Liquidity transformation and Eurosystem credit operations

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Discussion by Tomas Carrera de Souza @ Bank of England BEAR Conference [1]

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[1]Views expressed are personal and do not reflect those of DNB nor the Eurosystem

Two-slides summary (i)

$\Rightarrow$ Banks *can create* additional HQLA from ECB lending operations:

- The ECB's collateral framework accepts a broad range of assets, including non-HQLA.
- By pledging illiquid assets and receiving reserves (Level 1 HQLA), banks can do liquidity transformation.

Liquidity Transformation Rate: How much (LCR) HQLA is created by pledging an asset i:

$$LTR_i = 1 - \frac{1 - haircut_i^{LCR}}{1 - haircut_i^{CB}}$$

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Example 1: Pledge a **sovereign bond** with $haircut^{LCR} = 0\%$ and $haircut^{CB} = 3\%$:

$$LTR_{gov} = 1 - \frac{1 - 0}{1 - 0.03} = -\textbf{3}\%$$

$\rightarrow$ For every 1 unit borrowed against a sovereign bond, the bank loses 0.03 units of HQLA.

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Example 2: Pledge a **covered bond** with $haircut^{LCR} = 15\%$ and $haircut^{CB} = 4.5\%$

$$LTR_{cov} = 1 - \frac{1 - 0.15}{1 - 0.045} = \mathbf{11}\%$$

$\rightarrow$ For every 1 unit borrowed against a covered bond, the bank creates 0.11 units of HQLA.

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Example 3: Pledge an **unsecured bank bond** with $haircut^{LCR} = 100\%$ and $haircut^{CB} = 15\%$

$$LTR_{ubb} = 1 - \frac{1 - 1}{1 - 0.15} = \mathbf{100\%}$$

$\rightarrow$ For every 1 unit borrowed against an unsecured bond, the bank creates 1 unit of HQLA.
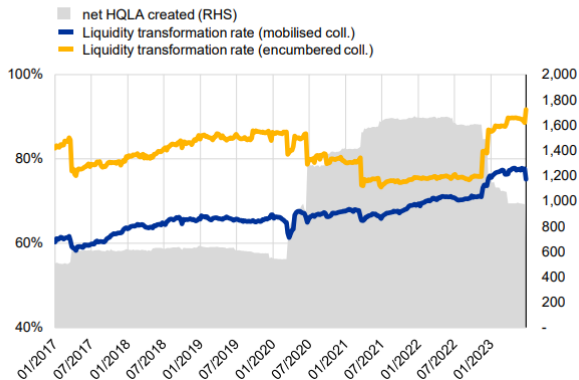
Two-slides summary (ii)

$\Rightarrow$ Banks *create* additional HQLA from ECB lending operations.

- **Coincidentally**, due to their ex-ante asset composition; and
- **Intentionally**, by pledging less liquid assets as collateral first.
    - *Quick comment: The extent of Intentional Liquidity Transformation may be underestimated if banks' asset holdings are shaped by the central bank's collateral framework.*

Two-slides summary (ii)

$\Rightarrow$ Banks *create* additional HQLA from ECB lending operations.

Figure 4: Liquidity transformation rate and net HQLA generated through Eurosystem credit operations

Discussion summary

1. Relevance of the paper,
2. Liquidity transformation as the driver of collateral encumbrance,
3. Endogeneity of banks' demand for HQLA to the design of central bank operations.

Relevance

Important topic for the future central bank balance sheet:
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⇒ Link between monetary policy and liquidity regulation (LCR).

This paper is a relevant reference for broader questions on this topic:

- How does the role of the LCR evolve when the central bank provides a liquidity transformation vehicle at non-backstop prices?
  → Greater relevance now, as some central banks transition to a demand-driven system.
- How do (i) banks' demand for reserves *and* HQLA, (ii) central bank operations, and (iii) money markets interact?
  - Idea: scope for cross-framework analysis with the ECB (uniform pricing) and BoE (tiered pricing)?
- How is ultimately the central bank balance sheet affected by these interactions?

Liquidity transformation as the driver of collateral encumbrance

- To what extent liquidity transformation drives collateral mobilization?

  A negative marginal LTR does not necessarily reflect LCR-optimization motives:
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For example:

1. Can pledged collateral be explained by non-LCR outside value (e.g., in repo)?
   - Idea: Compare mobilization of assets with same LTR but different outside value to disentangle LCR from other opportunity costs.

2. Can liquidity transformation patterns be explained by bank heterogeneity (e.g., LCR buffer size, business models, market access)?
   - Idea: Add interaction terms with bank-specific characteristics.

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The paper argues that there would be a lower HQLA supply (wealth effect), which:

   (i) Makes banks' LCR-constraints more binding, and therefore

   (ii) Increases their central bank borrowing (i.e., to achieve the same ΔHQLA).

   $\rightarrow$ With banks targeting a *constant HQLA level*, this wealth effect holds.

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Idea: Use a Poole (1968) framework to disentangle mechanisms and analyze trade-offs.

Conclusion

✔ Very nice and well-written paper!

✔ Evidence of the "adverse selection effect" from broad collateral frameworks (Bindseil, 2014).

✔ Relevant reference for work on operational frameworks and bank's liquidity management.

✔ Overall suggestion is to assess how liquidity transformation may influence banks' utility function and equilibrium conditions (i.e., endogeneity of HQLA demand to the operational framework).

- Are there other opportunity costs when it comes to collateralized borrowing?
- How does the scope for liquidity transformation affect optimal HQLA and reserves holdings?
- How do liquidity transformation and uniform pricing affect the relative attractiveness of different market-based funding options?