An Unemployment Re-Insurance Scheme for the Eurozone? Stabilizing and Redistributive Effects

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'Rethinking the European Fiscal Framework'
EFB-CEPR-ACES Workshop
February 28, 2020

- Potential element of EMU reform: 'European Unemployment Stabilization Fund' (Bénassy et al. 2018, Meseberg declaration 2018)
- Risk-Sharing vs. Moral Hazard (GCEE & Feld 2018, Heijdra et al. 2018)

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  - Decomposition framework: compare *interregional* and *intertemporal* stabilization potential of an unemployment re-insurance with stabilization effect of average UI in the euro area
  - Counterfactual simulation experiment: assess stabilizing and redistributive effects for the period 2000–16

  $\rightarrow$ provide insights on potential added value of the re-insurance

Design of the re-insurance and empirical approach

- Re-insurance resembles a rainy day fund → no 'genuine' EUBS! (Beblavý and Lenaerts 2017, Brandolini et al. 2016, Dolls et al. 2018, Koester and Sondermann 2018)

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  - ▸ Alternatives: short-term unemployment rate, work volume

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  - ▸ Alternatives: short-term unemployment rate, work volume

- Double condition (Carnot et al. 2017):
  - ▸ payout triggered if year-on-year increase in the unemployment rate in country j exceeds a certain threshold AND unemployment is above its 7-year moving average
  - ▸ Threshold values: 1 or 2 p.p.
  - ▸ (almost) symmetric rule for contribution payments (without threshold)

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  - Replacement rate 50% of previous gross earnings,
  - Maximum benefit duration 12 months
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- Calculation base for contributions: nominal compensation of employees

- Modelling of labor market trends in EA-19 over the period 2000-16
  - Simulate a sample of repeated cross sections via reweighting approach linking EU-SILC and LFS household micro data (re-weighting for 18 socio-demographic population groups)
  - Key advantage: precise replication of labor market cycles

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  - ▶ Partial equilibrium analysis: does not take into account general equilibrium effects of the re-insurance
  - ▶ No behavioral responses of government+administration
    → 'First-round' effects

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  - ▶ ex-ante conditionality not accounted for; re-insurance available to all current EA-19 member states from 2000 onwards

Decomposition framework

Scenarios	Minimum conditions	National borrowing	Pooling of contributions	EA borrowing
1. Benchmark UI (annually balanced budget)	yes	no	no	no
2. Benchmark UI (balanced budget 2000-16)	yes	yes	no	no
3. Scenario 2 + Re-insurance (annually balanced budget)	yes	yes	yes	no
4. Scenario 2 + Re-insurance (balanced budget 2000-16)	yes	yes	yes	yes

Stabilization coefficient for each of the four scenarios:
(Auerbach and Feenberg 2000, Dolls et al. 2012)

$$\tau = \frac{\sum_i \Delta C_i - \sum_i \Delta T_i}{\sum_i \Delta Y_i} = \tau_C + \tau_T \tag{1}$$

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Decomposition:

$$\tau_{tot} = \tau_{Re-insurance,with-debt} - \tau_{Benchmark-UI,without-debt}$$

$$= \underbrace{\left(\tau_{Re-insurance,with-debt} - \tau_{Re-insurance,without-debt}\right)}_{\tau_{Intertemporal-Smoothing(EA-level)}}$$

$$+ \underbrace{\left(\tau_{Re-insurance,without-debt} - \tau_{Benchmark-UI,with-debt}\right)}_{\tau_{Interregional-Smoothing}}$$

$$+ \underbrace{\left(\tau_{Benchmark-UI,with-debt} - \tau_{Benchmark-UI,without-debt}\right)}_{\tau_{Intertemporal-Smoothing(National-level)}} \tag{2}$$

How often are payouts/contributions triggered?

year	TRIGGER - payments unemployment rate (threshold: 1 percentage point)		TRIGGER - payments short-term unemployment rate (threshold: 1 percentage point)		TRIGGER - payments work volume (threshold: 0.99 percent)	
	num. of countries	country code	num. of countries	country code	num. of countries	country code
2000	3	EE,LT,SK	0		3	EE,LV,SK
2001	0		0		3	DE,LT,MT
2002	0		3	LV,MT,AT	3	DE,LV,SK
2003	3	DE,LU,PT	4	EE,LT,LU,PT	3	DE,MT,SK
2004	1	LU	1	LU	2	LV,MT
2005	0		0		0	
2006	0		0		0	
2007	0		1	IE	0	
2008	2	IE,ES	3	IE,ES,LV	0	
2009	12	EE,IE,EL,ES,FR,CY,LV,LT, AT,PT,SI,FI	12	EE,IE,EL,ES,FR,CY,LV,LT,AT, PT,SI,SK	8	DE,EE,IE,IT,LV,LT,AT,PT
2010	9	EE,IE,EL,ES,LV,LT,PT,SI,SK	1	EL	7	EE,IE,EL,ES,LV,LT,PT
2011	3	EL,ES,CY	3	EL,CY,PT	5	IE,EL,ES,PT,SI
2012	5	EL,ES,IT,CY,PT	3	ES,CY,PT	6	EL,ES,IT,CY,PT,SI
2013	6	EL,ES,IT,CY,NL,SI	1	CY	7	EL,ES,IT,CY,AT,PT,FI
2014	0		0		1	CY
2015	0		0		0	
2016	0		0		0	

year	TRIGGER - contribution: unemployment rate		TRIGGER - contribution: short-term unemployment rate		TRIGGER - contribution: work volume	
	num. of countries	country code	num. of countries	country code	num. of countries	country code
2000	13	BE,DE,IE,ES,FR,IT,CY,LU,NL,AT,PT,SI,FI	11	BE,DE,IE,ES,FR,IT,LV,MT,PT,SI,FI	15	BE,DE,IE,EL,ES,FR,IT,CY,LT,LU,NL,AT,PT,SI,FI
2001	12	BE,DE,IE,ES,FR,IT,CY,LV,LU,NL,SI,FI,	10	IE,ES,FR,IT,CY,LV,LU,AT,SI,FI	11	BE,IE,EL,ES,FR,IT,CY,LU,NL,PT,FI
2002	4	EL,IT,CY,LV	5	EE,CY,LT,NL,SK	9	IE,EL,ES,IT,CY,LU,MT,SI,FI
2003	6	EE,EL,IT,LV,LT,FI	7	IE,EL,FR,IT,AT,SK,FI	9	IE,EL,ES,FR,IT,CY,LT,LU,AT
2004	7	EE,IE,ES,IT,LT,SI,FI	7	EE,IE,ES,CY,LT,MT,FI	14	BE,EE,IE,EL,ES,FR,IT,CY,LT,LU,NL,AT,SI,FI
2005	10	EE,IE,EL,ES,IT,LV,LT,MT,SK,FI	8	EE,ES,FR,IT,LV,LT,SK,FI	12	BE,EE,IE,EL,ES,FR,IT,CY,LT,MT,SK,FI
2006	10	EE,EL,ES,IT,LV,LT,MT,SI,SK,FI	10	EE,EL,ES,FR,IT,LV,LT,NL,SK,FI	15	BE,EE,IE,EL,ES,FR,IT,CY,LV,LU,MT,NL,AT,SK,FI
2007	15	BE,DE,EE,EL,ES,FR,IT,CY,LV,LT,MT,NL,SI,SK,FI	13	DE,EE,ES,FR,IT,CY,LV,LT,NL,AT,SI,SK,FI	19	BE,DE,EE,IE,EL,ES,FR,IT,CY,LV,LT,LU,MT,NL,AT,PT,SI,SK,FI
2008	11	BE,DE,EL,FR,CY,MT,NL,AT,SI,SK,FI	10	BE,DE,EL,FR,CY,MT,NL,AT,SI,FI	14	BE,DE,EL,ES,FR,CY,LV,LU,MT,NL,AT,SI,SK,FI
2009	0		0		1	MT
2010	3	DE,LU,AT	5	DE,LU,MT,AT,FI	4	BE,DE,FR,LU
2011	5	BE,DE,MT,AT,FI	6	BE,DE,MT,AT,SI,FI	8	BE,DE,FR,LU,MT,NL,AT,FI
2012	2	DE,MT	5	DE,EE,LV,MT,FI	5	BE,LU,MT,SK,FI
2013	3	DE,EE,LV	3	DE,IE,LV	2	LU,MT
2014	6	DE,EE,IE,LV,LT,MT	9	DE,EE,IE,EL,ES,LT,MT,PT,SK	5	BE,DE,FR,LU,MT
2015	8	DE,EE,IE,LV,LT,MT,PT,SK	10	BE,DE,EE,IE,EL,ES,LV,LT,MT,PT	10	BE,DE,EE,IE,FR,LT,LU,MT,NL,SK
2016	10	BE,DE,IE,ES,LV,LT,MT,PT,SI,SK	14	BE,DE,IE,EL,ES,FR,CY,LT,MT,NL,PT,SI,SK,FI	13	BE,DE,EE,IE,ES,FR,LT,LU,MT,NL,AT,SI,SK

unemployment rate (threshold: 1 p.p.)			short-term unemployment rate (threshold: 1 p.p.)			work volume (threshold: 1 per cent)		
country	frequency	number of activations	country	frequency	number of activations	country	frequency	number of activations
ES	35%	6	CY	24%	4	LV	29%	5
EL	29%	5	PT	24%	4	PT	29%	5
CY	24%	4	IE	18%	3	DE	24%	4
PT	24%	4	EL	18%	3	EL	24%	4
EE	18%	3	ES	18%	3	ES	24%	4
IE	18%	3	LV	18%	3	EE	18%	3
LT	18%	3	EE	12%	2	IE	18%	3
SI	18%	3	LT	12%	2	IT	18%	3
IT	12%	2	LU	12%	2	CY	18%	3
LV	12%	2	AT	12%	2	LT	18%	3
LU	12%	2	FR	6%	1	MT	18%	3
SK	12%	2	MT	6%	1	SK	18%	3
DE	6%	1	SI	6%	1	AT	12%	2
FR	6%	1	SK	6%	1	SI	12%	2
NL	6%	1	BE	0%	0	FI	6%	1
AT	6%	1	DE	0%	0	BE	0%	0
FI	6%	1	IT	0%	0	FR	0%	0
BE	0%	0	NL	0%	0	LU	0%	0
MT	0%	0	FI	0%	0	NL	0%	0
total	14%	44	total	10%	32	total	15%	48

unemployment rate			short-term unemployment rate			work volume		
country	frequency	number of activations	country	frequency	number of activations	country	frequency	number of activations
DE	65%	11	FI	71%	12	LU	88%	15
LV	59%	10	DE	59%	10	BE	76%	13
MT	53%	9	ES	53%	9	FR	76%	13
FI	53%	9	MT	53%	9	MT	71%	12
EE	47%	8	EE	47%	8	IE	59%	10
IT	47%	8	IE	47%	8	ES	59%	10
LT	47%	8	FR	47%	8	FI	59%	10
IE	41%	7	LV	47%	8	EL	53%	9
ES	41%	7	LT	47%	8	CY	53%	9
SI	41%	7	SK	47%	8	NL	53%	9
BE	35%	6	EL	35%	6	DE	47%	8
EL	35%	6	IT	35%	6	IT	47%	8
SK	35%	6	CY	35%	6	AT	47%	8
CY	29%	5	AT	35%	6	LT	41%	7
FR	24%	4	BE	29%	5	SK	41%	7
NL	24%	4	NL	29%	5	EE	35%	6
AT	24%	4	SI	29%	5	SI	35%	6
LU	18%	3	PT	24%	4	LV	18%	3
PT	18%	3	LU	12%	2	PT	18%	3
total	39%	125	total	41%	133	total	51%	166

Decomposition Results

ES
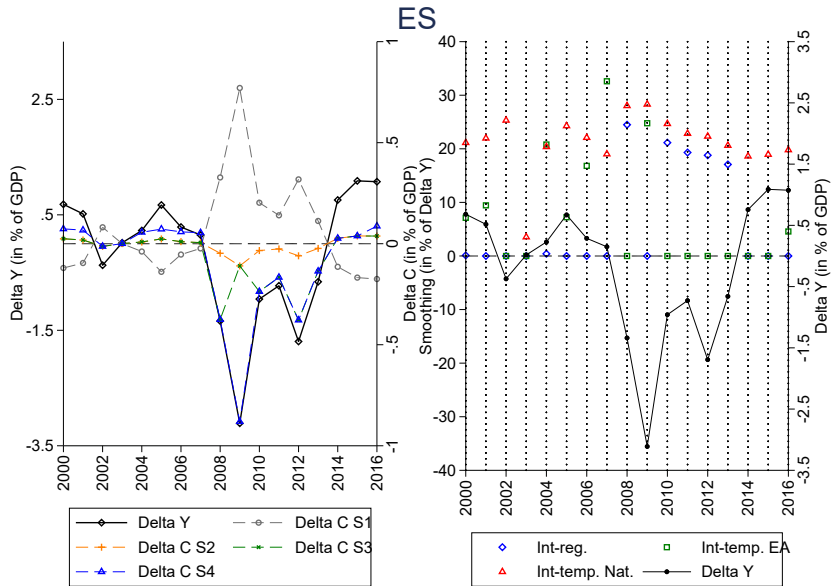
	Interreg	Intertemp (EA)	Intertemp (Nat.)	Overall
AT	0	24	25	49
BE	0	0	0	0
CY	17	7	26	49
DE	17	0	18	35
EE	12	8	21	41
EL	12	4	18	34
ES	17	4	24	45
FI	0	24	26	50
FR	0	21	23	44
IE	13	8	22	43
IT	15	0	16	30
LT	13	8	23	44
LU	24	0	25	49
LV	10	13	25	47
MT	0	0	0	0
NL	20	0	22	42
PT	14	5	21	40
SI	12	8	21	40
SK	15	0	17	32
EA19	11	7	20	38

Budgetary Effects

Net balance at EA-19 level, Threshold: 1 p.p.
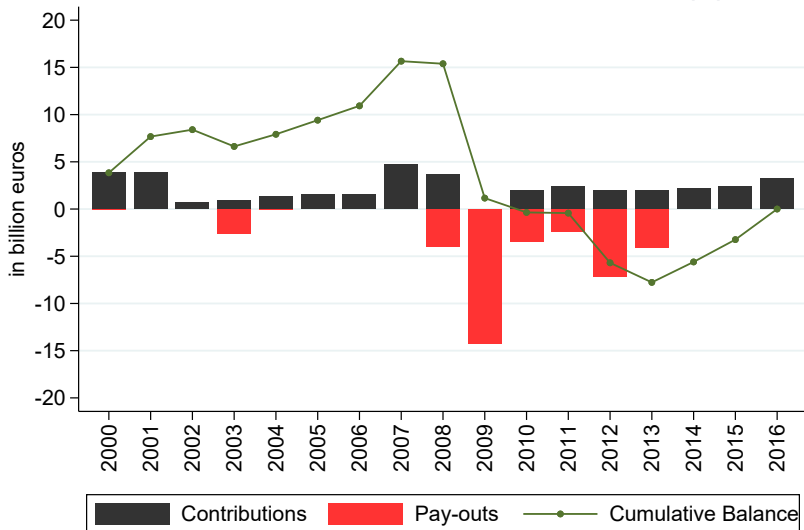
Average net contributions, Threshold: 1 p.p.
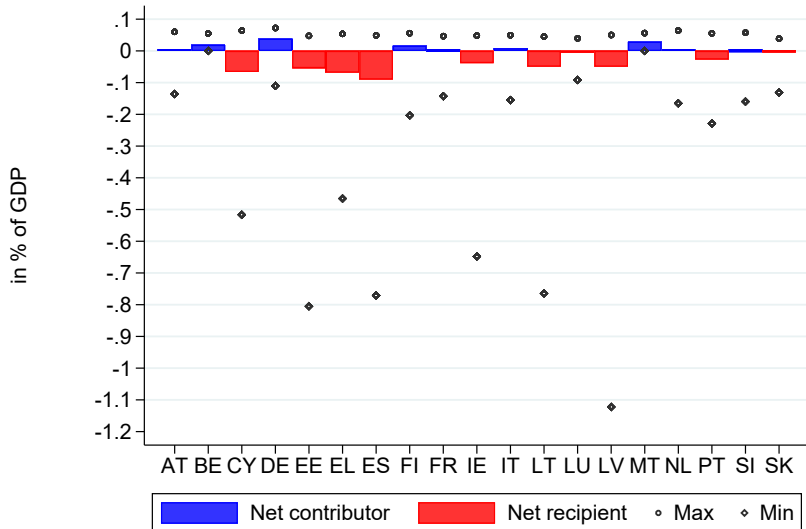
- Overall smoothing effect of the re-insurance economically as important as the intertemporal smoothing effect of an average UI

- Simulaled re-insurance revenue-neutral at EA-19 level, but not at the member-state level. But: No permanent transfers

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'Incentive-friendly' re-insurance:

- Provides support only in times of severe recessions and covers only part of the costs of unemployment

- Contribution payments should be experience-rated

- Prequalification: meeting minimum standards of policy-making (respect of fiscal rules, country-specific recommendations, harmonization of labor market policies)

Thank you for your attention!

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author	trigger variable	activation rule	payout rule	contribution rule	borrowing capacity
Arnold et al. (2018)	unemployment rate	unemployment rate above its 7-years moving average	0.5% of GDP for every 1 percentage point deviation in the unemployment rate above its 7-years moving average; variants: higher/lower transfer rates	0.35% of GDP per year; variants: higher/lower contribution rates; experience rating	yes
Beblavý and Lenaerts (2017)	short-term unemployment rate	short-term unemployment rate above its 10-years moving average, thresholds: 0.1/1/2 p.p.	pay-out equals sum of unemployment benefits paid to the short-term unemployed according to the rules of a hypothetical genuine European Unemployment Benefit System	0.1% of GDP per year until 0.5 % of EU GDP is accumulated; some variants with experience rating/claw-back	yes (two out of four variants)
Bénassy-Quéré et al. (2018)	unemployment rate, employment or wage bill	year-on-year increase in unemployment rate / decline in employment by e.g. 2 p.p.	one-off transfer of a fixed percentage of GDP (0.25%) for each p.p. increase in unemployment/ decline in employment beyond the specified threshold	0.1% of GDP per year; experience rating	no
Carnot et al. (2017)	unemployment rate	double condition: year-on-year increase in unemployment rate and unemployment above its 15-years moving average; variants: different thresholds for year-on-year increase	0.5% of GDP per percent increase in the unemployment rate, variants: higher pay-outs	double condition: year-on-year decrease in unemployment rate and unemployment below its 15-years moving average; variants: different thresholds for year-on-year decrease; 0.5% of GDP per percent decrease in unemployment; experience rating	yes
Dullien et al. (2018)	unemployment rate	1) payment from national compartment: unemployment rate above its national moving average, threshold: 0.2 p.p. 2) additional payment from common compartment ("stormy day fund"): threshold: 2 p.p.	1) national compartment: 25% of average wages paid per employee 2) common compartment: transfers becoming proportionally bigger the larger the increase in unemployment	0.1 % of GDP per year; 80 % into national compartment, 20% into common compartment; experience rating	yes

$$\Delta T_{j,t}^{Benchmark-UI,without-debt} = \Delta T_{j,t}^{Benchmark-UI,with-debt}$$
$$= \Delta T_{j,t}^{Re-insurance,without-debt} = \Delta T_{j,t}^{Re-insurance,with-debt} \tag{3}$$

$\rightarrow$ transfers from the re-insurance relax the balanced budget condition of the benchmark UI

Decomposition:

$$\tau_{tot} = \tau_{Re-insurance,with-debt} - \tau_{Benchmark-UI,without-debt}$$

$$= \underbrace{\frac{\sum_i \Delta C_i^{Re-insurance,with-debt} - \sum_i \Delta C_i^{Re-insurance,without-debt}}{\sum_i \Delta Y_i}}_{\tau_{Intertemporal-Smoothing(EA-level)}}$$

$$+ \underbrace{\frac{\sum_i \Delta C_i^{Re-insurance,without-debt} - \sum_i \Delta C_i^{Benchmark-UI,with-debt}}{\sum_i \Delta Y_i}}_{\tau_{Interregional-Smoothing}}$$

$$+ \underbrace{\frac{\sum_i \Delta C_i^{Benchmark-UI,with-debt} - \sum_i \Delta C_i^{Benchmark-UI,without-debt}}{\sum_i \Delta Y_i}}_{\tau_{Intertemporal-Smoothing(National-level)}} \quad (4)$$

DE