Discussion
Bank Intermediation Activity in a Low Interest Rate Environment
by Leonardo Gambacorta, Michael Brei and Claudio Borio


Luisa Corrado
Low Interest Rates and Balance Sheet Effects (Brei, Borio and Gambacorta, 2019)

Challenging themes and very interesting results in both papers

- With compressed profit margins banks move away from traditional loan-making business to other earning assets (e.g. stocks, bonds).
- They hold more liquid assets, as central banks tend to increase the volume of excess reserves in the system, which banks are forced to absorb.
- Rely more on stable forms of funding, such as deposits and fixed-rate long-term debt, rather than on short-term variable-rate funding.
- Readjustments lead to lower risk profile and risk-weighted assets.
Low Interest Rates and Dividends (Gambacorta, Oliviero and Shin, 2020)

- With perspective compressed profit margins the **price-to-book ratio of equity falls** so banks have a greater propensity to **pay out dividends**.

- **Consequences:** **capital erosion**.

- Regulatory solution: suspend dividend distributions and share buybacks to restore capital requirement standards. Role of **endogenous capital requirements** and role of bank capital (Gambacorta and Shin, 2016).

- **Counterfactual:** Over the period 2008–20, bank lending capacity would have been around 9% greater with dividend suspension.
Financial Cycles: Credit-to-GDP Gap (BIS)

(a) US  
(b) UK  
(c) JP  
(d) IT  

Source: BIS
Bank Equity in a Low Interest Rate Environment
(Corrado and Schuler 2019, ECB WP 2019)

- Bank profits depend on interest rate margins, adjustment costs related to deviation from capital requirement, \( \tau_t \), and monitoring costs, \( w_t m_t \).

\[
\Pi_t^B = R_t^L \frac{L_t}{P_t} - R_t^D \frac{D_t}{P_t} - \frac{\kappa_e}{2} \left( \frac{e_t}{L_t} - \tau_t \right)^2 - w_t m_t \tag{1}
\]

- The share of profits, \( \phi_\Psi \), paid out as dividends

\[
\Pi_t^\Psi = \phi_\Psi \Pi_t^B \tag{2}
\]

- The remaining share, \( (1 - \phi_\Psi) \), is booked into bank’s Tier 1 equity \( e_t \). With a higher fraction of dividends, \( \phi_\Psi \), there is more capital erosion

\[
e_t = e_{t-1} + (1 - \phi_\Psi) \Pi_{t-1}^B \tag{3}
\]
Capital Erosion: Actions

How to avoid capital erosion in a downturn:

- Dividend suspension ($\phi_\psi = 0$): direct but could be problematic in terms of policy versus banks’ shareholders.
- Countercyclical Capital Requirement (CCyB):

$$\tau_t = \bar{\tau} + \kappa \left( \frac{L_t}{Y_t} - \frac{L}{Y} \right)$$

Indirect effect of CCyB on price-to-book ratio ($PTB$), dividend payments and equity ($e$)

$$ \frac{L_t}{Y_t} \downarrow \quad \tau_t \downarrow \quad \Pi_t^B \uparrow \quad PTB_t \uparrow \quad \Pi_t^\psi \downarrow \quad e_t \uparrow $$

L. Corrado (University of Rome Tor Vergata) Discussion Bank Intermediation Activity in a...
Note: Two-year moving average of deviations in total credit-to-GDP.
Endogenous Capital Req. and the Macroeconomy

Note: Two-year moving average of deviations in consumption, inflation and loans (Corrado and Schuler, ECB WP 2019).
Endogenous Capital Req. and Welfare

Superior welfare outcome of endogenous capital requirement

<table>
<thead>
<tr>
<th></th>
<th>Output volatility</th>
<th>Inflation volatility</th>
<th>Welfare loss</th>
<th>Δ Loss[^1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benchmark</td>
<td>0.148</td>
<td>0.052</td>
<td>0.054</td>
<td>-</td>
</tr>
<tr>
<td>Monetary Policy Reaction</td>
<td>0.159</td>
<td>0.052</td>
<td>0.057</td>
<td>1.1%</td>
</tr>
<tr>
<td>Fixed Capital Req.</td>
<td>0.161</td>
<td>0.053</td>
<td>0.048</td>
<td>-14.7%</td>
</tr>
<tr>
<td>Endogenous Capital Req.</td>
<td>0.113</td>
<td>0.041</td>
<td>0.041</td>
<td>-27.8%</td>
</tr>
</tbody>
</table>

[^1] Relative to Benchmark. (Corrado and Schuler, ECB WP 2019)
Evidence during the Pandemic (Chadha et al., 2020)

- US broad money (M2) increased by 20% in 6-months
- Bank deposits which increased 16%
- Reserves increased by 100% over the same period

Note: US Money Aggregates (Chadha et al., 2020).
Conclusions

- Very interesting papers. The empirical results suggest a way forward in macro-models.
- Present results are driven by financial sector supply side shock.
- But in the most recent juncture shocks come from the real sector.
  - Because of the shutdown shock the reduction in loans is demand-driven.
  - Because of the lockdown shock velocity of money has gone down: hence, the increase of deposits is supply-driven.
- Interesting to see how the analysis on balance sheet effects and dividend payment policy unfold with more recent microdata.
- Effects of large-scale asset purchases and fiscal stimulus (Coenen, Montes-Galdon, Smets (2020), ECB EWP 2352)
Luisa Corrado
University of Rome Tor Vergata
Department of Economics and Finance
E-mail: luisa.corrado@uniroma2.it
https://sites.google.com/site/luisacorrado/


Model: Corrado and Schuler 2020

Diagram:

- **Households**
  - Dividends, Wages
  - Profits

- **Banks**
  - Headquarter
    - HR
    - Equity
    - Securitization
  - Retail
    - Individual loans
  - Monitoring
  - Credit card
  - Goods
  - Labor
  - Wages
  - Capital requirement
  - Interest rate
  - Interbank trading

- **Firms**
  - Intermediate and final goods

- **Monetary Authority**

- **Bank regulation**