

The e-krona project

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S V E R I G E S R I K S B A N K

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Central Bank Digital Currency - CBDC

- What is a CBDC?
 - a CBDC can be defined as national currency denominated, electronic, 24/7, liability of a central bank, which is more broadly accessible than current central bank deposits.
- Main reasons for issuing a CBDC
 - Socio-economic considerations
 - Financial stability objectives
 - Monetary policy objectives
 - Efficiency

VI. ANNEX: COUNTRIES WHERE RETAIL CBDC IS BEING EXPLORED Where central banks have done or are planning to do CBDC pilots

Bahamas	Ecuador (pilot complete)
Canada	South Africa
China	Sweden
Curaçao en Sint Maarten	Uruguay (pilot completed)
Eastern Caribbean	

Where central banks have or are exploring issuing CBDC

Per central bank websites Per news media (unconfirmed)

Australia	<i>Bahrain</i>
Brazil	<i>Cambodia</i>
Chile	<i>Egypt</i>
Denmark	<i>Haiti</i>
European Area	<i>Indonesia</i>
Hong Kong	<i>Iran</i>
Iceland	<i>Kazakhstan</i>
India	<i>Korea</i>
Israel	<i>Lebanon</i>
Jamaica	<i>Pakistan</i>
Japan	<i>Palestine</i>
Mauritius	<i>Philippines</i>
New Zealand	<i>Rwanda</i>
Lithuania	<i>Switzerland</i>
Norway	<i>Tunisia</i>
Russia	<i>Ukraine</i>
Trinidad and Tobago	<i>United Arab Emirates</i>
Turkey	
United Kingdom	

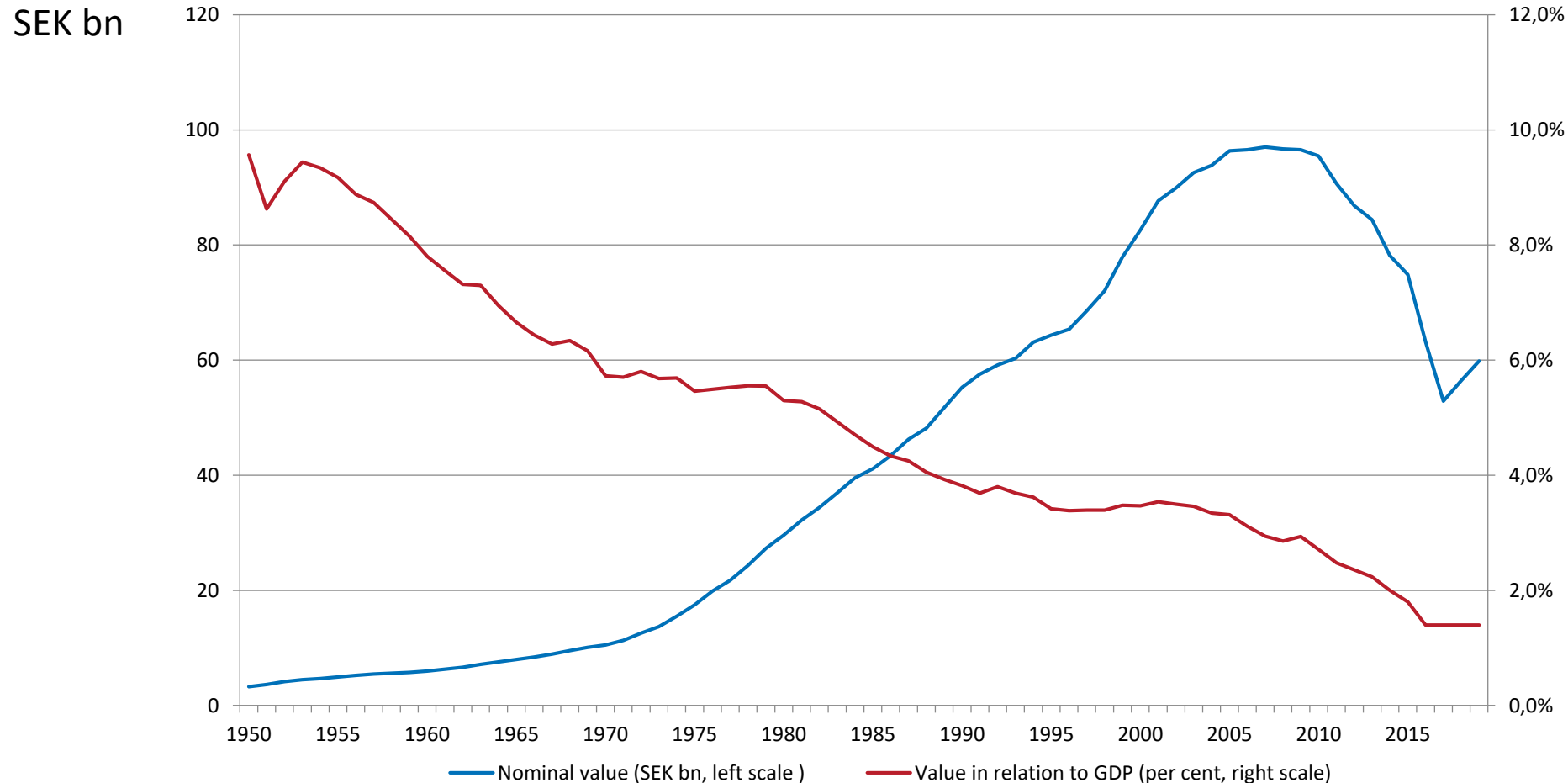
Sources: Central banks or various news sources per hyperlinks above. *Italicized* entries are sourced from news articles. Information has not been verified through official channels.

Source: IMF

"Happy families are all alike; every unhappy family is unhappy in its own way."

Leo Tolstoy, *Anna Karenina*

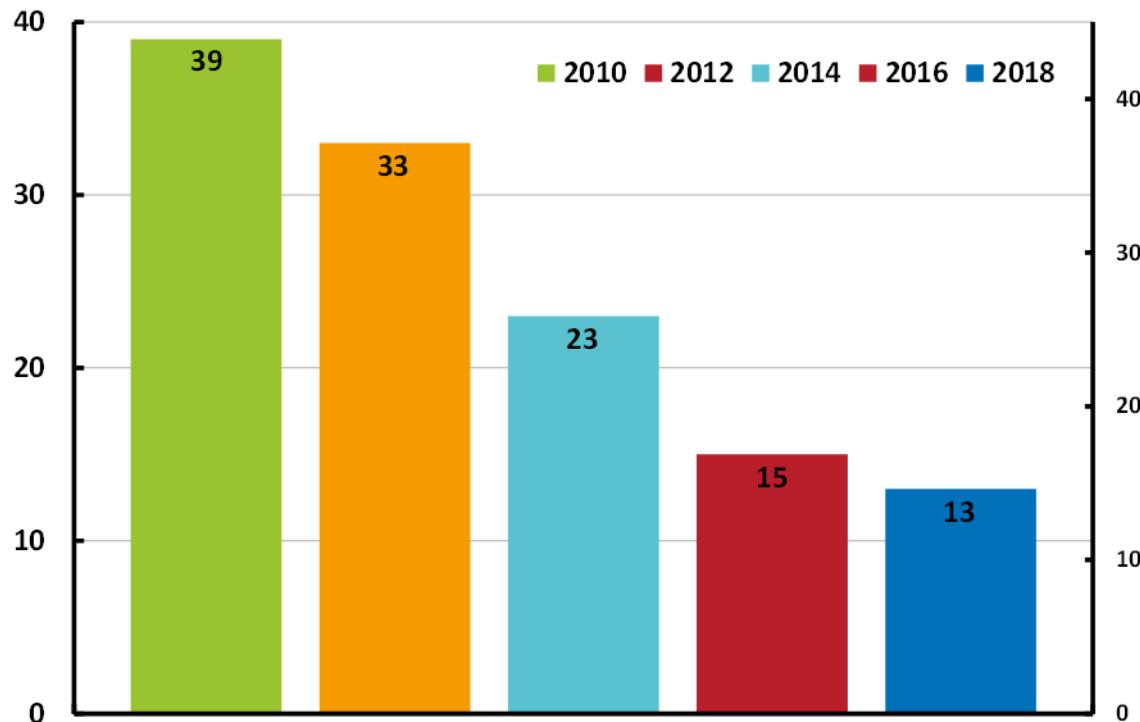
Cash is declining in significance in Sweden



Source: Statistics Sweden and the Riksbank

Is cash accepted as means of payment?

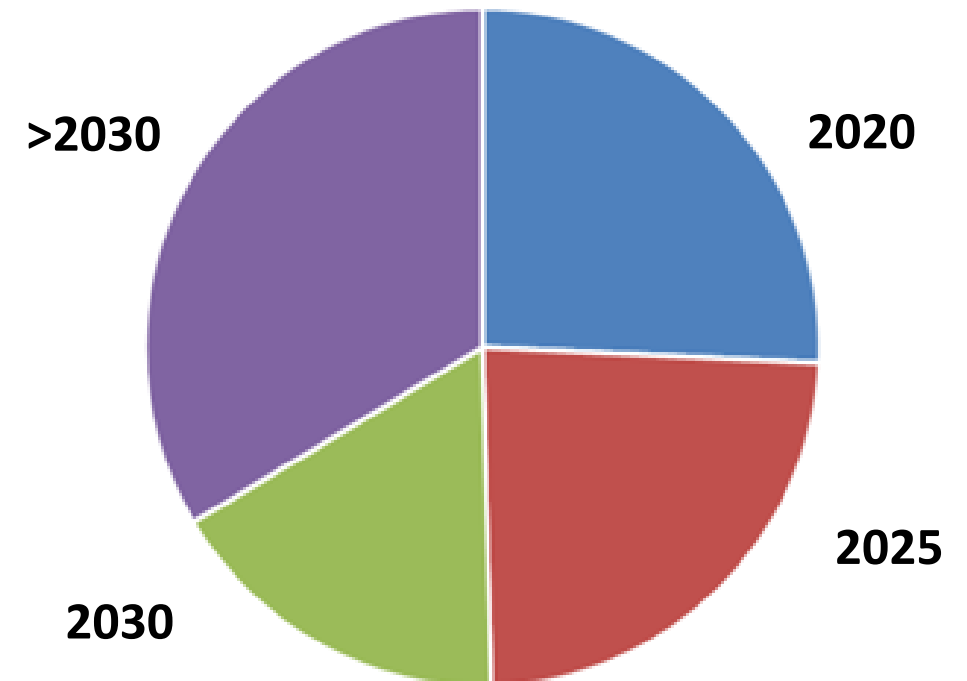
Percentage of respondents who used cash in their latest payment transaction.



Note: Per cent

Source: The Riksbank

Only 50 % of Swedish traders will probably accept cash after 2025



Source: Andersson, Hedman and Segendorf (2018), "Cashless Society: When will Merchants Stop Accepting Cash in Sweden. A research model." Memo.

What explains the decrease?

- Culture of cooperation in infrastructure among banks
- Cards are accepted everywhere
 - All households have cards and almost all retailers have terminals
- Innovation
 - Driver: Households are technology adept, handheld devices are common as is internet access
 - Top 3 in the World Economic Forum's Network Readiness Index
 - Substitute for cash at points of sales (mobile payments, small but growing)
 - Example: iZettle converts a smartphone to a card terminal
 - Substitute for cash at person to person transactions (growing rapidly)
 - Example: Swish, now also for small businesses, eCommerce and point of sale.
- Demographic factors
- Cashless bank branches (>60%) and fewer branches overall

The cashless society

- Some groups will find it problematic
- The general public has no access to central bank money
- Competition in the retail payment market
- Resilience
- No domestic payment infrastructure

No easy alternatives available



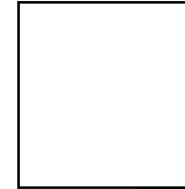
E-krona

- **New territory** for central bank
- Effects on **other policy areas?**
- Testing and analysis needed



Detailed regulation

- **Natural monopoly**
- **Pricing** notoriously difficult
- **No public access to central bank money**



Do nothing

- **Can private interests** handle all groups and risks in society?
- **New territory** for monetary system
- **Robustness?**

The e-krona project



Proof of concept and
testing 2019-2020



Continued analysis



Petition to the Parliament on
the need for a broad
investigation into an e-krona
and alternatives

What have we done?

- **2017: "Brainstorming"**
 - **2018: Deeper analysis**
- What is an e-krona?
 - What can it do
 - Consequences
 - Legal issues



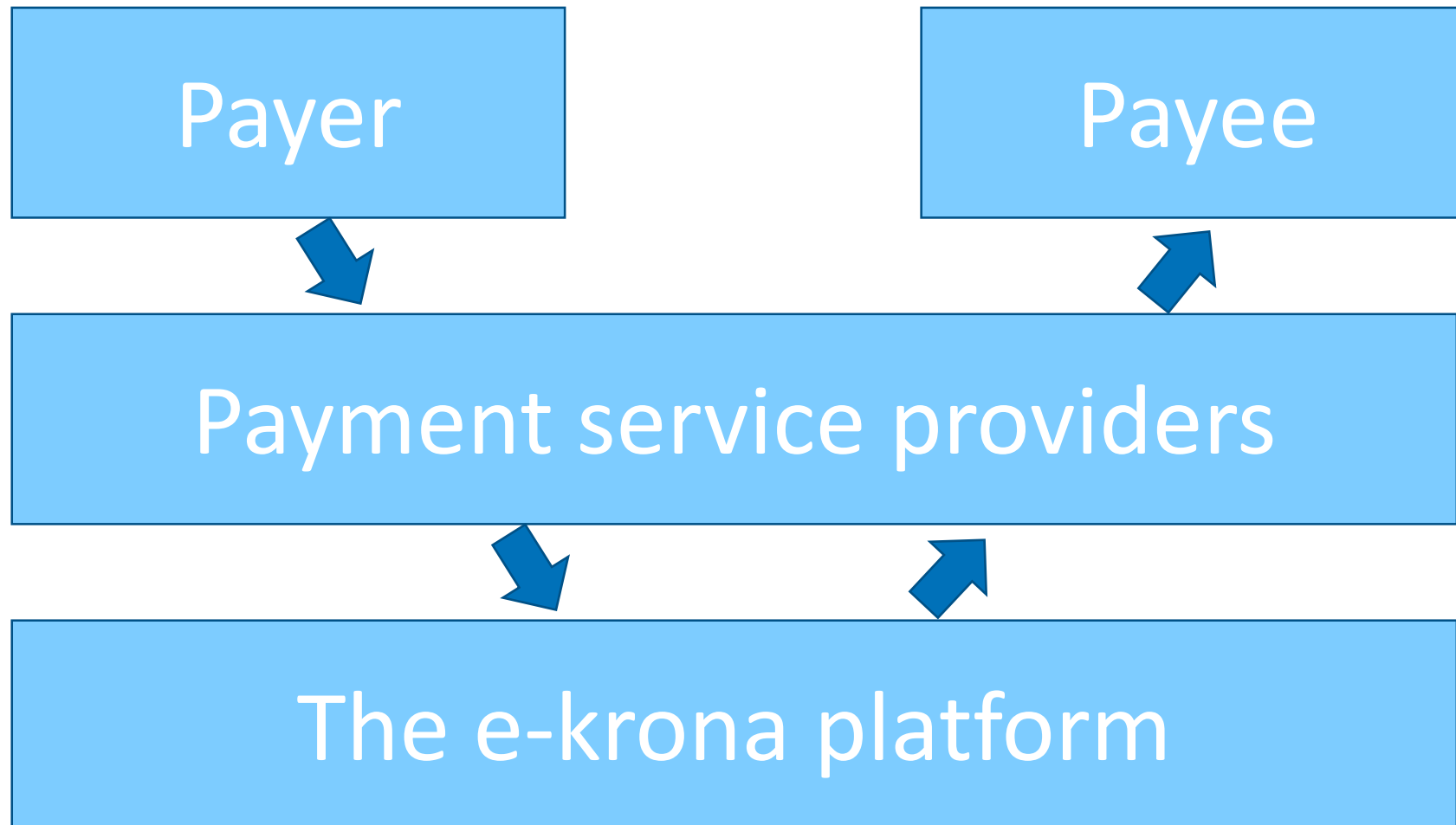
<https://www.riksbank.se/en-gb/payments--cash/e-krona/>

Overall concept – Which basic functions *could* an e-krona have?

- Means of payment – primarily between households and companies
- Accessible 24/7, real time
- Denominated in SEK
 - Value based (~e-money)
 - Account based (~deposits)
- No legal support for interest rate – initially not interest bearing
- Anonymity (partial)?
- Off-line functionality?



With the market, not against it



e-krona pilot – building and testing technical solutions

- A development project to increase knowledge
- “Value based” solution
- Goal: develop one or more technical proposals and rule book for an e-krona
- Pilot project during 2019 -2020
- Competence is being procured
- Technical work: 2020-



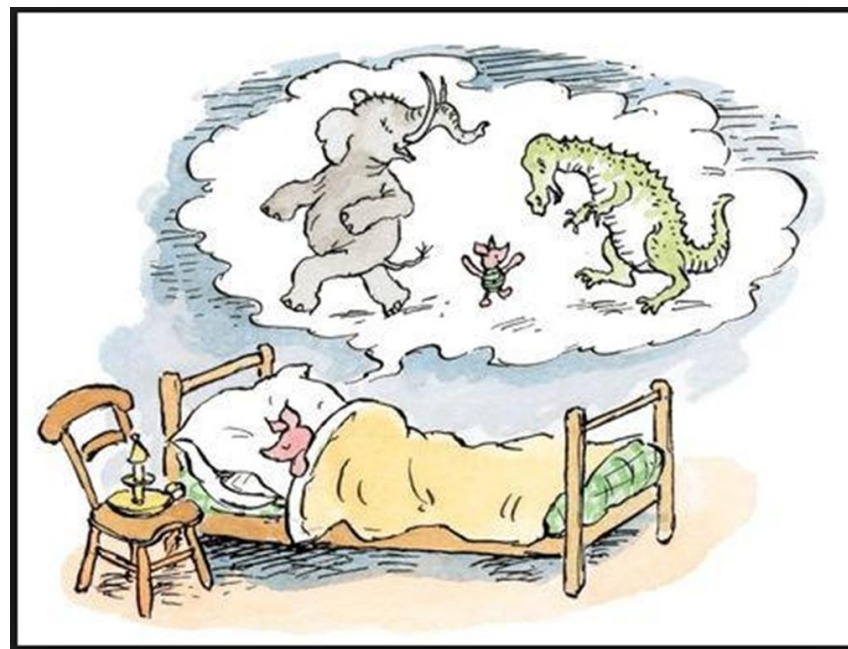
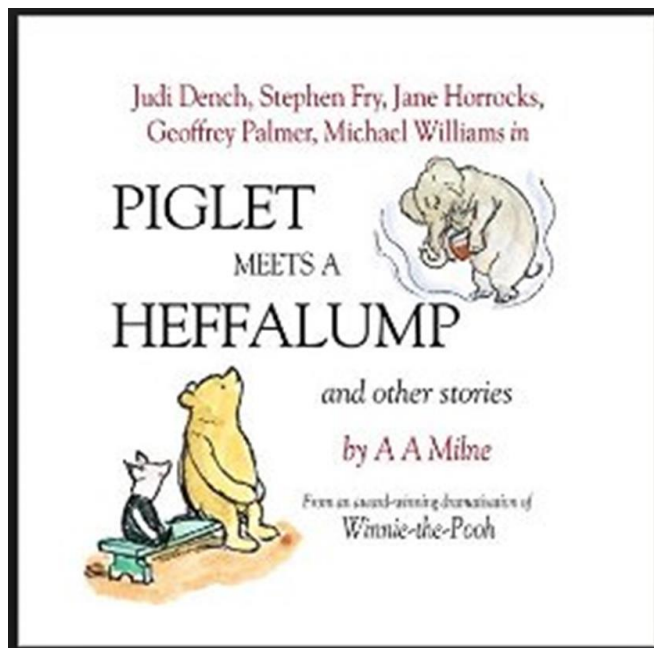
Analytical work

- Central bank money and confidence in money and banks
- Central bank money and an efficient unit of account
- Competition on the retail payment market
- Liquidity provision – how do banks react to CBDC?
- Seignorage
- Business model and financing

What is the role of the state?

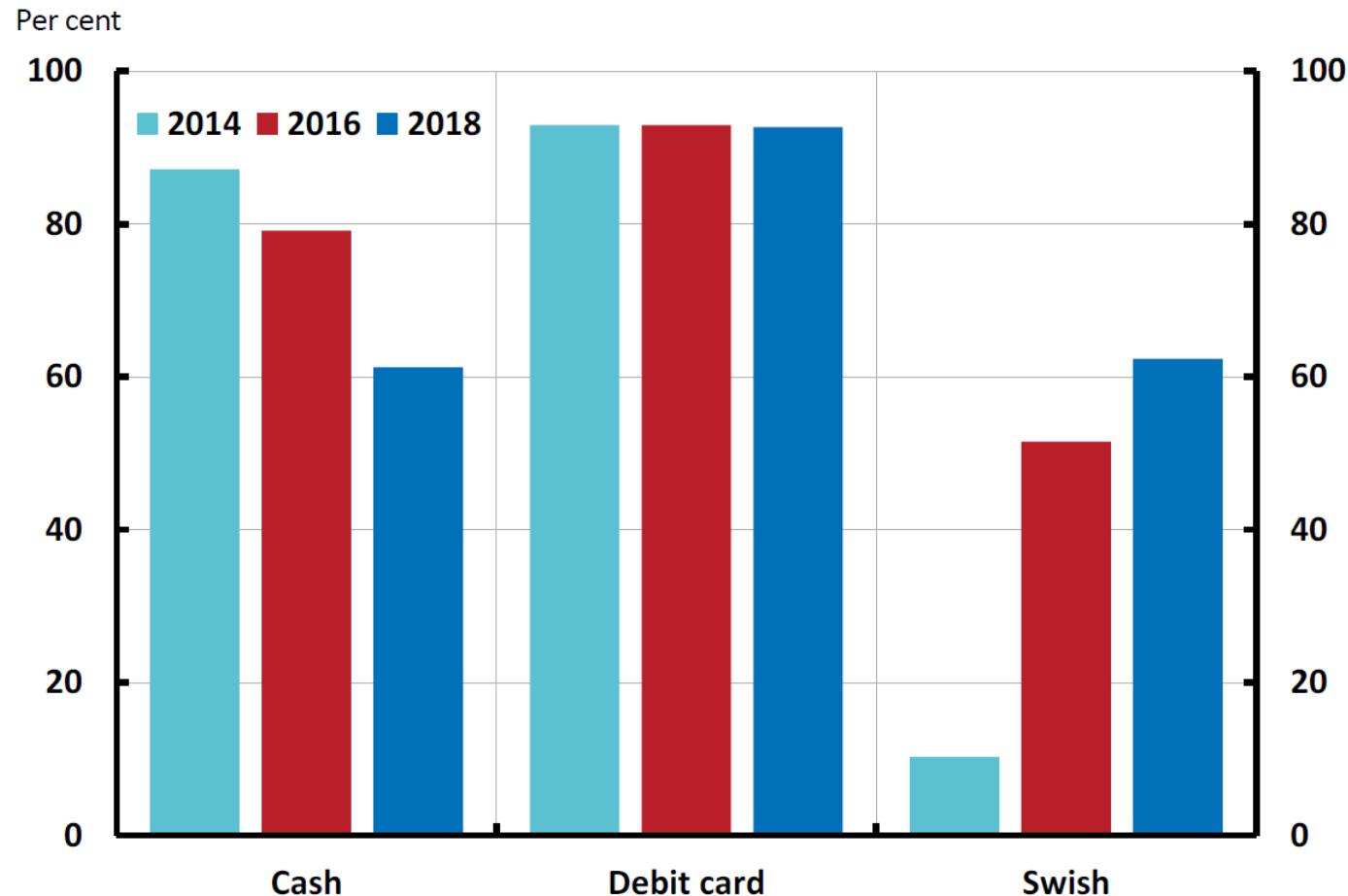
- A retail CBDC is ultimately a political issue
- What role should the state have in the monetary system and payments market?
- What is the role of the central bank?
- A CBDC and the technology enabling are merely tools to reach economic and political objectives
- Petition sent to the parliament. Inquiry 2020-





Thank you!

Swedes are paying more often with Swish and more seldom with cash



Note. The figure shows responses to the question: Which means of payment have you used in the past month?