Revisiting the Properties of Money

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1. Update properties and functions of money framework.
   - Introduced by Jevons (1876) and Menger (1892).

2. Reconcile economics and computer science literatures.
   - Need common terminology that is still general, but granular enough to describe digital money.

3. Evaluate performance of different forms of money according to expanded framework.
   - Commodity money, bills, coins, private bank money, cryptocurrencies, stablecoins, CBDCs, quantum money.
# Revisiting the Properties of Money

<table>
<thead>
<tr>
<th>Primary Function</th>
<th>Property</th>
<th>Commodity Money</th>
<th>Physical Coins</th>
<th>Physical Bills</th>
<th>Central Bank Reserves</th>
<th>Bank Deposits</th>
<th>CBDC</th>
<th>In-Game Currency</th>
<th>Cryptocurrency</th>
<th>Crypto with DApps</th>
<th>Privacy Oriented Crypto</th>
<th>Stablecoin</th>
<th>Private-Key QM</th>
<th>Public-Key QM</th>
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<tbody>
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<td>Societal or Regulatory</td>
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Functions of Money

▶ Original functions still largely sufficient to describe digital money.
  ▶ Medium of exchange, standard of deferred payment, store of value, unit of account.

▶ Introduce societal and regulatory objective as new function.
  ▶ AML compliance, censorship resistance.
  ▶ May make form of money less attractive to users.
Properties of Money

> Original framework lacks many important properties of digital forms of payment.

  > Throughput, latency, untraceability, reversibility, backup.

> Increased scope for design induces many hard and soft tradeoffs.

  > Reversibility versus latency, local verification versus backup, traceability versus financial crime prevention.
Conclusions

1. **Choice of properties will drive adoption in emerging era of currency competition.**
   - Jevons-Menger properties still relevant, but not decisive.
   - Societal and regulatory objectives may impede adoption.

2. **Unclear how CBDCs will perform in currency competition.**
   - No clear set of properties other than public and digital.
   - Unclear if central banks want to regain control of medium of exchange.
   - Central banks face new threat of losing unit of account.