What is money? Cash versus central bank digital currencies

Morten L. Bech
Head of Secretariat,

Cash on Trial
SUERF – Frankfurt, 20 May 2019

Any views expressed in this presentation are those of the presenter and not necessarily those of the BIS
Amicus curiae

- An **amicus curiae** (literally, "friend of the court") is someone who is **not a party** to a case and may or may not have been solicited by a party and **who assists a court by offering information, expertise, or insight** that has a **bearing on the issues** in the case.
- Pronunciation: Ah-MEEK-us K-YUR-ee-ay
- US and UK legal systems

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**Amicus curiae briefs in US Supreme Court cases**

<table>
<thead>
<tr>
<th>Period</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900-50</td>
<td>10%</td>
</tr>
<tr>
<td>2000s</td>
<td>85%</td>
</tr>
</tbody>
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*Amicus Curiae ~ Friend of the Court*
Game plan

- What is money?
  - The functions of money
  - A taxonomy
- How are payments changing?
  - Electronic on the rise but cash still rules
- When can I get my hands on central bank digital currency?
  - A survey
- Cash, cashless or less cash society?
  - It is hard to predict, especially about the future
What is money?
Evolution of money over time

- Money served an important function in human civilisation - has existed for 1000s of years:
- Three functions: i) unit of account, ii) means of payment and iii) store of value
- Money is memory ...
The money flower

- Electronic
- Central bank issued
- Widely accessible
- Peer-to-peer

Bech and Garratt (2017)
Central bank cryptocurrencies
BIS Quarterly Review, Sep
Electronic

Central bank issued

Widely accessible

Peer-to-peer
Two digital coins!
Electronic

Central bank issued

Widely accessible

Peer-to-peer

CBCC (wholesale)

CBCC (retail)

= CBDC
How are payments are changing?
Swipe and gone

Source: “Payments are a-changin’ but cash still rules”, by M. Bech, U. Faruqui, F. Ougaard and C. Picillo, BIS, Mar 2018

Economist.com
Cash demand varies across countries

As a percentage of GDP

Selected groupings

Change from 2000 to 2016

CPMI jurisdictions

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1 Includes CPMI and other countries (AE, BG, CL, CO, CZ, DK, HR, HU, ID, IL, IS, KW, MY, NG, NO, PH, PL, RO, RS, TH, UA and UY). Data start in 2002 for India, 2004 for Mexico, Turkey, South Africa and 2005 for Russia. The vertical line indicates the start of the GFC in 2007.  
2 For countries with no data available in 2000, the first data point available is used for the x-axis value. For the euro area, 2002 data.  
3 For China, 2015 data from the People’s Bank of China webpage. Data for Russia include banknotes and coins in the vaults of the Central Bank of the Russian Federation. Data for Singapore include Brunei notes and coins held at banks.

Sources: People’s Bank of China; IMF, International Financial Statistics; CPMI (2017b); authors’ calculations.
Ask banks - What financial products & services are:

- Most affected by technological developments now?
- Most affected by tech developments over the next 5y?
- Seeing the greatest competition?

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When can I get my hands on central bank digital currency?
Central bank digital currency

Central bank CBDC work

Share of respondents

<table>
<thead>
<tr>
<th>Engagement in CBDC work</th>
<th>Focus of work¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td></td>
</tr>
<tr>
<td>0-20</td>
<td>Yes 56%</td>
</tr>
<tr>
<td>20-40</td>
<td>No 44%</td>
</tr>
<tr>
<td>41-60</td>
<td>Yes 69%</td>
</tr>
<tr>
<td>61-80</td>
<td>No 31%</td>
</tr>
<tr>
<td>81-100</td>
<td>Yes 70%</td>
</tr>
</tbody>
</table>

¹ Share of respondents conducting work on CBDCs, 2018 survey.

Source: Central bank survey on CBDCs.

BIS paper 101
Likelihood of issuing a CBDC in the short and medium term

Share of respondents

General-purpose CBDC

Short term

Medium term

Wholesale CBDC

Short term

Medium term

1 Short term: 1–3 years and medium term: 1–6 years.

Source: Central bank survey on CBDCs.
Cash, cashless or less cash society?
Key features of cash
Anonymity and privacy

- **Anonymous:**
  - No one knows who you are

- **Privacy:**
  - What you bought and for what amount are unknown

- **Societal preferences?**
  - Regulation
  - Innovations
What is plan B?

Cashless? Maybe - but likely not completely paper money less
For more information

- [www.tedxbasel.com](http://www.tedxbasel.com)
- 2018
CPMI-related resources

- The role of central bank money in payment systems (2003): www.bis.org/cpmi/publ/d55.pdf