# Liquidity Transformation and Eurosystem Credit Operations by Benjamin Hartung

Discussion by Quentin Vandeweyer (University of Chicago)
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# One Slide Summary

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3. Banks actively post less liquid assets than their portfolio.

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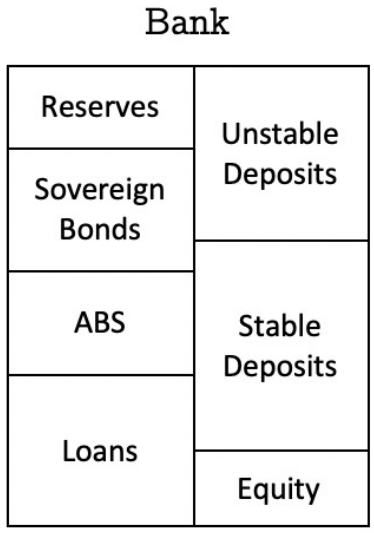
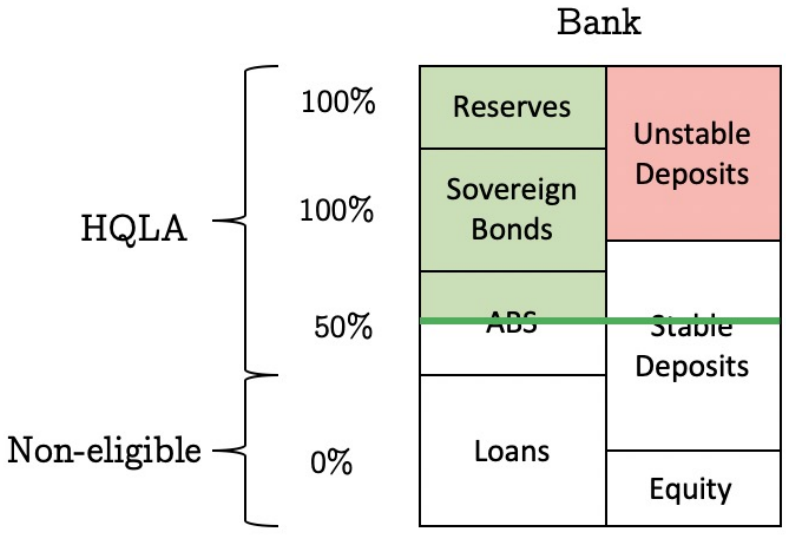
3. Banks actively post less liquid assets than their portfolio.

$\Rightarrow$ Average liquidity transformation rate (LTR) of 92%

# Stylized Example



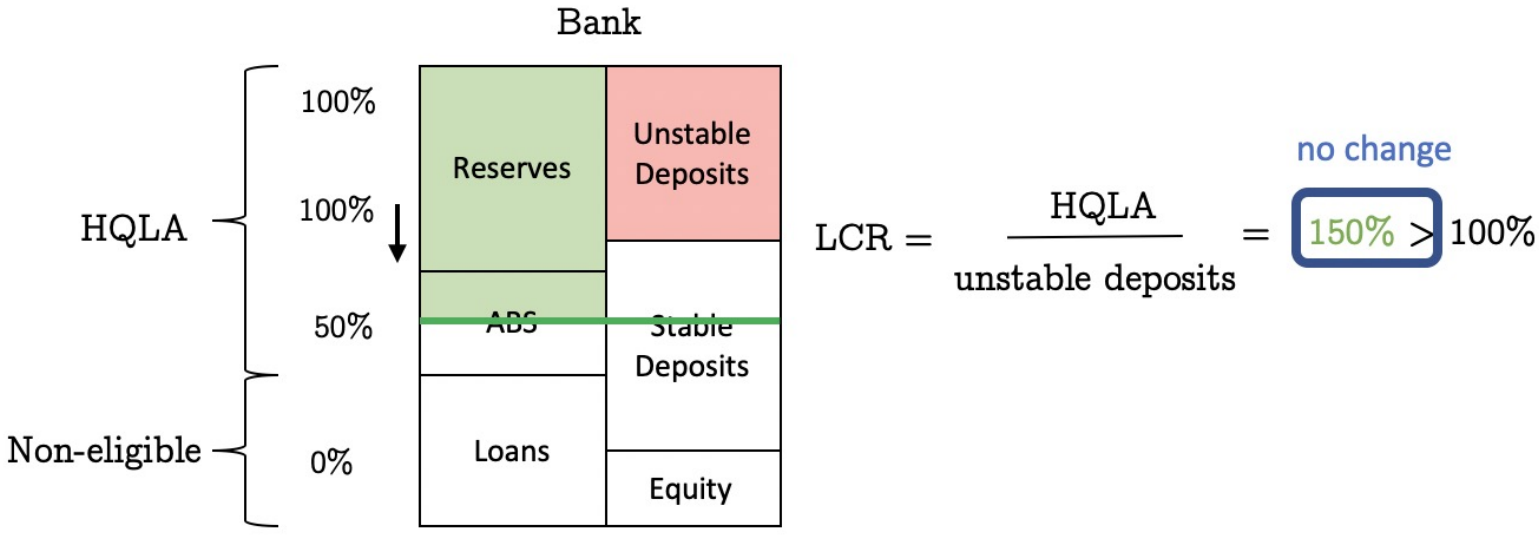
# Stylized Example: LCR Computation




$$\text{LCR} = \frac{\text{HQLA}}{\text{unstable deposits}} = 150\% > 100\%$$

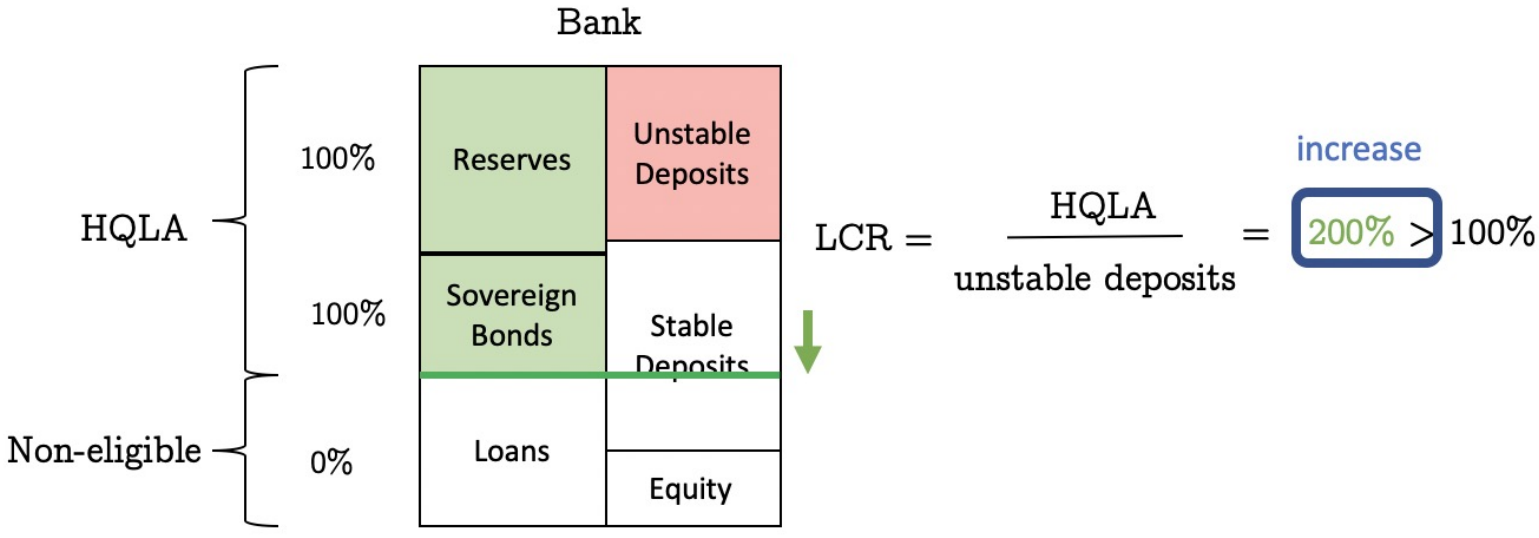
Liquidity Transformation Rate = 1 – HQLA

# Stylized Example: Sovereign as Collateral



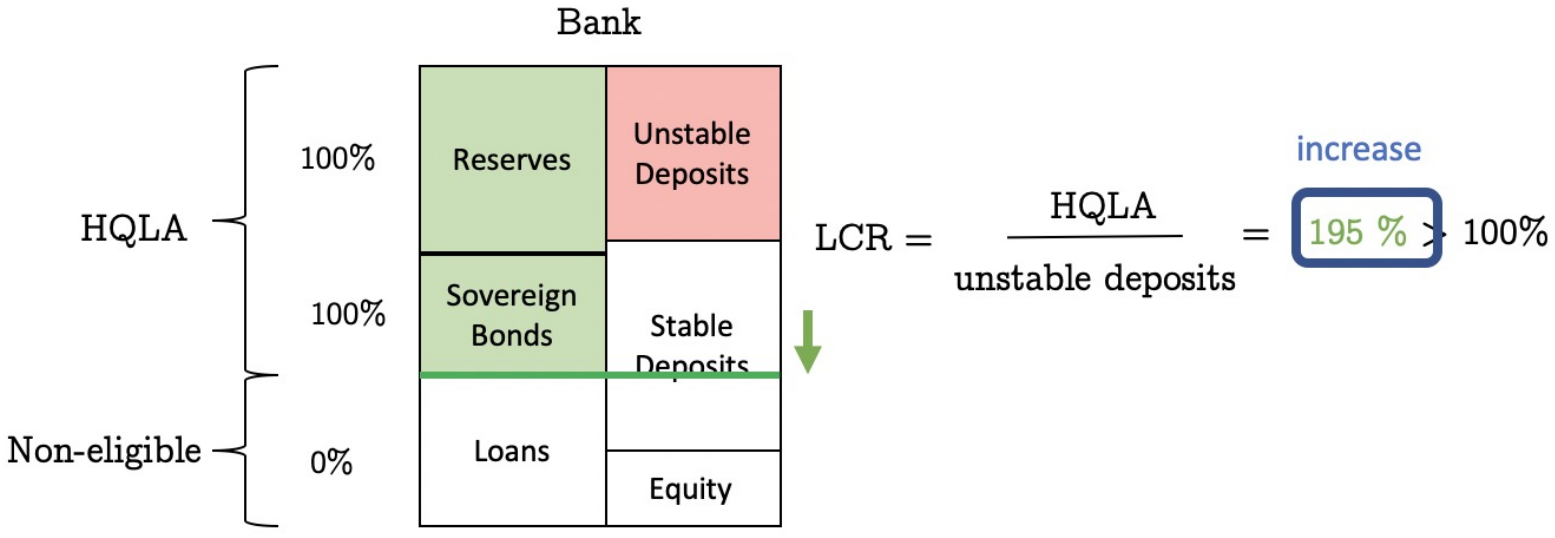

Liquidity Transformation Rate = 1 – 100% = 0%

# Stylized Example: ABS as Collateral




Liquidity Transformation Rate = 1 – 50% = 50%

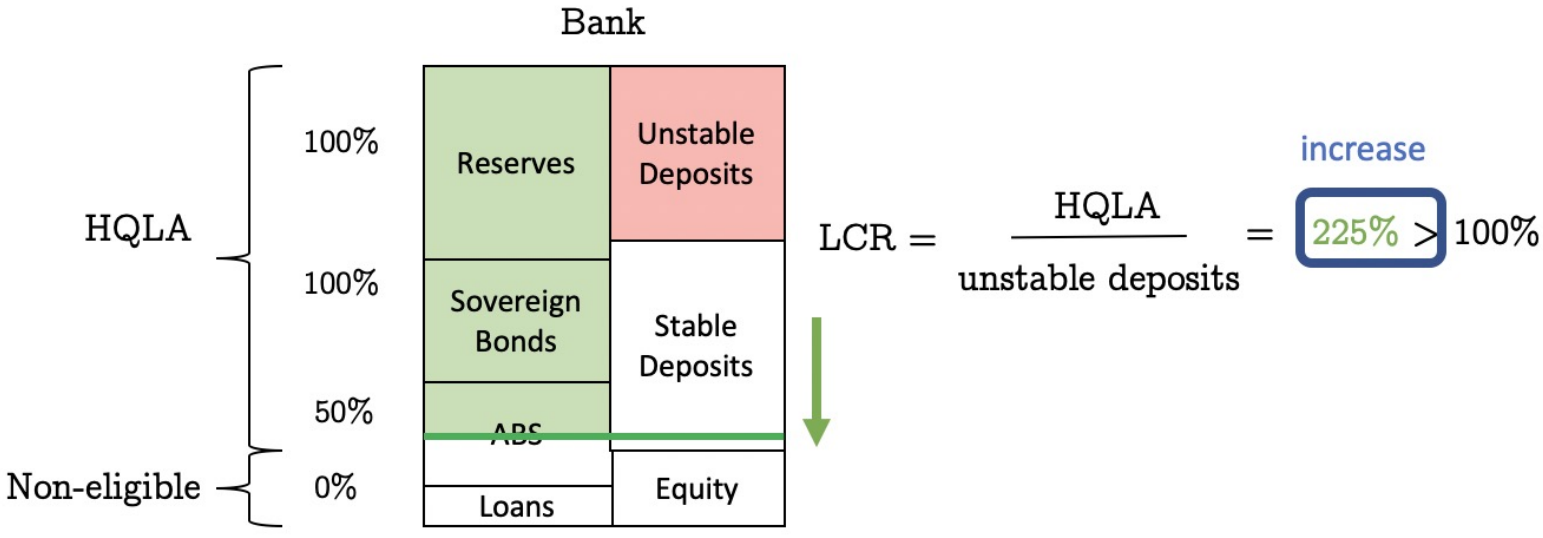
# Stylized Example: Accounting for ECB Margins




Liquidity Transformation Rate = 1 – HQLA / (1 – (1-ECB haircut))

Liquidity Transformation Rate = 1 – 50% / (1 – (1-5%)) ≈ 45%

# Stylized Example: Loans as Collateral




Liquidity Transformation Rate = 1 – HQLA / (1 – (1-ECB haircut))

Liquidity Transformation Rate = 1 – 0% = 100%

Note: This is LTR for reserves which is different than LTR for collateral = 1 – HQLA – ECB haircut

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- Has a bit of an "ex-post obvious" problem but:
  - ▷ Knowing that the LTR is positive is important:
  - → *qualitative* distinction b/w passive credit operations and purchase programs ($\approx 0$ LTR).
  - → the Eurosystem has an automatic elasticity tool to prevent aggregate HQLA scarcity.
  - ▷ The LTR is an important *quantitative* metric for monetary policy implementation.
  - → although ideally LTR is a marginal number and we would like to see whole curve.

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  - → although ideally LTR is a marginal number and we would like to see whole curve.
- Two comments about policy implications:
  - ▷ **Comment 1:** Demand for Reserves
  - ▷ **Comment 2:** Demand for HQLA

# Comment 1: Demand for Reserves

The paper argues that a tightening of margins requirement should have an ambiguous impact of reserves demand.

- "The overall decrease in the supply of HQLA would make LCR-induced liquidity constraints more binding and thereby increase the overall demand for generating additional HQLA"

- "A negative substitution effect would reduce the demand for Eurosystem credit as banks need to pledge more HQLA to obtain one euro of Eurosystem credit."

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$\Rightarrow$ which effect dominates depend on substitutes availability and pricing.

# Case 1: No Substitute ($\approx$ Reserve Requirement)

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**Effect of margin tightening $\alpha$:**

- margin tightening $\uparrow \alpha \Rightarrow \downarrow$ collateral LTR $\Rightarrow \uparrow$ in reserves demand $c^\star$
- higher margins imply more reserves needs from credit operation to meet LCR

# Case 2: Linear Substitution (HQLA)

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- **If $k_c \leq k_b$:** $\quad c^\star = h/(1 - \alpha), \quad b^\star = 0$
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**Ambiguous effect of margin tightening $\alpha$ :**

- locally if $k_c < k_b$: $\uparrow \alpha \Rightarrow \uparrow c^\star$ $\quad \leftarrow$ margin tightening <u>increases</u> reserves demand
- moves threshold: $\uparrow \alpha \Rightarrow \downarrow k_c$ $\quad \leftarrow$ margin tightening <u>decrease</u> reserves demand

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   - $\rightarrow$ no evidence for demand for HQLA liquidity driving.

2. HQLA can be more valuable for other reasons than being HQLA
   - $\rightarrow$ for instance, many government bonds were trading special during that time.
   - $\rightarrow$ encumbering those instead of illiquid useless loans would be bailing on a free option.

$\Rightarrow$ Question about external validity

# Conclusion

**Great paper!**

**A few suggestions:**

- compute the marginal optimal LTR curve,
- be more upfront that economizing collateral is not necessarily economizing HQLA.