

A discussion of *Making room for the needy: the credit-reallocation effects of the ECB's Corporate QE* by Arce, Gimeno and Mayordomo

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*Disclaimer: The views expressed in this presentation do not necessarily reflect the views of the Bank of Italy or the Eurosystem.*

## CSPP and Spanish firms

Assess effectiveness of the ECB's Corporate Sector Purchase Program (CSPP) on financing conditions of Spanish firms. The CSPP consisted into the **outright purchases** of

- ▶ **investment grade**
- ▶ **euro**-denominated bonds
- ▶ issued by **non-bank** corporations
- ▶ on both the **primary** and **secondary** markets

Announced in March 2016; started in June 2016. Aim: "further strengthen the **pass-through of the Eurosystems asset purchases to financing conditions of the real economy**, and, in conjunction with the other non-standard monetary policy measures in place, provides further monetary policy accommodation." (ECB)

# How

Separately looking at

- ▶ the **bond market** - exploring the **direct effect**

- ▶ yields on bonds
- ▶ bond issuance
- ▶ bank credit

to **firms that issue bonds** around both around the **announcement and start dates**

- ▶ the **credit market** - evaluating a possible indirect
  - ▶ credit reallocation effect

to **firms that do not issue bonds**

## Findings

They overall find a **positive effect of CSPP on Spanish firms' financing conditions**

- ▶ negative effect on yields of both issuers and non-issuers
- ▶ positive impact on issuance
- ▶ reduction in credit flows towards firms that benefits from asset purchases
- ▶ offset by an increase in bank credit towards smaller non-eligible firms

Thus providing evidence for the **overall effectiveness of the measure**

## A picture of the Extended APP

**Table:** The Extended APP as of end September 2017, million euro

Purchase Program	Start	Amount	Share
Covered Bond (CBPP)	Oct 2014	231.314	10,9
Asset Backed Securities (ABSPP)	Nov 2014	24.076	1,1
Public Sector (PSPP)	Mar 2015	1.748.063	82,5
Corporate Sector (CSPP)	Jun 2016	114.658	5,4
Total		2.118.111	

## CSPP over time

**Table:** CSPP: cumulative purchases up to September 2017, primary and secondary market

End of Month	Primary Market holdings	Share Primary	Secondary Market holdings	Share Secondary	Total holdings
Jun-16	241	3,8	6.157	96,2	6.398
Sep-16	3.243	10,9	26479	89,1	29.722
Dec-16	6930	1,4	44139	86,4	51.069
mar-17	10.546	14,0	64.909	86,0	75.455
Jun-17	13.851	143,4	82.769	85,6	96.620
Sep-17	17.033	14,9	97.626	85,1	114.658

## CSPP by country

Table: Breakdown by country, actual holdings and eligible bonds

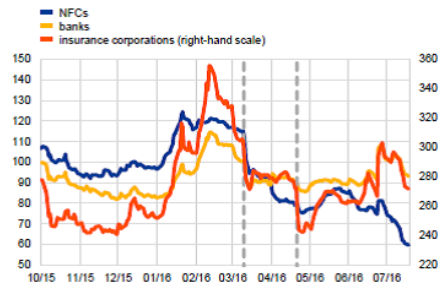
Country of Risk	CSPP holdings	Eligible CSPP Bond Universe
France	29%	31%
Germany	25%	25%
Italy	11%	12%
Spain	11%	10%
Netherlands	6%	5%
Belgium	5%	5%
Switzerland	3%	3%
Other (euro area)	6%	6%
Other (non-euro area)	3%	4%

## Wide (anecdotal) evidence on effectiveness

### Chart C

#### Investment-grade corporate bond spreads

(basis points)



Sources: Markit and Bloomberg.

Notes: Corporate bond spreads are measured by asset swap spreads. The vertical lines indicate the Governing Council meetings on 10 March and 21 April. The indices also contain subordinated bonds. The latest observation is for 18 July 2016.

”The announcement of the CSPP on 10 March was followed by a significant contraction in the spread between yields on bonds issued by non-financial corporations (NFCs) and a risk-free rate” (ECB, Economic Bulletin, August 2016)



## In brief

This is a **very nice paper** from which I learned a lot!

- ▶ Bridges the gap between a relevant policy question and sound empirical analysis
- ▶ Very clear and carefully performed empirical analysis

Critical aspects and open questions:

- ▶ We are talking very **few bond-issuers**
- ▶ Missing link with **underlying mechanisms**
- ▶ Some concerns on **identification** - esp. supply versus demand effects
- ▶ Definition of **LHS variables**

## Some underlying theory I: Partial Equilibrium

### How should CSPP work in theory?

Basic idea: **corporate asset purchases**

- ▶ **reduce yields** on targeted corporate bonds (**direct effect**) ✓
- ▶ **influence also other asset prices**, generating scarcity in eligible bonds, thus encouraging a shift to other asset classes (**portfolio rebalancing**) ✓
- ▶ overall can potentially **encourage issuance** on primary mkts and enhance **liquidity** in secondary mkts because of the presence of a large player ✓
- ▶ absent credit supply frictions, can channel credit towards "ineligible" firms (**credit reallocation**) ✓

## Some underlying theory II: General Equilibrium

All in all, hopefully the above mechanisms **spur economic activity**, and this in turn can **feedback onto further**

- ▶ lower bond yields
- ▶ higher bond issuance
- ▶ higher credit demand

as shown in the structural dynamic general equilibrium model by Bartocci et al. (2017), calibrated and simulated on the EA.

Notice that your results might be **downward biased** if these mechanisms are operational!

**How can you reliably identify causal effects?**

And, more specifically, how can you check for a possible time-varying demand?

## Regressions on bond issuers

Analysis on bond **yields and issuance** at the **firm/bond  $j$**  and **time  $t$**  level

1. equation 1 on bond yields

$$\text{ExcessYield}_{jt} = \alpha_j + \beta_1 \text{CSPP}_{jt} + \epsilon_{jt}$$

2. equation 2 of firm net bond issuance

$$\text{BondIssuance}_{jt} = \alpha_j + \beta_1 \text{CSPP}_t + \beta_2 \text{CSPP}_t * \text{Eligible}_j + \epsilon_{jt}$$

## Regressions on credit

Analysis on **credit** supply/demand at the **firm**  $j$ , **bank**  $b$  (and surprisingly **not time**  $t$  level)

1. equation 3 on bond-issuing firms

$$\Delta Credit_{jb} = \alpha_b + \delta G_j + \theta GB_{jb} + \beta_1 bondissue_j + \epsilon_{jb}$$

2. equation 4 on non bond-issuing firms

$$\begin{aligned} \Delta Credit_{jb} = & \\ & \alpha + +\beta_1 Outflows_j / TA_j + \beta_2 Dsize_j + \\ & +\beta_2 Outflows_j / TA_j * Dsize_j + \\ & +\delta F_j + \gamma B_b + \theta FB_{jb} + \epsilon_{jb} \end{aligned}$$

# To isolate causal links

## A few suggestions

- ▶ **Expand your time horizon** beyond the neighborhood of announcement and start of the program  
different effects kick in with different delays relative to the start of the program
- ▶ Also exploit the time dimension to **allow for time-varying demand**  
include, where possible, time varying firm fixed effects (demanding!) or firm-level characteristics

## To isolate causal links, continued

- ▶ Consider **continuous measure** of exposure / selection into treatment

### Replace the dummies

- ▶ *Eligible* in reg 2 with the *share* of eligible bonds over total bonds / liabilities (selection into treatment)
- ▶ *Bondissuance* and *Bondissue* in reg2 and reg3 with the *actual change* in bond issuance
- ▶ **Expand geographical span** for the analysis at firm-time level (reg1 and reg2)  
with Dealogic data you could **repeat them on the whole EA**
- ▶ Allow for **non-random firm-bank matching** in firm-bank regs  
saturate the **relationship-level controls**  $GB_{jb}$

## the LHS variables

**Bond yields:** there is a wide preference to use **credit default swaps** instead of corporate bond yields for benchmark

- ▶ corporate CDS market is more liquid in general
- ▶ which in turns allows a finer maturity matching (now you only have three loose brackets).

You could try to **build this alternative measure or motivate why you don't.**

**Change in credit:** A large part of the literature uses the **delta log of stocks of outstandig credit**, as it smooths out extreme variations

Why not using that measure?