

*Comments on “The Challenges Facing Currency Usage: Will the  
Traditional Medium be Able to Resist Competition  
from the New Technologies?”*

**Andrew K. Rose, UC Berkeley**

- Interesting, potentially important task
- Q: Is new economy a threat to the use of currency?
- A: Definitive “No!”
- Seems convincing

- Evidence is strong
- Most digital cash schemes have vanished, or are struggling
- Few countries with non-trivial e-money activity
- Section 2.2 is enough to answer title question!

- Looking forward: costs of e-money are high
  - Fraud
  - Encryption against counterfeiting
- Thus e-money has competitive disadvantage vis-à-vis cash for the foreseeable future

## Big and Small

- Small bills used as medium of exchange by law-abiders
- Large bills used as store of wealth by criminals (=> inflation an optimal tax for certain societies)
- Weak results common to time-series
- Correct question? Should we focus only on currency? E-money may displace checks, affect M1 rather than M0 (internet payments)

- Even if e-money drives out currency, do we care?
  - Bank issued e-money is still a claim on monetary base
  - Base  $\equiv$  currency + commercial bank reserves at Central Bank
  - Decrease in currency might increase reserves
    - (Can guarantee that with reserve requirements for e-money)
  - Any reduction in base reduces seigniorage
    - But seigniorage is small (Rogoff) and other benefits exist  
(crime/monetary efficiency)

## And yet

- Arguments about e-money stem from cash being cheaper, safer and more anonymous
- Similar view about checks when introduced in 1600s
  - Party B cannot immediately use checks from party A
  - Party B does not know party A's check is good without verification
  - Checks not anonymous

- Yet check overcame disadvantages, now big medium of exchange, M1 component
- Ditto credit/charge cards, even paper money (vis-à-vis specie)



- Moore's law equivalent for e-money?
- Technology convergence (e.g., Bluetooth) may help more
- EFT accounts for vast majority of OECD payments in the OECD by value
- Impossible to imagine wholesale wiring of money used by businesses to come to retail level?
- Incentive for banks to offer e-money large, since float provides interest-free loan

“Today, there continue to be incentives for private businesses to recapture seigniorage from the federal government. Seigniorage profits are likely to be part of the business calculation for issues of prepaid payment instruments, such as prepaid cards ... a diversion of seigniorage may be an inevitable byproduct of creating a more efficient retail payment system in the long run.”

Alan Greenspan

“Fostering Financial Innovation: The Role of Government”

- E-money may be down now, but I doubt it is out for the count.