A case for a European Rainy Day Fund

Andreja Lenarčič (ESM)

Kari Korhonen (ESM)

[PRELIMINARY]

**20th Banca d'Italia
Workshop on Public Finance
21-23 March 2018**

Motivation

- **Need for a fiscal stabilisation function** to address severe asymmetric shocks in a monetary union =>

  - more fiscal space, more countercyclical fiscal policy
  - predefined insurance leads to less uncertainty
  - stabilisation at country level has externalities for the whole MU

- **Many proposals on the table**

  - Unemployment insurance [e.g. Dullien (2013), Lellouch and Sode (2014), Dolls et al. (2017), Beblavý and Lenaerts (2017)]
  - Unemployment reinsurance [e.g. Beblavý et al. (2015) and Brandolini et al. (2015)]
  - Macroeconomic stabilisation funds [e.g. Enderlein et al. (2013), Delbecque (2013), Furceri and Zdzienicka (2013), Carnot et al. (2015), Carnot et al. (2017), Beetsma et al. (2018)]

Motivation

- **Need for fiscal stabilisation function** to address severe asymmetric shocks in a monetary union =>

  - more fiscal space, more countercyclical fiscal policy
  - less uncertainty
  - stabilisation at country level has externalities for the whole MU

- **Many proposals on the table**

- **Aim to build a model** that precludes permanent transfers, minimizes moral hazard, does not suffer from revisions in the data and yields significant stabilisation effects

=> explore possible design and benefits of a **European rainy day fund**

Outline

- Review of the US system of rainy day funds (RDFs)
  - General features
  - Lessons learned

- Proposal for a common non-mutualized European RDF

- Empirical simulation – an example

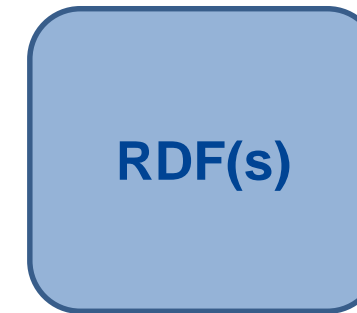- Conclusions

US rainy day funds (RDFs)

- RDFs are established under state level legislation, part of multi-layered state budget [Balassone et al. 2007]

General Fund/ Budget

Capital Fund

RDF(s)

- pays out current expenditure
- financed through taxes and fees

- pays out infrastructure investments
- financed through **debt** and motor fuel taxes

- closing fiscal gaps (in current year); some earmarked for specific purposes (e.g. education)

- The balanced-budget requirement usually refers to the General Fund and corresponding balance is measured including transfers to/from the RDF

US rainy day funds - characteristics

A lot of variation across the states

- **Financing means and rules.** General budget surpluses, static annual contributions, or contributions linked to growth of specific budget revenues, GDP growth or revenue forecast errors. Possible thresholds.

- **Size.** Rule of thumb – in the past 5% of state budget expenditures, following the crisis 15%, caps set as % of previous year budget, average budget or fixed amount, in some cases no size requirements.

- **Disbursements.** Governor's decision, appropriation by state legislatures (often supermajority required), rules-based access, including a threshold, combination of rules and voting, no rules at all.

- **Replenishing.** In majority of cases: a broad discretion, in 10 states: disbursed funds need to be repaid over a fixed period, in 1 state: repayment linked to improvement in the economy.

[Pew Charitable Trusts, 2014, 2017, Haggerty and Griffin 2014]

US rainy day funds - lessons learned

- RDF buffers were not sufficient to cover budget gaps in bigger and longer crises

- States are not always using the RDFs when they should

- Strong rules for payments and disbursements lead to better results

- Deposits, withdrawals and size targets should be informed by economic factors (including business cycle and revenue volatility), rebuilding should be based on economic/fiscal conditions, should not be used to address structural issues

- Impact on fiscal discipline and cyclicality of fiscal policy mixed due to the failure to accumulate sufficient reserves during good times + balanced general budget requirement

[Balassone et al., 2007, Pew Charitable Trusts 2014, 2017, 2018, Zahradnik and Johnson, 2002]

Proposal for Europe - **European Rainy Day Fund (ERDF)**

⇒ **Common non-mutualized RDF** with saving in national compartments in good times + consumption of savings and inter-compartmental lending in bad times

- **Addresses issue of no permanent transfers by construction** due to saving-loan structure

- **Minimizes moral hazard** due to 1) obligation to build up savings during good times, 2) strict eligibility rules, 3) thresholds for activation possible => implying that first losses need to be borne at the national level

Proposal for an ERDF – sketch (I)
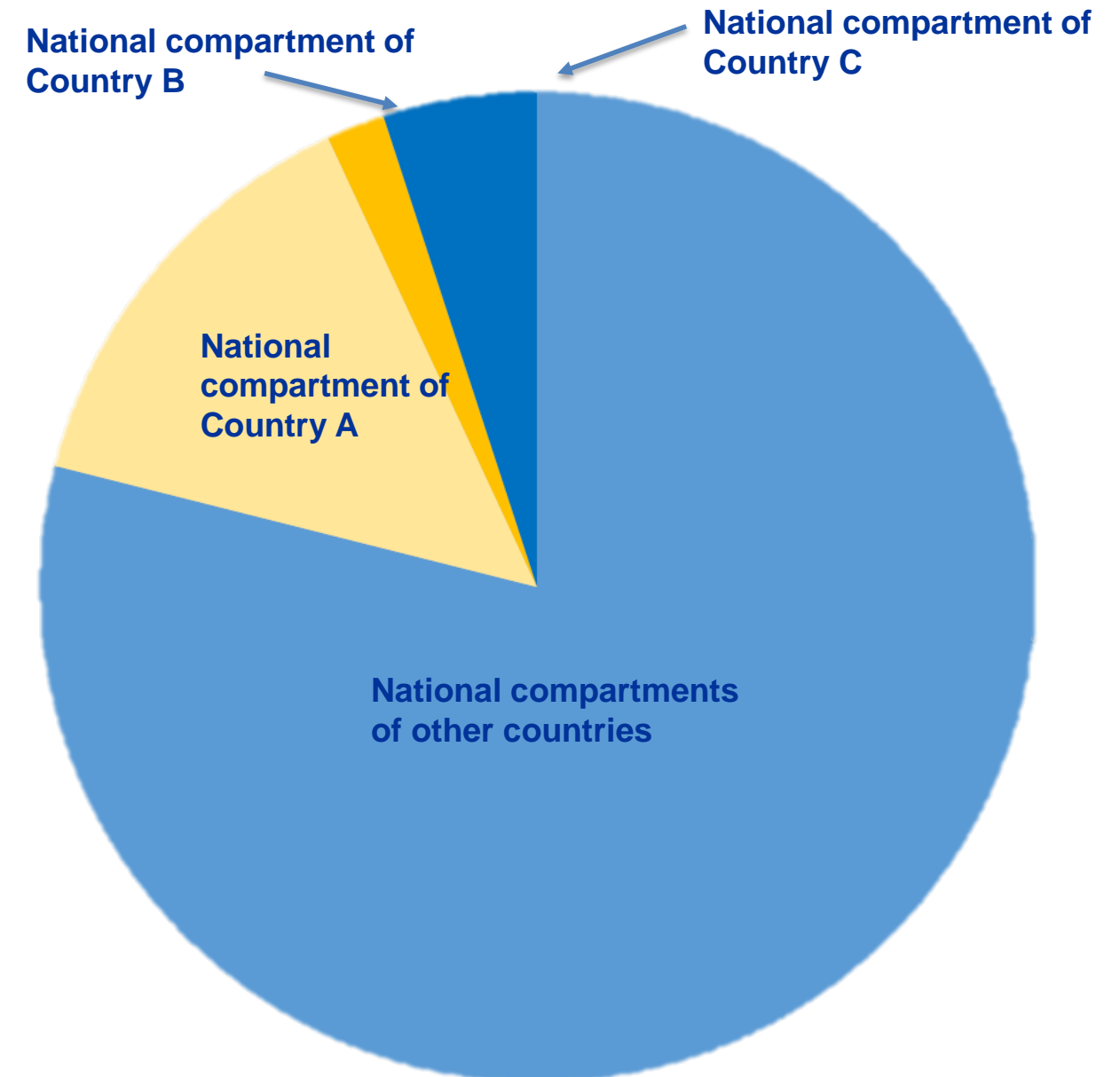
First layer = self-insurance

- **Save** in national compartment in good times

- **Draw** from own compartment in bad times

- Saving and drawing according to common pre-specified rule

- **Overall target size limited**:1-2.5% of GDP [Allard et al. (2013), Furceri and Zdzenicka (2013), IMF EA Country Report (2016), Carnot et al. (2017)]

- **Target size of national compartment**

= f(size of economy, GDP volatility, fund size)

- Free to save more than target size

National compartment of Country B

National compartment of Country C

National compartment of Country A

National compartments of other countries
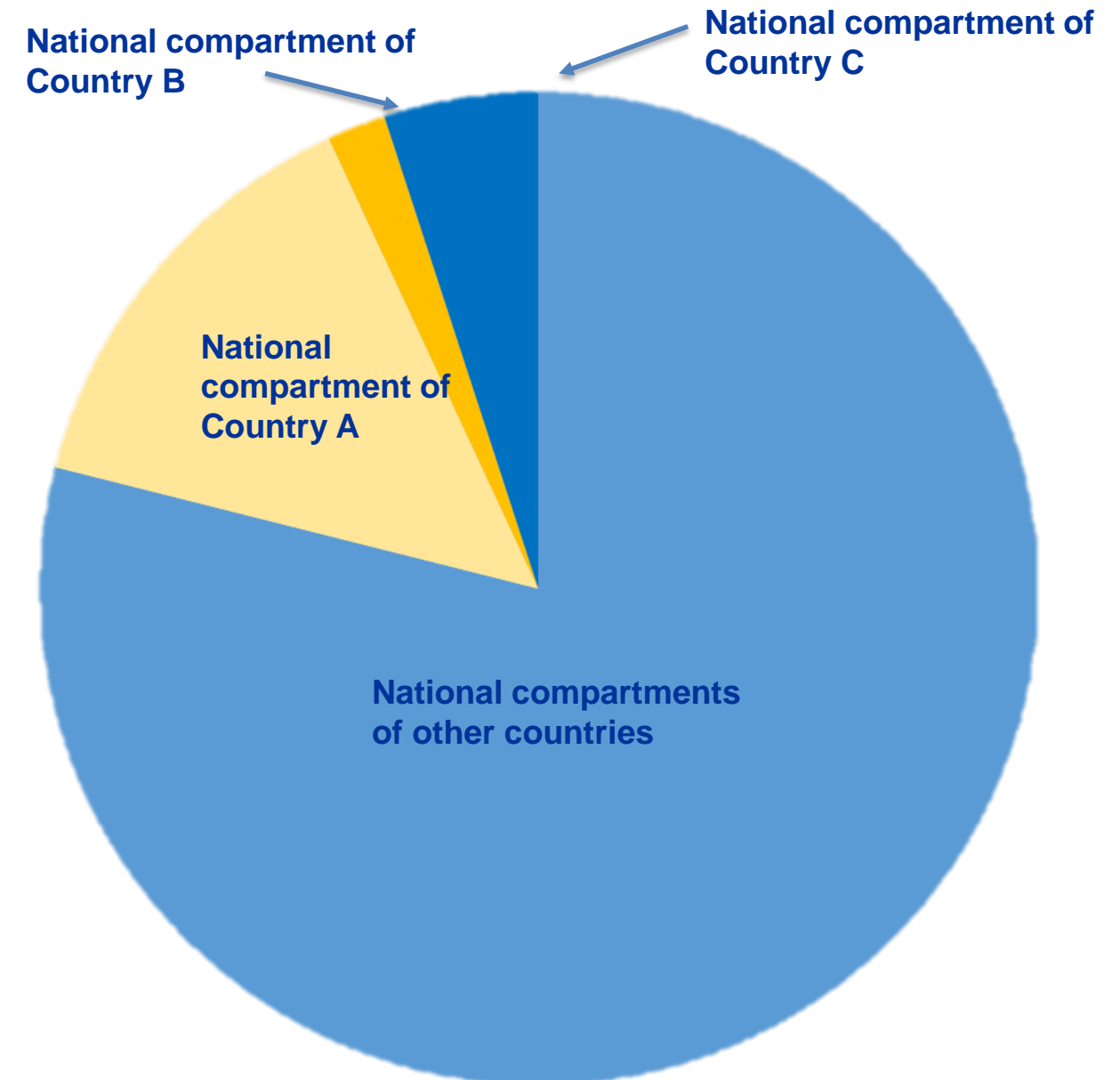
Proposal for an ERDF – sketch (I)

Rules for contributions and withdrawals

- **When?** - trigger variable and threshold

- **How much? -** GDP and the size of the shock (matches payments with size and volatility of the economy)

- Based on changes in variables, not levels

- Clear and strong, agreement signed by all countries

- **Examples of rules:** Furceri and Zdzenicka (2013), Carnot et al. (2017)

National compartment of Country B

National compartment of Country C

National compartment of Country A

National compartments of other countries

Proposal for an ERDF – sketch (II)

Second layer = borrowing between compartments

■ **After consuming own compartment**, countries can borrow up until x% of own compartment target size

■ Same rules as for drawing apply

■ Technically loan from the rest of the fund, at relatively low cost

■ **Repayment of the loan:** maturity fixed but longer than average business cycle, with mandatory repayments in good times according to the rule for contributions; repayment should not undermine the stabilization effect

National compartment of Country A

National compartments of other countries
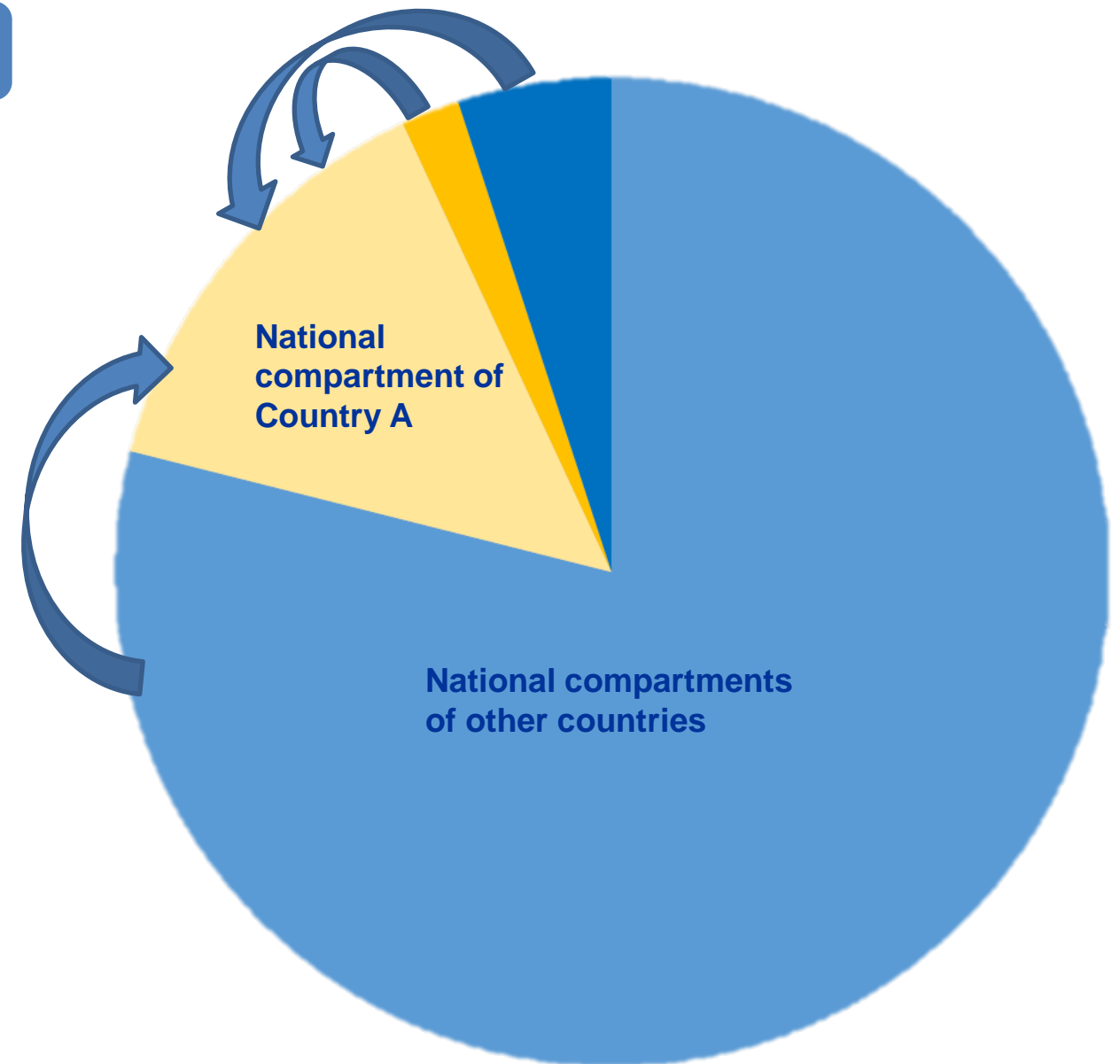
Proposal for an ERDF – sketch (III)

Third layer = borrowing capacity

- Fiscal stabilisation function a**ddressing (large) asymmetric shocks** can in principle work without a borrowing capacity

- **A borrowing capacity would improve the stabilising capacity and fairness in accessing funds**

- Alternative:

  - **smooth asymmetries relative** to the EA average [e.g. Enderlein et al., 2013 or Beetsma et al., 2018]

  - **recalibrate the disbursements to the size of remaining funds** [Furceri and Zdzienicka, 2017]

National compartment of Country A

National compartments of other countries
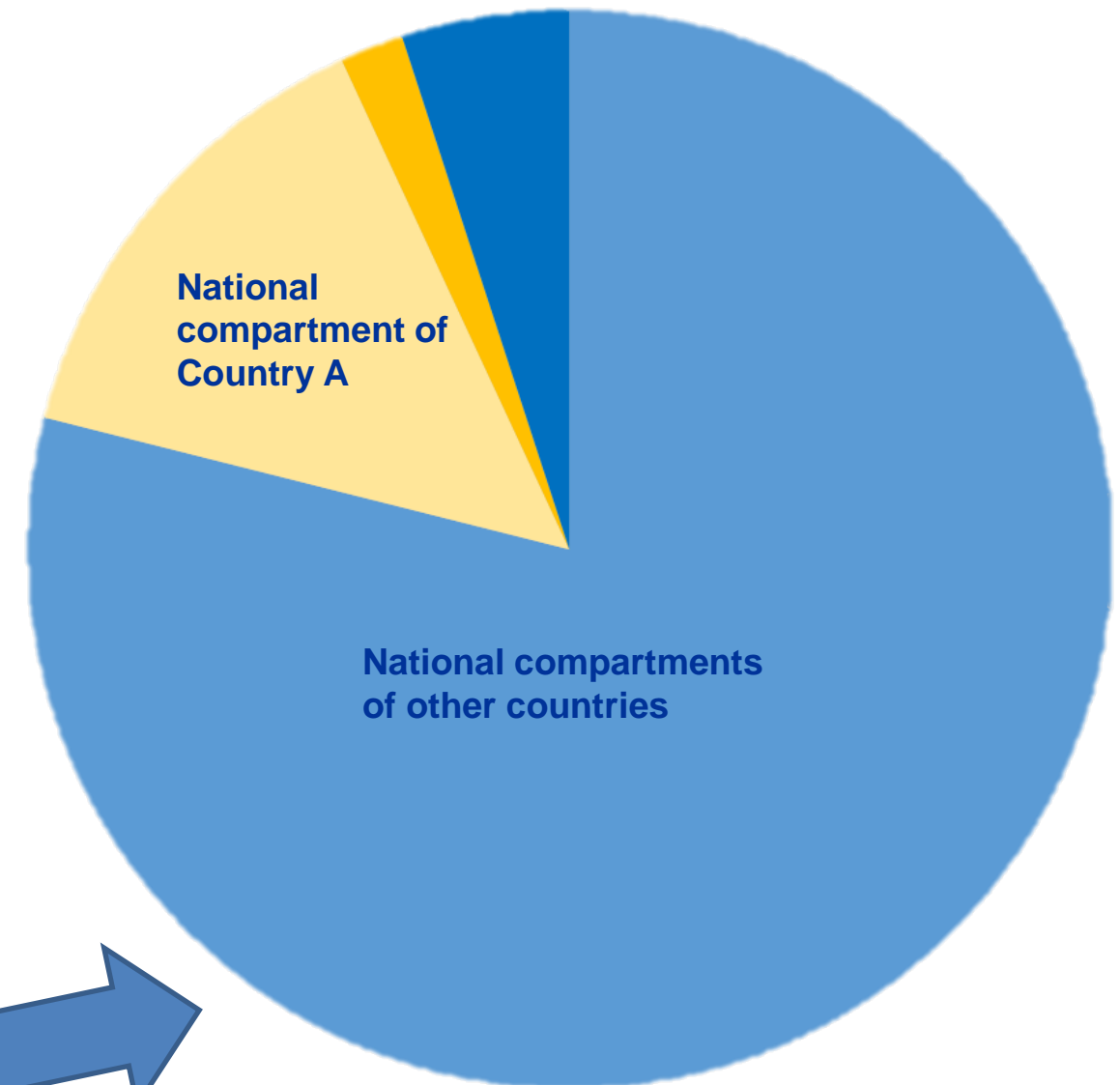
Borrowing of fiscal stabilisation fund in the capital markets

- **Size of borrowing needs** would <u>depend on fund's design, on when it would be set up</u> (good/bad times)

- Fund <u>should provide more fiscal space (compared to market borrowing)</u> but borrowing costs could be relatively high if a standalone facility

  - As needs would arise in bad times
  - Credit rating depends on the certainty of payments
  - Likely infrequent issuer, without a stable investor base
  - Liquidity premium, need to compete with existing supranational issuers

⇒ **important to maintain high creditworthiness – options:** Capital support, guarantees (from participating countries, EU budget…), covered bonds, taxation power

⇒ **other solutions**

  - Lower borrowing needs with **a ramp up period**
  - Integration of the Fund in the EU/EA architecture – merging with entities with high credit rating or a backstop arrangement

Proposal for a ERDF – other properties

- **Earmarking** possible (e.g. for national unemployment schemes, investment)

- **Eligibility:** access to the funds could be **conditioned ex-ante** on sustainable/sound economic/fiscal policies – compliance with common fiscal rules, **but unconditional ex-post**

- **Transparency** increased by frequent reporting of countries' positions by a centralised Fund, positive effects on confidence and motivation to engage in sound fiscal policies

- **Fund administered by a central entity** that would monitor, invest funds, and borrow if necessary from the markets.

Empirical simulation – an example calibration

- **Data:** Ex-post data for 11 euro area member states (11EA), starting in 1995.

- **Size:** Target size of the ERDF equal 2% of nominal GDP of countries included in the simulation, relative size of each national compartment is based on the ESM capital contribution key, corrected for GDP volatility.

- **Rules:** Payments to and from the fund are prescribed by the "double-condition" rule by Carnot et al. (2017) - based on changes in unemployment rate, but limited via the fund structure

- **Loan repayment:** All loans need to be repaid within 8 years, either via early repayments, if so prescribed by the "double condition" rule, or when the loan matures. No ramp up period is assumed.
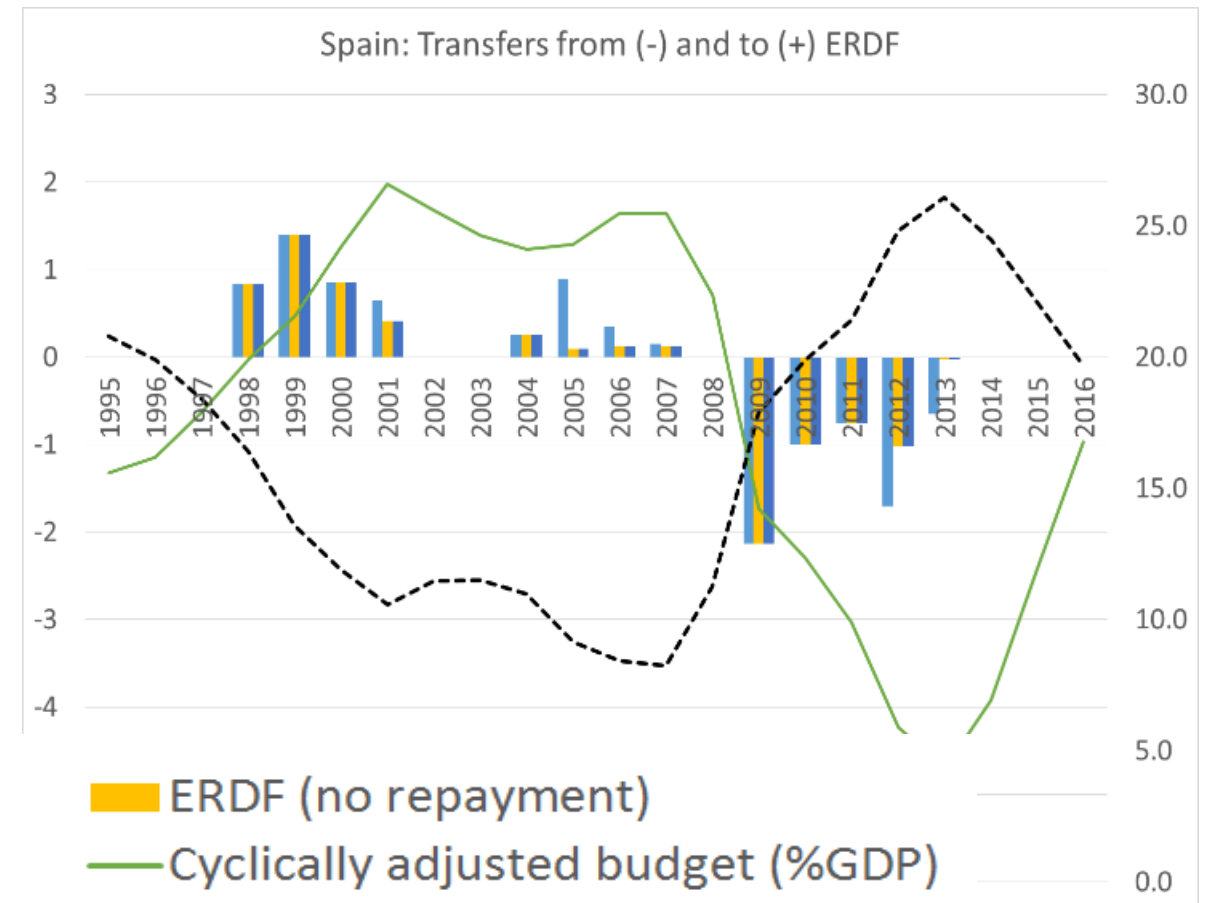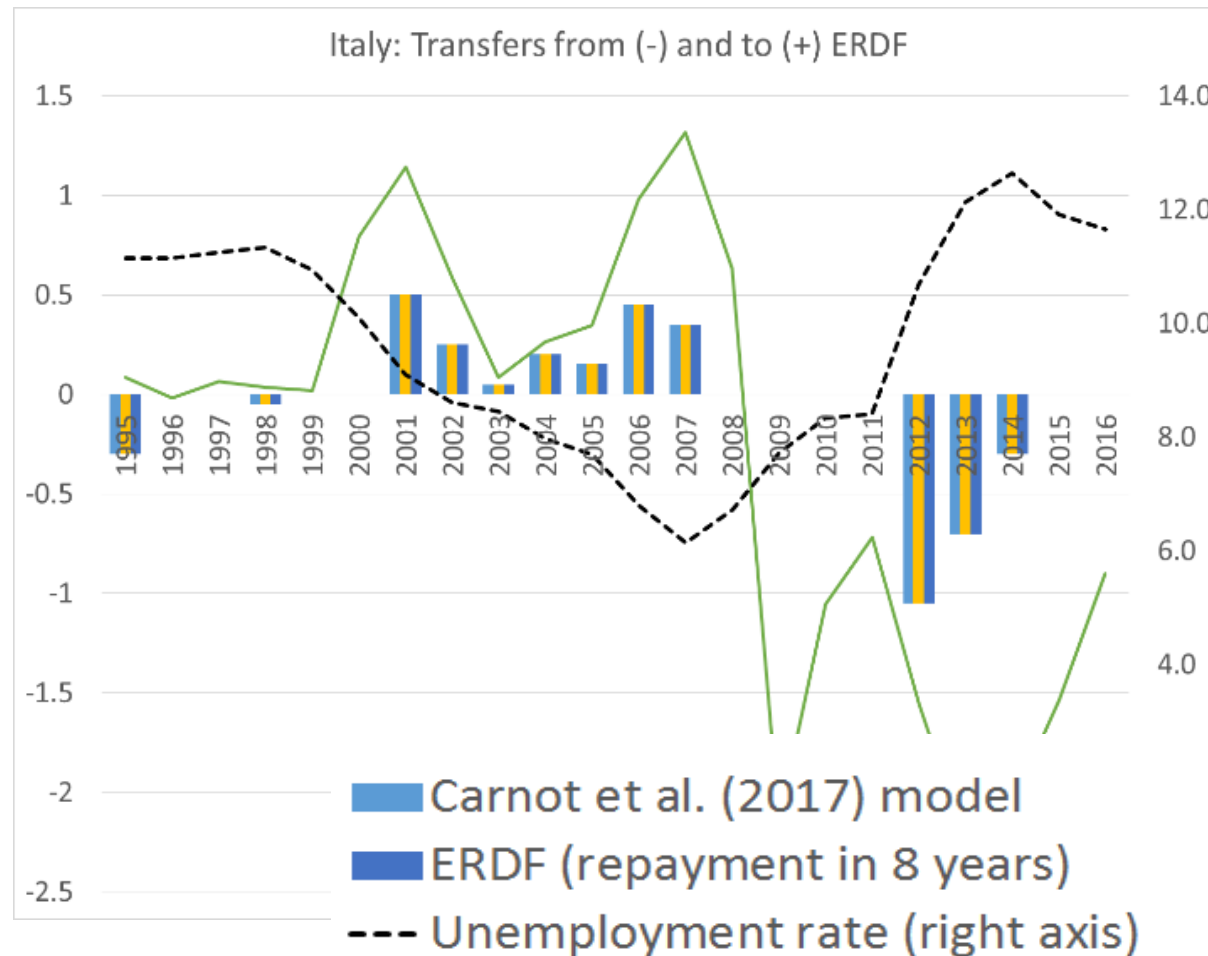
Empirical simulation – an example (I)

- Evolution of positions in national compartments (as % of national GDP) and ERDF overall (as % of EA11 GDP), borrowing limit 90%, target size of 2% of EA11 GDP, repayment in 8 years, Carnot et al. (2017) double condition rule

	AT	BE	DE	ES	FI	FR	IE	IT	LU	NL	PT	EA11
1995	0.00	0.00	0.00	0.00	0.00	0.00	0.20	-0.28	0.00	-0.36	-0.09	-0.07
1996	-0.33	0.00	-0.39	0.00	0.00	-0.23	0.26	-0.27	0.00	-0.30	-0.12	-0.22
1997	-0.32	0.00	-0.76	0.00	0.00	-0.37	0.46	-0.26	0.00	0.39	-0.12	-0.30
1998	-0.30	-0.07	-0.73	0.49	0.00	-0.35	0.75	-0.30	0.00	1.18	0.34	-0.15
1999	-0.29	0.20	-0.70	1.34	0.00	-0.34	0.98	-0.29	0.03	1.67	0.54	0.04
2000	-0.28	1.32	-0.66	1.81	0.00	0.25	1.16	-0.27	0.11	1.89	0.66	0.26
2001	-0.33	1.47	-0.64	2.00	0.22	0.83	1.18	0.22	0.22	2.00	0.63	0.49
2002	-0.57	1.43	-1.01	1.94	0.22	0.81	1.14	0.45	0.11	1.94	0.61	0.40
2003	-0.81	1.33	-1.53	1.89	0.25	0.78	1.11	0.49	-0.39	1.89	0.16	0.21
2004	-0.99	1.14	-1.52	1.99	0.31	0.75	1.09	0.67	-0.88	1.79	0.01	0.24
2005	-1.25	1.03	-1.80	2.00	0.44	0.73	1.07	0.79	-0.85	1.60	-0.37	0.15
2006	-1.19	0.98	-1.71	2.00	0.68	0.77	1.02	1.18	-0.81	1.89	-0.39	0.27
2007	-1.13	1.50	-1.45	2.00	0.94	1.32	0.97	1.45	-0.77	2.00	-0.44	0.51
2008	-0.76	1.83	-0.91	1.96	1.11	1.74	0.95	1.42	-1.09	2.00	-0.43	0.74
2009	-1.24	1.89	-0.94	0.30	1.15	1.80	-0.01	1.47	-1.23	2.00	-1.17	0.43
2010	-1.21	1.76	-0.64	-0.50	1.11	1.60	-0.36	1.43	-1.20	1.94	-1.63	0.33
2011	-0.89	2.00	-0.05	-1.06	1.31	1.56	-0.50	1.39	-0.96	1.89	-1.80	0.41
2012	-0.84	1.99	0.15	-1.80	1.34	1.09	-0.50	0.44	-1.01	1.37	-1.80	0.09
2013	-1.55	1.54	0.25	-1.80	1.32	0.70	-0.49	-0.19	-1.80	0.41	-1.67	-0.14
2014	-1.66	1.43	0.34	-1.76	1.17	0.69	-0.48	-0.45	-1.80	0.34	-1.73	-0.17
2015	-1.67	1.38	0.53	-1.70	0.87	0.59	-0.46	-0.43	-1.80	0.33	-1.63	-0.13
2016	-1.77	1.34	0.51	-1.65	0.85	0.57	-0.39	-0.42	-1.45	0.32	-1.65	-0.12

Empirical simulation – an example (II)

- Transfers from (-) and to (+) ERDF in % of national GDP, with and without obligation to repay loans in 8 years, including comparison with Carnot et al. (2017) model, borrowing limit 90%, target size 2% of EA11 GDP

Italy: Transfers from (-) and to (+) ERDF

Spain: Transfers from (-) and to (+) ERDF

Carnot et al. (2017) model
ERDF (repayment in 8 years)
Unemployment rate (right axis)
ERDF (no repayment)
Cyclically adjusted budget (%GDP)

Source: own calculations, OECD, Carnot et al. (2017).
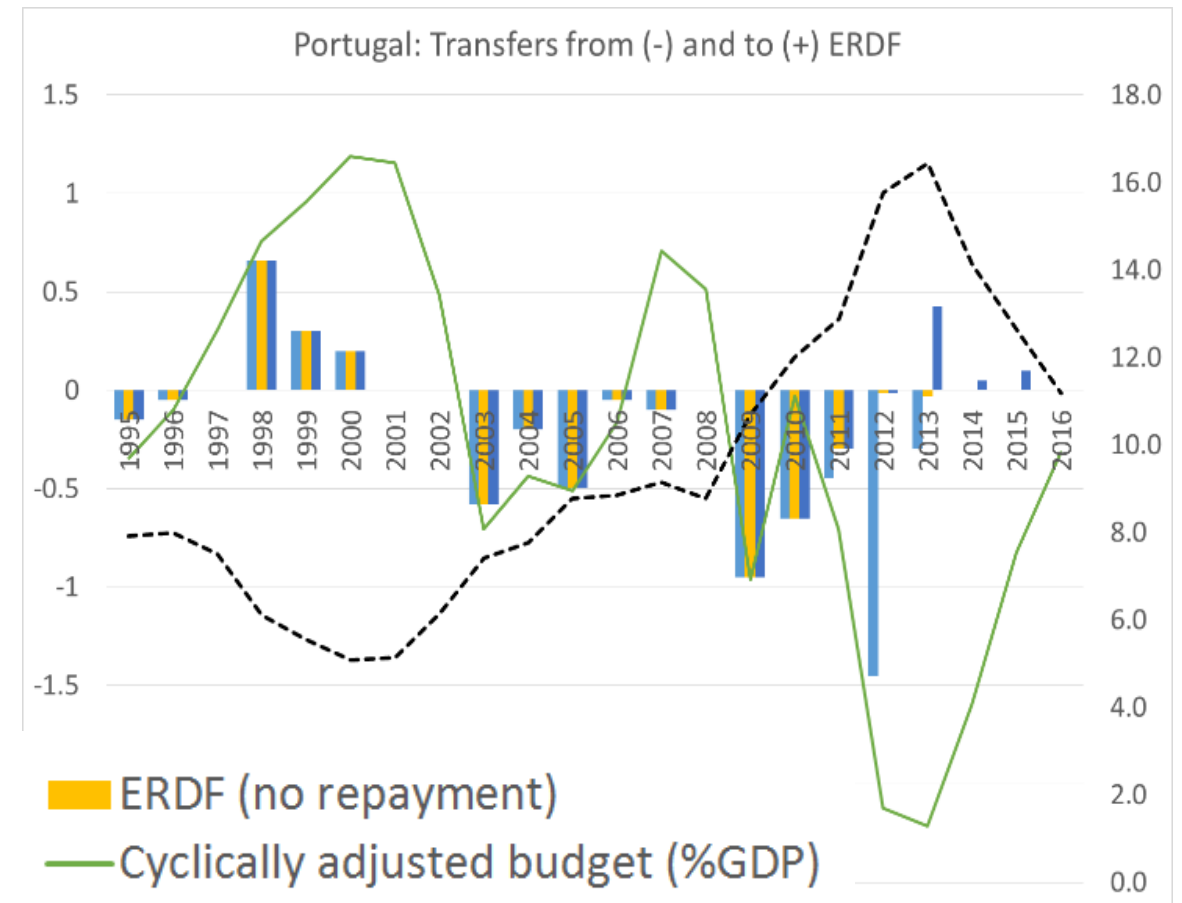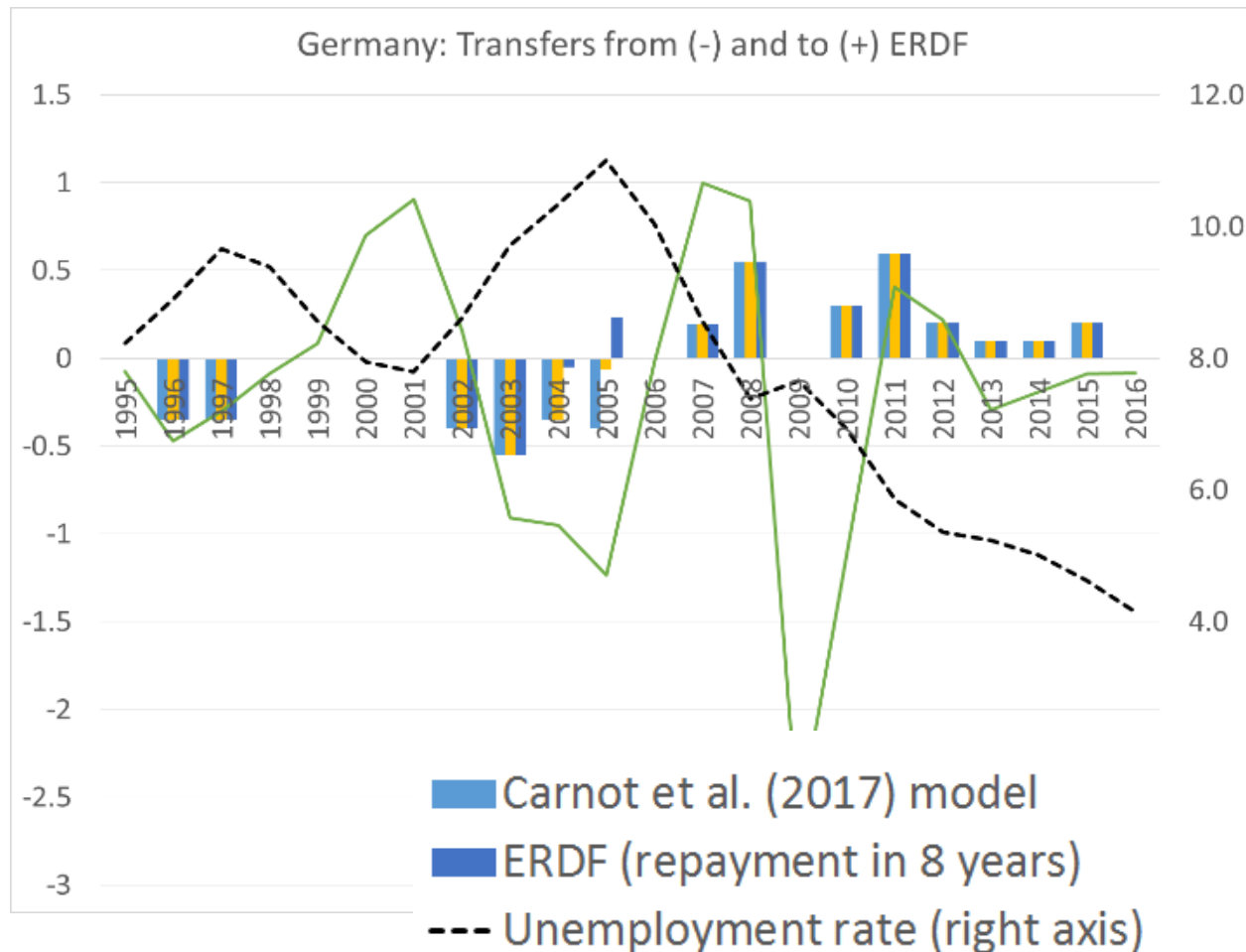
Empirical simulation – an example (II)

- Transfers from (-) and to (+) ERDF in % of national GDP, with and without obligation to repay loans in 8 years, including comparison with Carnot et al. (2017) model, borrowing limit 90%, target size 2% of EA11 GDP

Germany: Transfers from (-) and to (+) ERDF

Portugal: Transfers from (-) and to (+) ERDF

Carnot et al. (2017) model
ERDF (repayment in 8 years)
Unemployment rate (right axis)
ERDF (no repayment)
Cyclically adjusted budget (%GDP)

*Source: own calculations, OECD, Carnot et al. (2017).*

17

Different borrowing constraints

■ Evolution of position of the overall ERDF (as % of EA11 GDP), in case of applying different borrowing limits, assuming ERDF target size of 2% of EA11 GDP

Borrowing limit	0.5	0.9	1.5	Carnot et al. (2017)
1995	-0.07	-0.07	-0.07	-0.07
1996	-0.22	-0.22	-0.22	-0.22
1997	-0.30	-0.30	-0.30	-0.31
1998	-0.15	-0.15	-0.15	-0.18
1999	0.04	0.04	0.04	0.01
2000	0.26	0.26	0.26	0.23
2001	0.49	0.49	0.49	0.51
2002	0.40	0.40	0.40	0.43
2003	0.37	0.21	0.21	0.26
2004	0.40	0.24	0.24	0.20
2005	0.40	0.15	0.14	0.20
2006	0.51	0.27	0.18	0.36
2007	0.73	0.51	0.43	0.63
2008	0.96	0.74	0.66	0.89
2009	0.66	0.43	0.34	0.55
2010	0.56	0.33	0.24	0.46
2011	0.66	0.41	0.33	0.56
2012	0.43	0.09	-0.10	0.13
2013	0.22	-0.14	-0.39	-0.16
2014	0.19	-0.17	-0.42	-0.19
2015	0.22	-0.13	-0.37	-0.15
2016	0.22	-0.12	-0.36	-0.15

Source: own calculations, OECD, Carnot et al. (2017).

Conclusion

- **Benefits of the RDF idea in the EA context:** countries would be obliged to save in the good times and obtain additional fiscal space in bad times **– more countercyclical fiscal policy, increased stabilisation capacity**
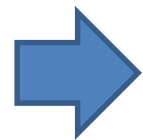
  ERDF an example where

    – Permanent transfers excluded

    – Moral hazard minimised

    – Cheap borrowing within the Fund, limited borrowing needs

    – Borrowing capacity / ramp-up period would allow to respond also to shocks hitting several countries

  Yet:

    – Fine-tuning of the model needed, as concerns regarding clawbacks only partially addressed by state dependent repayment (compared to grant structure)

    – Question how to move to the new system

Thank you for your attention!