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Non-Performing Loans (NPLs), financial stability and growth

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Disclaimer: The views expressed in the talk are entirely my own

A lot has been done on NPLs in policy circles

A few examples

- **Dynamics** and **drivers** of NPLs (EBA, 2016)
- Factors contributing to **delayed recognition** and **inefficient resolution** of NPLs (Aiyar, 2015; Fell et al. 2016; ESRB, 2017)
- **Provisioning** and **prudential backstops** (EC, 2017; ECB, 2017)
- **Accounting** and prudential regulation (ESRB, 2017)

And more is going on

Plan of the talk

Take a step back and review the reasons for policy attention

1. What are the (**micro** and **macro**) effects of high NPLs?
2. What do we **know** (and **not** know) about such effects?
   - Evidence on NPLs
   - Evidence on "similar" shocks to assets and liabilities
3. Some (tentative) reflections

Keep in mind

- Evidence based on **academic-style** studies (non-exhaustive)
- When not available, comparison with other **similar types** of **bank shocks** (**sovereign bonds** and **capital**)

Starting point for attention on NPLs

NPLs constitute a weakness and thus have to be addressed in their entirety across the euro area (Draghi, 2017)

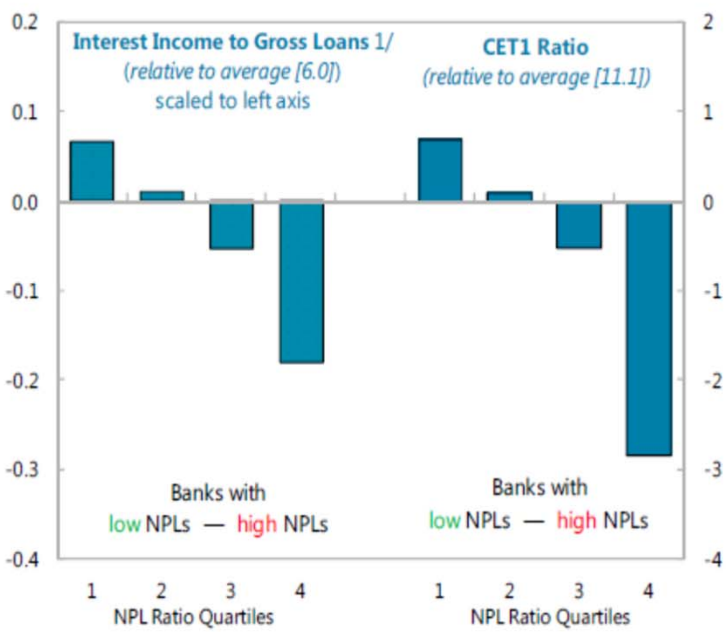
- "We all know the **damage** that **persistently high levels** of NPLs can do to **banks' health** and **credit growth**."
- "Internal ECB analysis shows that (…) banks with **high stocks** of NPLs have consistently **lent less** than banks with **better credit quality**, therefore providing less support to firms and households"

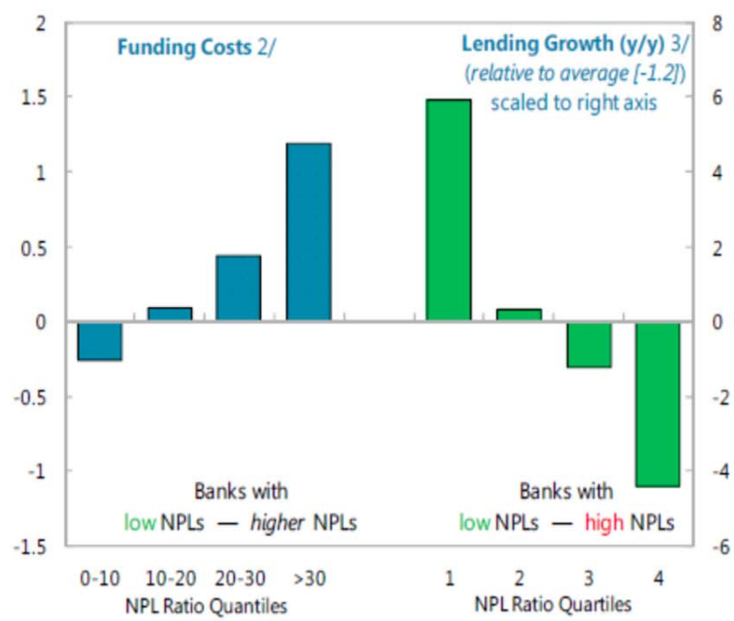
The weakness deriving from NPLs has therefore a micro as well as a macro perspective

Standard perception: NPLs as a micro weakness

High stocks of NPLs have a negative impact on a bank's:

1. **Profitability** due to higher **provisions** and lower **net income**
2. **Capital** due to higher **risk weights**
3. **Cost of funding** due to lower **expected revenue streams** and **investor' higher risk perception**





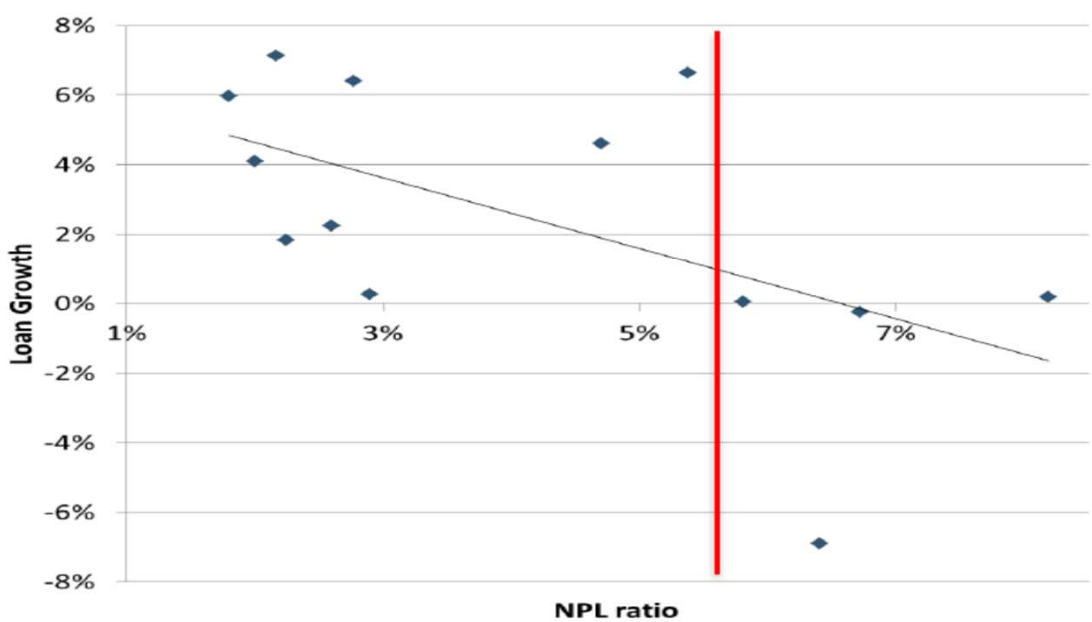
Source: Aiyar et al. (2015)

Standard perception: NPLs as a **macro** weakness

High stocks of NPLs have negative impact on

1. **Aggregate lending** due to contracted credit supply
2. **Credit quality** due to increased risk taking attitude
3. **Country risk** due to banks-sovereign nexus
4. Further **integration** and risk sharing in the Euro area

NPL ratio and loan growth in the EU.
*Source: IMF. **



What do we know (and do not know)?

(High stocks and flows) NPLs are **negatively correlated** with

- **Bank profitability**, **capital** and **funding costs**
- **Loan growth**

Such **correlations** are **not** informative on the **causality** between NPLs and their effects

- NPLs are **determined mostly** by **deteriorating macroeconomic** conditions
- and only **partly** by **bank characteristics** such as **lending standards** or **bad management** (Klein, 2013; Bending et al., 2014; Angelini and Zingales, 2017)

→ Need to distinguish between **demand** and **supply** considerations, also for **policy implications**

Academic-style evidence

Evidence on the **causal effects** of NPLs on credit is **very scarce**

- Need of **micro data** between borrowers and lenders
- Need of an **exogenous shock** to NPLs to determine **causality**

Accornero et al. (2017)

- Bank **lending** is **not** affected by NPL **stocks**, once controlled for **time-varying firm fixed** effects (e.g., changes in firm **characteristics** and **demand** over time)
- …but it **is** affected by **capital ratios**
- (Exogenous) **new post-AQR** NPLs can cause a **negative adjustment** in credit supply due to higher provision needs

Bruno and Marino (2018) find similar results post AQR, but **only** for banks with **very high** NPL **stocks**

Important caveat: AQR also affects **other** bank **characteristics**

Evidence on "comparable" shocks

Sovereign shocks are found to have real effects

- Banks with exposure to **impaired sovereign debt reduced lending** significantly during the European debt crisis (Acharya et al., 2018) because of **funding difficulties** (De Marco, 2018)

Shocks to capital also are found to have real effects

- Banks subject to (exogenous) **higher capital requirements reduced lending** (Gropp et al., 2018)
  - **Instrument**: 2011 EBA capital exercise

Implications

- Policy debate is based on **robust evidence**
- To which **extent** are these two shocks **similar** to NPLs?
  - E.g., sovereign debt is **less opaque** and "**cheaper**" to hold in regulatory terms and may thus **distort** banks' incentives more

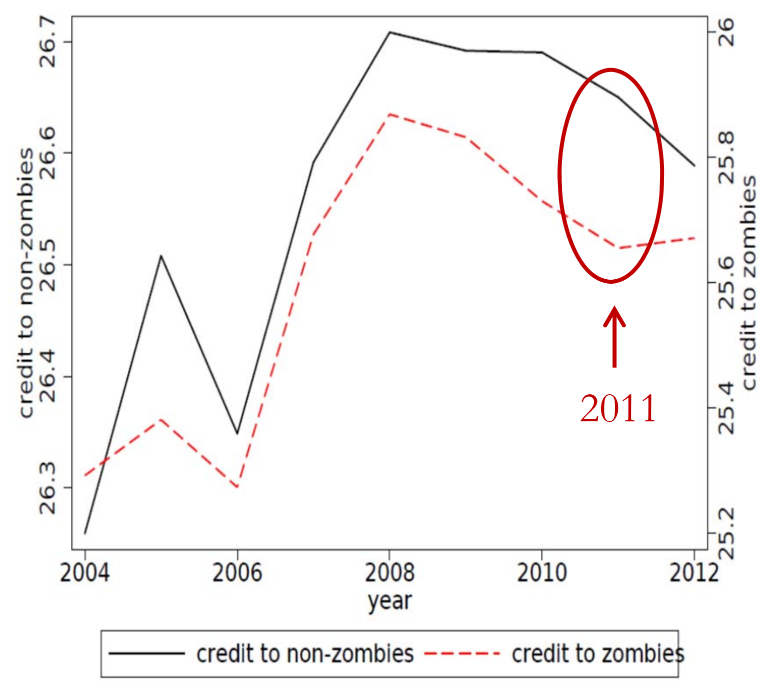
Evidence on zombie lending

Banks with high NPLs may keep lending to zombie firms

- "Gamble for resurrection" or bad management policies
- Consequences for healthy firms, thus prolonging recessions

Schivardi et al. (2017)

- **Undercapitalized** banks are **less likely** to **cut** credit to **zombie** firms, thus generating **more NPLs**
- **Credit misallocation** impaired **failure rate** of **healthy** firms, but with **negligible effects** on the overall **real economy**
  - ➢ **No** significant effect on the **growth** of healthy firms
  - ➢ **No** significant effect on TFP



Some (tentative) reflections

- **Evidence** on the **effects** of NPLs is **scarce** and **inconclusive**
  - **Scarcity** of micro-level data
  - Difficult to find **appropriate** instruments
- **Evidence** on **similar shocks** may be helpful, but with **caveats**
- **More solid** evidence is **crucial** to **best** design **policies**
  - E.g., if **macro conditions** matter, then **improve** those first
  - E.g., if **zombie lending** does **not** prolong crises, then strict provisioning and/or **fast resolution** of NPLs may not be the priority in **recessions**
- **Bank capital** seem to play an **important role**
  - NPLs may be an **obstacle** to **successful** recapitalizations (e.g., Unicredit project FINO in 2016)