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Remunerating means of payments (in an instantaneous, 24/7, open banking, Agentic AI world)

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Program on Financial Stability*

1. Interest on “money” (means of payment) – intro and history of thought
2. What does economic theory tell us on equilibrium interest on means of payments?
3. Instruments:
 - a) Bank sight deposits (current accounts)
 - b) Deposits with central bank
 - c) CBDC
 - d) E-money
 - e) Stablecoins
4. Protecting bank deposits against competition – why?
5. Policy conclusion

1. Interest on Money

- **Money includes the means of payment function** => “Money” should be used for “readily available money” (not for “invested money”)
- **Money offers:**
 - Immediacy of use
 - At par immediate exchangeability into other forms of money
 - Numéraire denomination
- **Neighboring financial assets** (which fail to meet definition of money):
 - term deposits;
 - short term public debt;
 - money market funds.
- **Money is sometimes remunerated, but often not, and sometimes its remuneration is even forbidden – or required**

1. Interest on Money

- **Constraining remuneration of money is problematic.** It is typically circumvented when it matters
 - **Internal circumvention: the form of money is ultimately remunerated through some work around** => constraint ineffective; damage to credibility and efficiency
 - **“External” circumvention: funds move into another form of money or nearby financial asset, i.e. from the money holder’s perspective, negative consequences of the constraint on his income can be largely avoided** => constraint ineffective in terms of ultimate goals, unintended flows of funds relating to interest rate cycle, financial instability. **Benefits particularly from low transaction cost, 24/7 instantaneity; Agentic liquidity management; open banking; Blockchain.**

	Direct regulatory goals	Ultimate regulatory goal	Unintended flows of funds correlated with interest rate level, implied financial instability
Internal circumvention	fail	fail	Avoided due to internal circumvention
External circumvention	reached	fail	Yes

2. Modelling liquidity premium of money (convenience yield)

- **Economic theories of interest on means of payment: Gesell (1916), Milton Friedman (1958); Keynes (1936);**
- **Black (1970) and Fama (1980)** insist that in a **modern, IT-based, low transaction cost financial world**, boundaries between money and other financial assets cannot be maintained
- **Relative to short term debt instruments: these need to be liquidated**
 - Kyle (1985): market maker sets bid-ask spread such that expected losses from insiders equal profits from noise trader
 - If bid-ask spread is known, and one assumes payment need with a certain probability due to exogenous liquidity shocks, this allows deriving yield spread between money and debt instrument
- **Relative to deposits with longer notice period**
 - Bank run model matching asset liquidity, fire sale losses, and runnable funding
 - Longer notice period => lower fire sale losses in case of redemption => Less capital needs, or ability to go for less liquid assets with thus higher yields
 - Allows to derive exact “notice period term curve”

2. Further relevant modelling approaches of sight deposit rate

- Klein (1971) and Monti (1972) model how **market power in banking produces a wedge between the policy rate and the deposit rate.**
- **Ho and Saunders (1981)** model bank as risk-averse dealer in the credit market, that sets bid (deposit) and ask (loan) rates symmetrically around reference rate. Equilibrium spread increasing with market power, interest rate risk (the variance of the reference rate), bank's risk aversion and size of individual transactions.
- **=> Conclusion:** No economic model supports conclusion that spread between means of payment and nearby financial assets should correspond to the absolute level of the latter prevailing at some moment in time. It should be broadly independent of the interest rate level; it should instead depend on structural factors such as the efficiency of banking and financial markets and on competition

3a. Commercial bank money. and 3b interest on reserves with central bank

- 1930/1940s: Remuneration of commercial bank prohibited (US, DE, JP) or suppressed via cartels (UK)
- **Prohibitions lifted in 1980s at the latest; Now almost everywhere free**
- Deposit betas (pass through rates) for current accounts very low for western advanced economies (EUR, US, UK), for current accounts around 10%
- Higher in rest of the world, in some countries even close to 100% (Mauritius; Pakistan also due to legal requirement)
- **Zero remuneration of reserves with central bank standard until 1990s.** “Ceiling approach” to MPI: banks structurally dependent on central bank credit / discounting, so discount rate anchors market rate, low excess reserves
- **1990s: birth of corridor approach to MPI** => remunerated deposit facility.
- **Eurosystem as of 1999.** ECB took 25 years to adopt Finish automated remuneration of XS reserves (after asking Finland to stop it)
- **US:** M. Goodfriend (2002): “Interest on reserves” proposal; Financial Services Regulatory Relief Act of 2006. Section 201; Effectiveness date was supposed to be 2011, but then moved in 2008 to 2008

3c. CBDC

- **Activists:** Barrdear and Kumhof (2016) and many others: use CBDC remuneration as additional , non-redundant policy variable to improve macroeconomic outcomes
- **Passivists:** Bindseil and Panetta (2020): overcome with CBDC the anomaly of banknotes being remunerated at zero, regardless of whether short term market rates are -1% or 10% etc.
- **Digital euro:** In absence of clarity from economists on what they want, **unholy alliance** of banks, financial-repression conspiracy believers, non-economist lawmakers, and cowed (or realist?) central banks happily buried remuneration. Instead: zero remuneration, limits and reverse waterfall. So digital euro is only financial asset that will be limited, and it will be a thin instrument layer on top of commercial bank money?
- **China's** introduced remuneration on the digital yuan (e-CNY) with effect from 1 January 2026.

3d. E-money

- **EU EMD2 Article 12:** "Member States shall prohibit the granting of interest or any other benefit related to the length of time during which an electronic money holder holds the electronic money."
- **Wise monthly message** sent to clients in June 2026 reads as follows: *"You've received 0.28 EUR cashback for May. "Your annualised cashback rates are currently 0.8% for EUR, 2.2% for GBP and 2.2% for USD. We've paid the cashback for May into your account, minus the 30% withholding tax which we've paid to the Belgian tax authorities."*
- **Brazil and Nigeria:** FinTechs with large customer basis pay highest remuneration and, use directly INST payment infrastructure
- **India:** prohibits remuneration, **Japan** does not foresee non-bank PSP deposits
- **China:** Alipay and WeChat Pay: have to hold 100% of their reserves with PBoC at zero / low remuneration

3e. Stablecoins

- **MiCAR Article 50(1)** prohibits issuers of e-money tokens from granting interest; Article 50(2) extends this to CASPs. **EU COM Targeted consultation (Q 20)** asks directly whether this prohibition should be maintained or whether remuneration should be permitted, fully or under defined conditions.
- **Genius Act's** prohibition covers only direct remuneration by issuer. One third of US stablecoins currently benefit from remuneration. Coinbase website (<https://www.coinbase.com/earn>, 1. June 2026): *“Earn 3.35% rewards on USDC. Put your assets to work simply by holding USDC and grow your balance in a low-risk way, starting with as little as \$1.” “No lockups. Get your money back whenever you need it. Your earnings accrue automatically.”*
- **US Clarity Act** (negotiated compromise text of spring 2026) would seem to broaden restriction: only transaction related rewards, but crypto-industry seems optimist...
- Many official sector representatives (in particular outside the US) are against remuneration of stablecoins because they are generally against stablecoins. Maybe they have good reasons for that aversion, and no-remuneration is a proxy

5. Why suppressing remuneration of money??

Non of the following arguments is ultimately convincing or sufficient.

- a. Competing for deposits incentivizes reckless risk taking and undermines financial stability
- b. Positive externalities of banking deserve protection
- c. The deposit franchise allows for maturity transformation without banks taking high-interest rate risk (Drechsler, Savov, Schnabl. 2021)
- d. Protection from competition for sight deposits is a compensation for the heavy regulatory burden imposed on banks for the benefit of society.
- e. Non-remuneration of sight deposits can be efficiently compensated by free transaction banking services of retail depositors

6. Conclusion

- There are no good reasons for regulatory suppression of remuneration of readily available money (“means of payment”)
- Non-remuneration constraints are anomaly; do not matter much in low-rate environments, but as they do, they create credibility, financial stability and efficiency issues (internal and external circumvention).
- *External circumvention creates unintended flows of funds out of constrained forms of money into unconstrained ones (or nearby financial assets) when interest rates increase, and vice-versa.*
- *In a world of 24/7, low transaction cost, open banking and instant payments (tokenization?) and agentic liquidity and investment management, the negative effects worsen and the positive ones are even more difficult to achieve*
- If banking is to be protected, there could be some sort of Pigou-subsidy independent of the interest rate level
- => Prohibitions of remuneration of money should be phased out.
- For financial stability reasons, but also for fairness: Higher-inflation emerging economies should particularly ensure that the less wealthy can access one well remunerated form of money, be it commercial bank money (Mauritius), e-money (Brazil), or CBDC. A matter of inclusiveness and fairness.