# Discussion of "The Employment Cost of Sovereign Default"

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European Central Bank

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The views expressed in this paper are those of the discussant and do not represent those of the European Central Bank.

#### Outline

#### Introduction

#### Comments

General comments
Implications and realism of key assumptions
Policy experiments
Role of employment in euro area crisis
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- ... assesses policy experiments to reduce employment cost of default.
  - Labour market: wage and unemployment subsidies alleviate firms' pre-financing constraints.
  - Bank regulation: higher capital requirements/sovereign debt exposures for banks enhance loan provision.

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  - Formal/rigorous/analytical proof of (part of) the results would be recommended, in particular of link of productivity and default.

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- Consider the private sector equilibrium {s, R, v}:

$$s: \quad s = 1 - \underbrace{G(z - Rw)}_{+}$$

$$R: \quad \chi W = L^b = L^f = w(1 - s)N + av$$

$$v: \quad \begin{cases} > 0 & \text{if } Ra \leq \lambda_f [1 - (1 - s)N, v] \frac{1}{1 + r} \mathbb{E}_z \{ \mathcal{J}(\Omega', \mathcal{D}) \} \\ = 0 & \text{otherwise} \end{cases}$$

Given wage setting with fixed output sharing ( $w = z - \omega$ ),

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Since R > 1. if  $\uparrow z \Rightarrow \uparrow s \Rightarrow \uparrow u$ .

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  - $\Rightarrow$  what if wage setting with constant share of output ( $w = \omega z$ )?

$$R = (1+r) \left[ \lambda - \frac{\kappa + \gamma q B'}{w(1-s)N + av} \right].$$

If 
$$\uparrow B' \Rightarrow \downarrow R \Rightarrow \downarrow s + \uparrow v$$
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Given static banking ( $\phi = 0 \Rightarrow W = \kappa + \gamma qB'$ ),

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  - Gertler and Karadi (2011) calibrate  $\phi = 0.972$  to have expected bankers' lifetime of a decade. How realistic?
  - $\Rightarrow$  what if  $\phi > 0$ ?

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- For instance, regulators could impose a limit on leverage:

$$\frac{L}{W} = \chi \le \bar{\chi} \iff R \le 1 + (1+r) \left(\lambda - \frac{1}{\bar{\chi}}\right)$$
$$\Rightarrow L = \min \left\{ \frac{\kappa + \gamma q B'}{\lambda - \frac{R-1}{1+r}}, \bar{\chi}(\kappa + \gamma q B') \right\}$$

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Alternatively, regulators could impose a unit cost on loan provision, so that the participation constraint would yield:

$$P_{j,t} \ge (\lambda + \xi) L_{j,t} \Rightarrow L_{j,t} = \frac{\kappa + \gamma q_t B_{t+1}}{\lambda + \xi - \frac{R_t - 1}{1 + r}}$$

where  $\xi > 0$  is the unit cost.

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- Likewise, standard models (e.g. Arellano, 2008) predict counter-cyclical spreads and have only foreign investors ( $\gamma=0$ ) VS this model predicts pro-cyclical spreads when has mostly foreign investors (low  $\gamma$ ). This seems at odds with empirical evidence.

# Default in good times

• if  $\gamma = 0.1 \Rightarrow corr(Y, spr) = 25\%$ ?

Description	Data	Model $\gamma \in [0.1, 0.9]$
Debt ratio Default probability Unemployment rate	69% 3% 7%	69 to 115% 1.5 to 3% 7 to 11%
GDP and spread	-6% 1%	-5 to 25% -7 to 23%
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Table 3: Model prediction and Portuguese data: Debt ratio 2000-2011 and GDP correlations 1995-2015.

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- Wright (2014) provides only an accounting exercise, decomposing GDP growth into its factor contributions.
- Large theoretical literature models euro area crisis as determined by adverse demand shocks.
- ► This paper unveils a transmission mechanism of the real impact of default risk in high-debt/high-unemployment countries, but it does not show the determinants of the euro area crisis.

### Other comments

Where is the market clearing conditions for goods?

$$z(1-s)N = (w+\omega)(1-s)N = ...?$$

If after-tax w goes to employed, where does  $\omega$  go?

- No welfare implications are analysed in explaining the employment cost of default and in assessing the policy experiments. Maybe add this to tables?
- ▶ Table 3: different model statistics depend differently on  $\gamma \Rightarrow$  make one column for each value of  $\gamma$ .

### Thank you for your attention!