BITCOIN AND BLOCKCHAIN
– PERSPECTIVES OF THE DANISH CENTRAL BANK

Governor Lars Rohde, Finance and Consulting Club Aarhus, April 4th, 2018
“Nationalbanken warns against speculation in things which do not exist.”
Is blockchain or cryptocurrencies the future?
What are the functions of money?

- Unit of account
- Medium of exchange
- Store of value
Types of money – what's apples and what's oranges?

<table>
<thead>
<tr>
<th>Types of Money</th>
<th>Issuer</th>
<th>Intermediary</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>Danmarks Nationalbank</td>
<td>No intermediary</td>
<td>Stable value</td>
</tr>
<tr>
<td>Bank Deposits</td>
<td>Commercial bank</td>
<td>Commercial bank</td>
<td>Stable value</td>
</tr>
<tr>
<td>Cryptocurrency</td>
<td>Decentralised issuance with no official issuer</td>
<td>No intermediary</td>
<td>Significant fluctuations</td>
</tr>
</tbody>
</table>
Cryptocurrencies are far from stable

Note: The rate is daily observations: The number of transactions is a monthly moving average. Last observation is 24th of January 2018
Source: Blockchain.info
What is a good medium of exchange?

- STABLE
- BROAD ACCEPTANCE
- EFFICIENT
- SECURE
Cryptocurrencies is challenged

- STABLE
- BROAD ACCEPTANCE
- EFFICIENT
- SECURE
Potential for blockchain and its sister technologies?
Lot's of talk – where is the walk?

Maersk and IBM to form joint venture applying blockchain to improve global trade and digitise supply chains

"Liquidity Alliance" builds blockchain solution for cross-border collateral transfer

Four international CSDs develop a Blockchain prototype in cooperation with Deutsche Börse / Targeted ‘LA Ledger’ solution to provide fast and efficient mobilisation of collateral
Danmarks Nationalbank participates in an European distributed ledger project
A new role for central banks: Issuing digital central bank money to the general public?
Types of money – including digital central bank currency

<table>
<thead>
<tr>
<th>Type</th>
<th>Issuer</th>
<th>Intermediary</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>Danmarks Nationalbank</td>
<td>No intermediary</td>
<td>Stable value</td>
</tr>
<tr>
<td>Bank Deposits</td>
<td>Commercial bank</td>
<td>No intermediary</td>
<td>Stable value</td>
</tr>
<tr>
<td>Cryptocurrency</td>
<td>Decentralised issuance with no official issuer</td>
<td>No intermediary</td>
<td>Significant fluctuations</td>
</tr>
<tr>
<td>Central Bank Digital Currency</td>
<td>Danmarks Nationalbank</td>
<td>Central bank</td>
<td>Stable value</td>
</tr>
</tbody>
</table>

4. april 2018
What is the point?

To improve the safety and efficiency of the payment system?

To give the public unlimited access to convenient risk-free central bank money?

To improve financial stability?

To ensure that the central bank does not fall behind in the digital age?
The technology holds promise for the future