk
Maintain physical protection or control of customer assets;

Prohibitions against comingling of assets

- See, e.g., SEC Rule 15c3-3
- See, e.g., CFTC Rules 1.20-1.29, 1.49, 22.1-22.17, 30.7

(Deliver customer assets to customer in timely manner and/or when contractually agreed)
When custodians are in possession of cryptocurrencies when a fork arises, a number of questions arise.

- Is a custodian required to return to the account holder the forked cryptocurrencies along with the original cryptocurrency?
- What is the speed with which new, forked cryptocurrencies must be delivered to the account holder?
- What are the technical limitations, and costs of delivery of new tokens for custodians?
- What disclosures should be required for customers re: forking policy?
INTER-CUSTODIAL RELATIONSHIPS

- Due to cybersecurity (hacks), or volume, exchanges (registered and unregistered) can face liquidity crunches
- The inability to redeem customer redemption requests can harm the reputation of a custodian, and faith in the industry (like going to an ATM and unable to withdraw cash)
- Custodians may lend digital assets to one another without full disclosure of such activities to customers
DISCLOSURE, DISCLOSURE, DISCLOSURE

- “Full Spectrum” Counterparty risks
  - Cybersecurity practices and limitations
  - Operational
  - Conflicts
  - Balance Sheet/capitalization
- Forking Practices
- Insurance (Full vs. Partial) (Customer-based vs. Exchange-based)
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