In search of gold

Exploring central bank issued digital currency

RESERVE BANK
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Money – what is it good for?

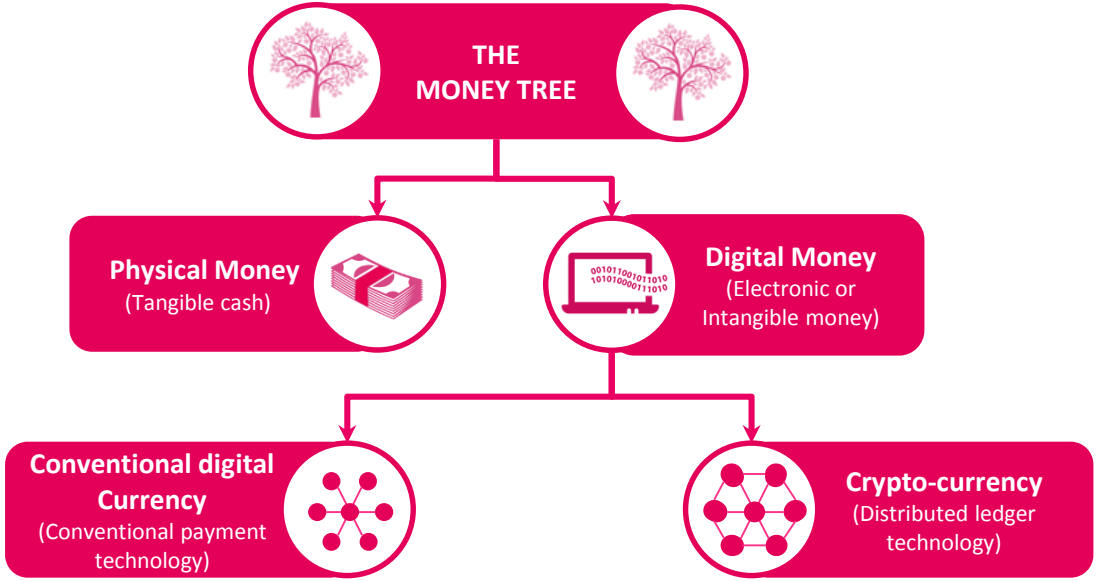
- Unit of account – a common and stable metric across different goods and services that allows them to be compared or converted

- Means of payment – something that can easily be exchanged and accepted in lieu of different goods and services

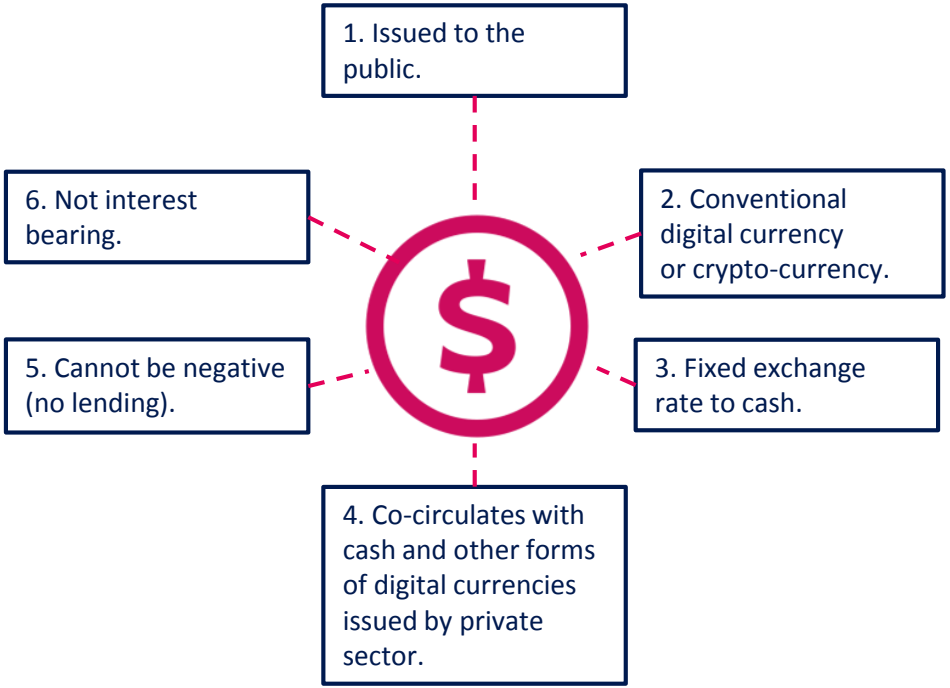
- Store of value – the ability to hold its value and transfer spending power across time

Forms of money

The Money Tree



Key assumptions



Currency distribution – some things to consider.

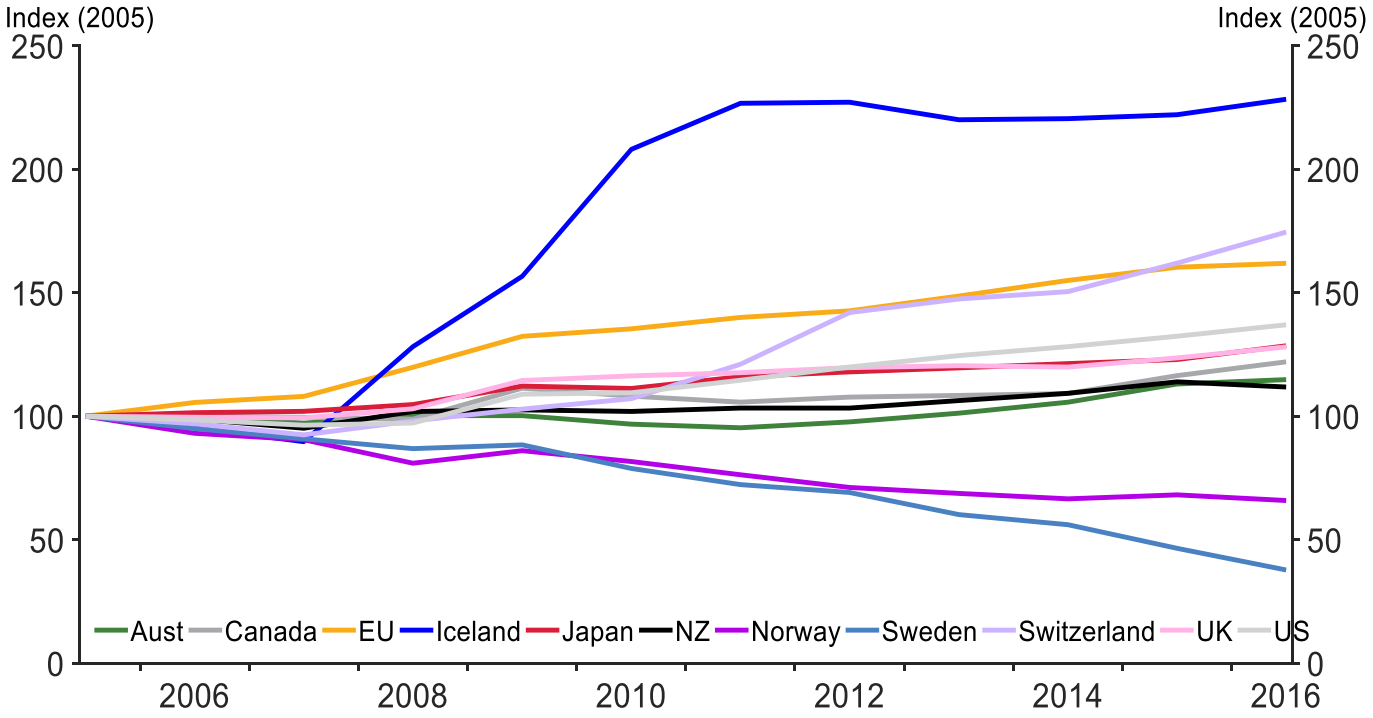
PROS

- Safer and easier to distribute
- Public access to electronic legal tender

CONS

- Set up costs
- Large consumer losses
- AML/CFT monitoring
- Vulnerable to electricity outages

Cash in circulation (% of nominal GDP)



Source: Haver Analytics

Payments comparison

	Blockchain	Current system
Input cost	Uses 1.4 times NZ's annual energy consumption.	NZ card payments annual cost of processing is 1.3% of total value. (MBIE, 2016)
Fees	Can vary from 1 USD to 55 USD (previous high) per Bitcoin transaction.	NZ Card fees are between 1.2 – 1.6 %, cross-border transaction fees could cost around $9 to $30 per transaction.
Time	Transactions take around 10 minutes to be processed (end-to-end).	Payment is near-instant, but domestic transactions can take an hour to several days to be settled depending on when instructed. Cross-border up to five days.
Scale	It would take around a month to process the card payments NZ makes each day.	ESAS processes around 1100 retail transactions totalling around $3.9 billion each day.

The verdict: a blockchain currency compared to existing payments

PROS	CONS
• Improves operational resilience, and cyber resilience • All transactions are recorded on one ledger • Cheaper and faster cross-border payments • More anonymity than existing card payments	• Slow and expensive domestic payments • Inefficient use of electricity • Not scalable to large volumes • Probabilistic finality Cross-border transactions require exchange

The verdict: a conventional digital currency (or central crypto-currency) vs existing payments

PROS	CONS
• Improve settlement speed • Potentially lower fees • More anonymity than existing card payments	Cross-border transactions require exchange

Financial stability implications of central bank digital currency

CONS

- Reduce bank resilience to economic downturns and incentivise search-for-yield behaviour
- Increase commercial bank reliance on overseas wholesale funding, accentuating susceptibility to downturns in overseas markets
- Increase the probability and severity of bank runs during periods of system-wide instability

Regulation of privately-issued currencies

- Provide efficiency enhancing competition to incumbents
- No threat to current stability (too small)
- No plans for additional prudential regulation
- AML/CFT legislation still binds use of crypto-currencies (KYC)
- FMC Act fair dealing provisions may apply to initial coin offers

What have we found?

- Scope for innovation and efficiency gains in payment systems exists
- On balance, the pros and cons of a central bank digital currency are mixed
- An open mind as to eventual development of a central bank digital currency, but not a near term prospect