Income insurance:
a theoretical exercise with empirical application for the euro area

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The views are solely those of the authors

Outline

1. Motivation
2. Design issues
3. Four possible schemes
4. Retrospective simulations
5. Pros and cons of the example schemes
6. An Extension

Motivation

- **Large, heterogenous and persistent cyclical patterns** in EMU, generating tensions on the appropriate policy response

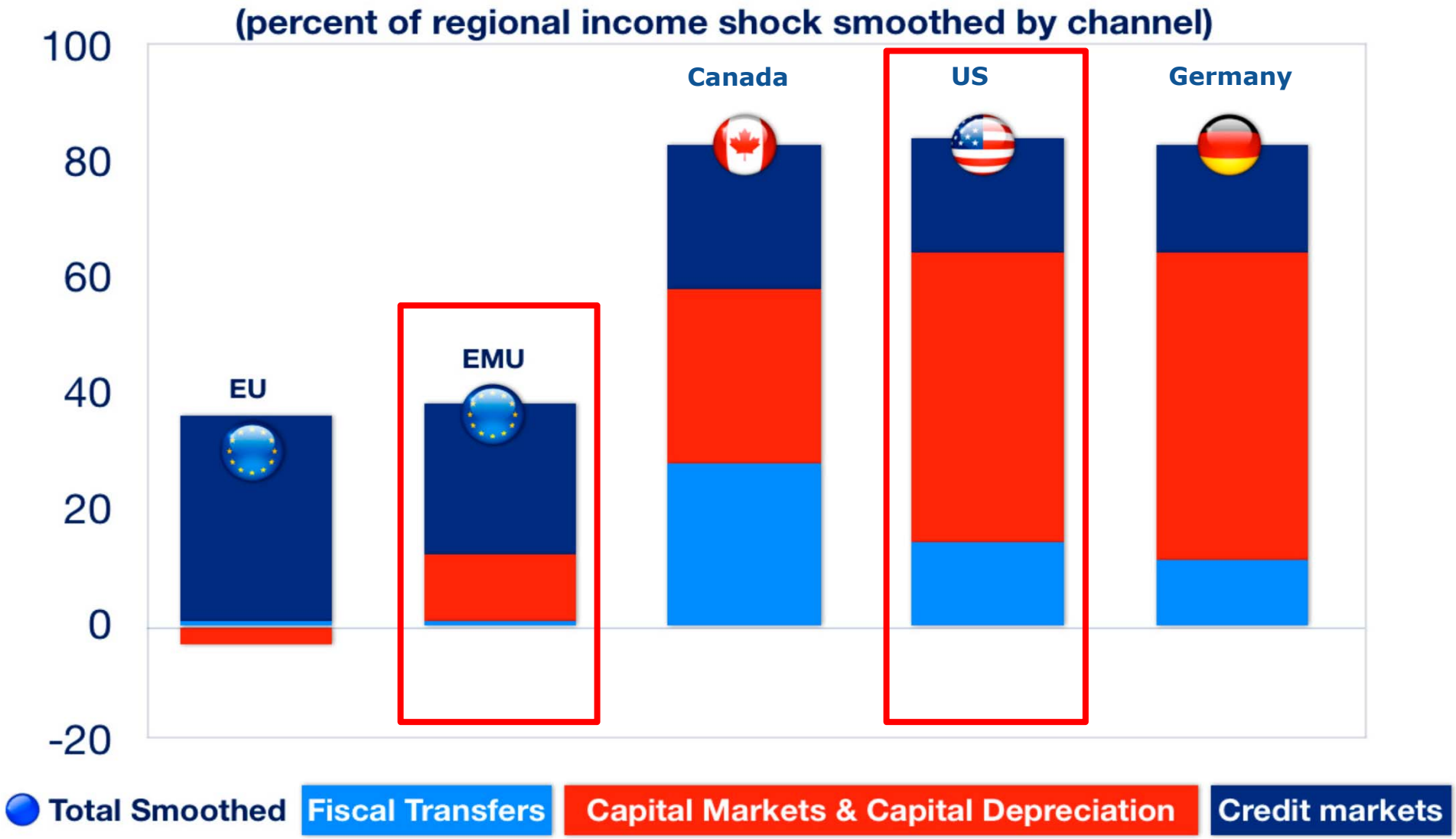
- **More cross-regions risk-sharing in other successful monetary unions than in EMU** (IMF, 2013). Commentators making suggestions for public risk sharing schemes.

- Paper espouses no specific proposal. Instead **it provides an examination of the pros and cons**.

- **Schemes provide additionnal income insurance**, but fully within the rule-based framework.

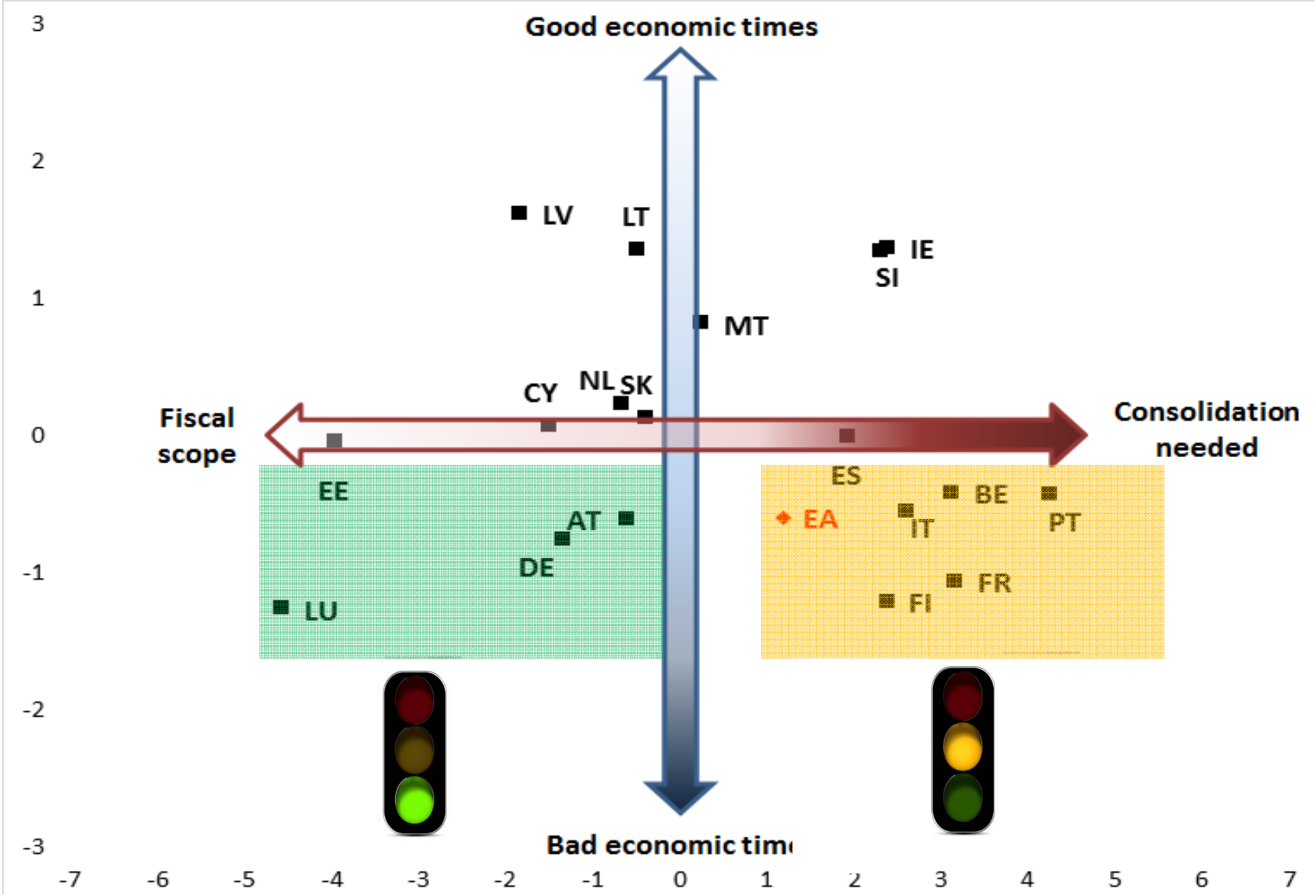
- Focus of paper: **issues in scheme design**, **simulations <u>including in "real time »</u>**

Insurance against income shocks in EMU remains low.



Source: IMF. Allard et al. (2013) Toward a Fiscal Union for the Euro Area

A "fiscal map" of challenges for 2017



Complementing fiscal governance

A fiscal capacity would **strengthen fiscal governance**.

There is a case for simultaneous implementation: **effective risk sharing and risk reduction reinforce each other**:

- Stringent fiscal rules to allow for the full play of economic stabilisers in bad times +discretionary policy margins
- Stabilisation capacity to provide ex post insurance for large shocks and to smooth out business cycle as risk sharing
- Credible prudent fiscal policy could reduce the sovereign rate spread in case of shocks ("confidence sharing")

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Issues in designing a "good" scheme (1)

Key principles/constraints:

- **Political acceptability** (von Hagen and Wyplosz, 2010) → Fully automatic
- Multiple schemes → **Trade off simplicity vs nice features**
- **Prevention as much as support** → Slow booms as well as reflate busts

Key features scrutinised in the paper:

- **Should provide net gains in stabilising power**
  → Measuring the cycle? Output gap, but examine real time and bais thereof
  → No claw-back

Issues in designing a "good" scheme (2)

Key features scrutinised in the paper (cont'd):

- **Should not compromise fiscal discipline**
  → More emphasis on large shocks than mundane fluctuations
  → budgetary prudence: broadly balance fund

- **Must not be a permanent transfer scheme**
  → address cyclical divergences, not permanent income differentials
  → Requires stripping out trends (difficult)

- **Stabilise relative, or also common shocks?**
  → Study both. The low inflation environment and limits to MP: stronger case for including c s.

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Schemes 1 and 2: simple benchmarks

Scheme 1: Pure relative shocks

$P = a * (OG - AOG)$

Scheme 2: Simple relative and common shocks

$P = a * OG$

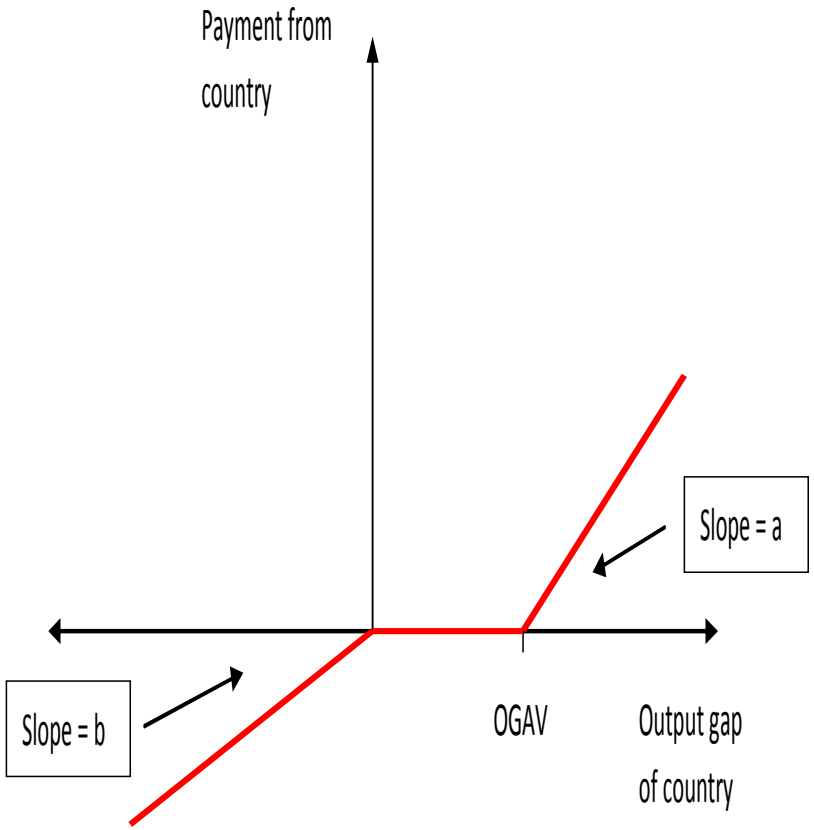
$P = a * (OG\text{-}AOG) + a * AOG$

P = Payment to/from scheme
OG = Domestic output gap
AOG = Euro area average output gap

Scheme 3: Preferred scheme to mainly stabilise relative shocks

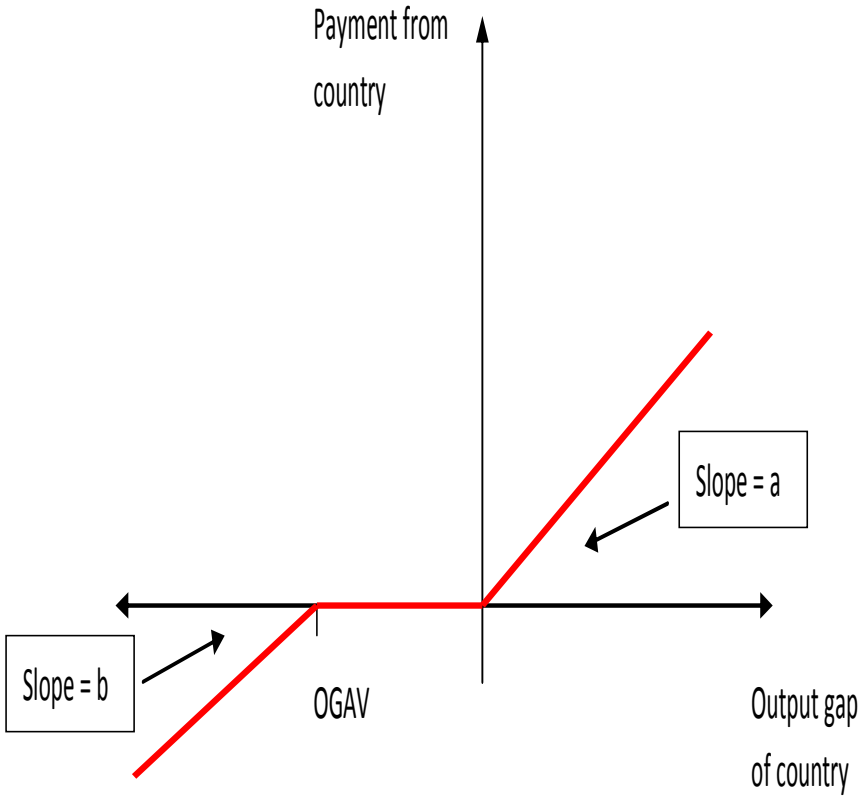
When EMU booms

Payment when area wide average gap is positive (in an upturn):

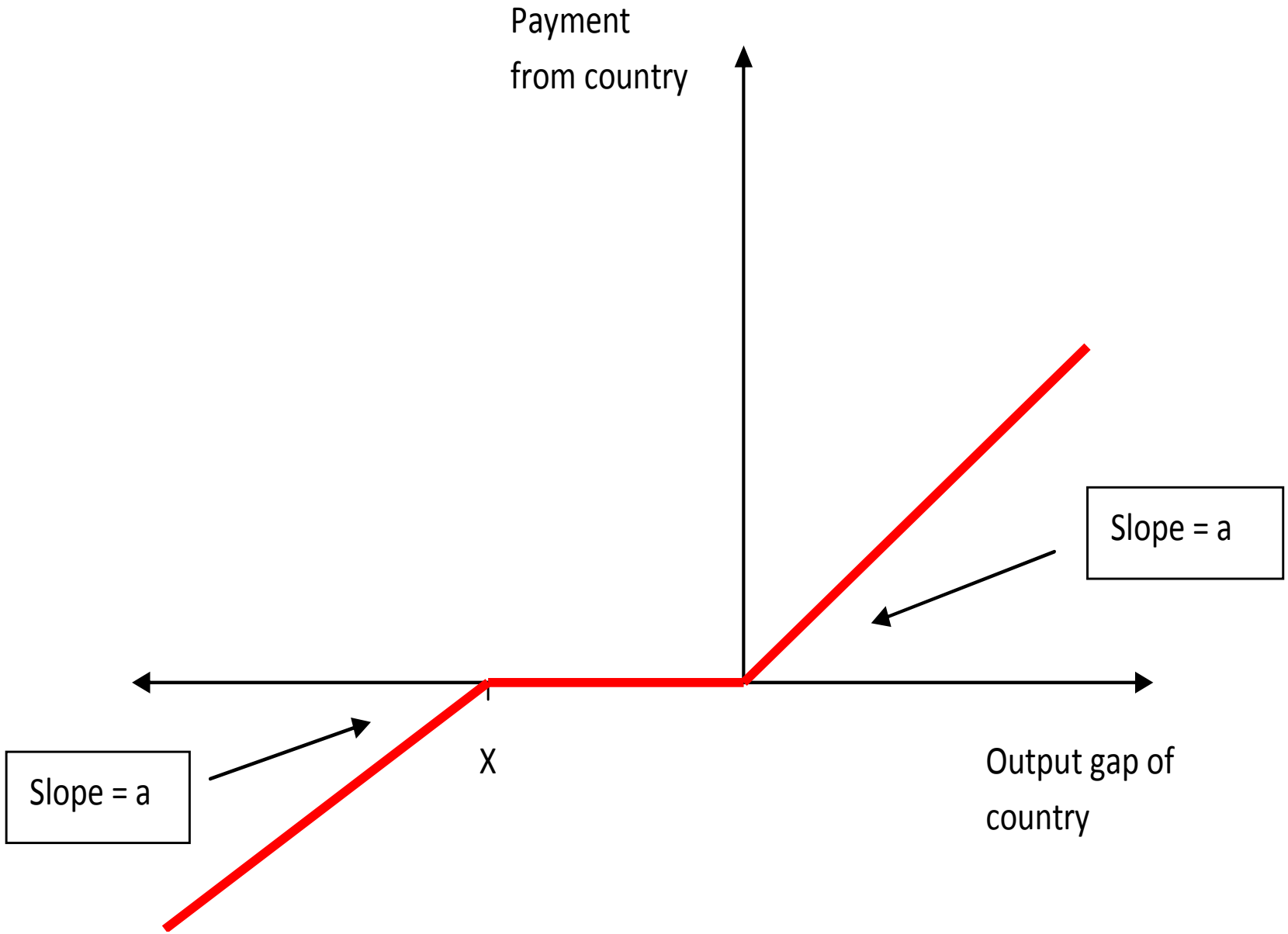


When EMU slumps

Payment when area wide average gap is negative (downturn):



Scheme 4: Preferred scheme to stabilise both relative and common shocks



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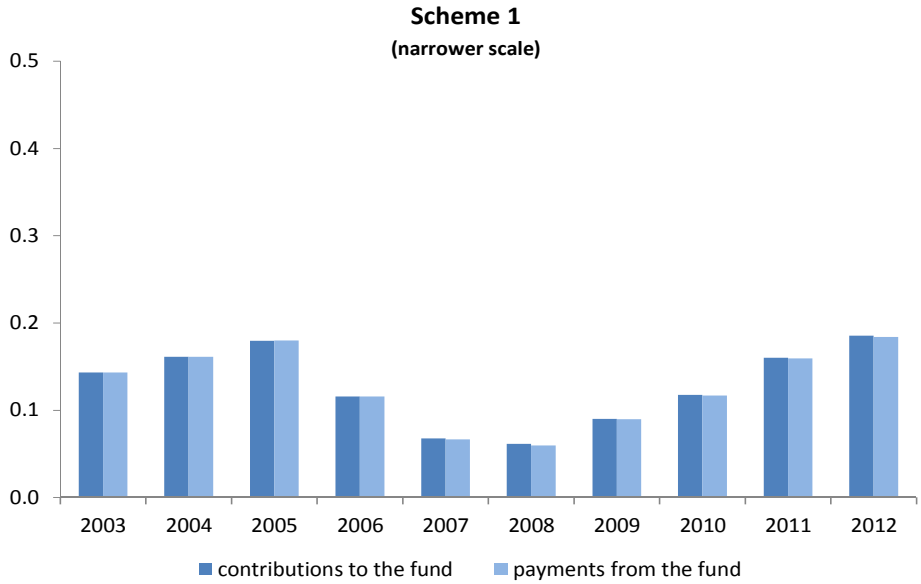
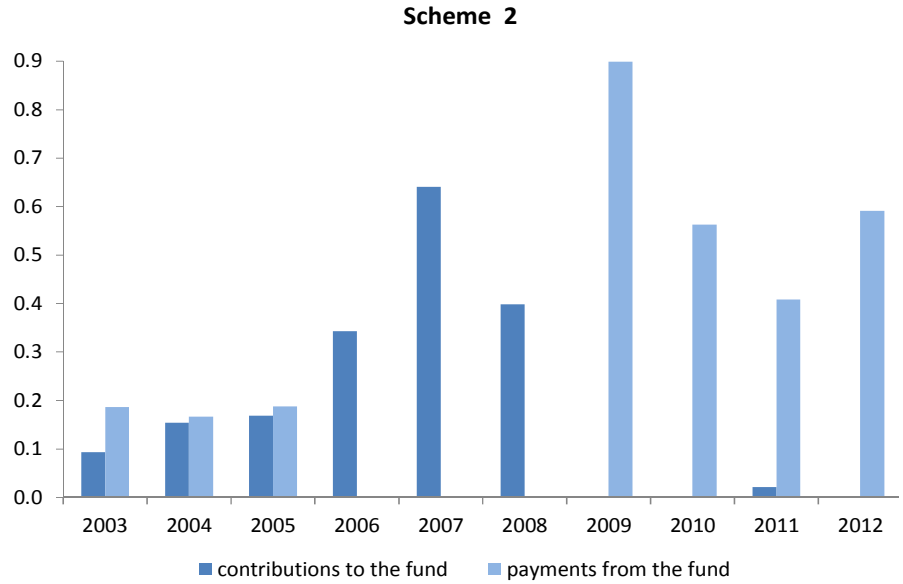
Summary statistics for the schemes
Ex post data, 2003-2012

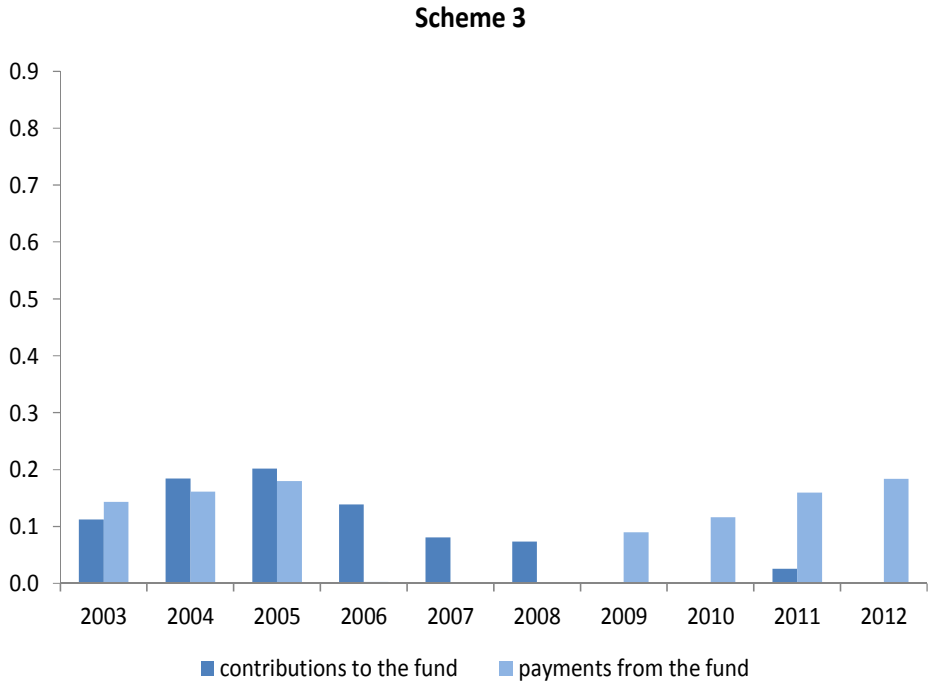
	Frequency of scheme activity	Mean receipt	Mean payment
	%	% national GDP	
Scheme 1	*100*	0.3	0.3
Scheme 2	*100*	0.6	0.5
Scheme 3	*68*	0.4	0.4
Scheme 4	*81*	0.5	0.5

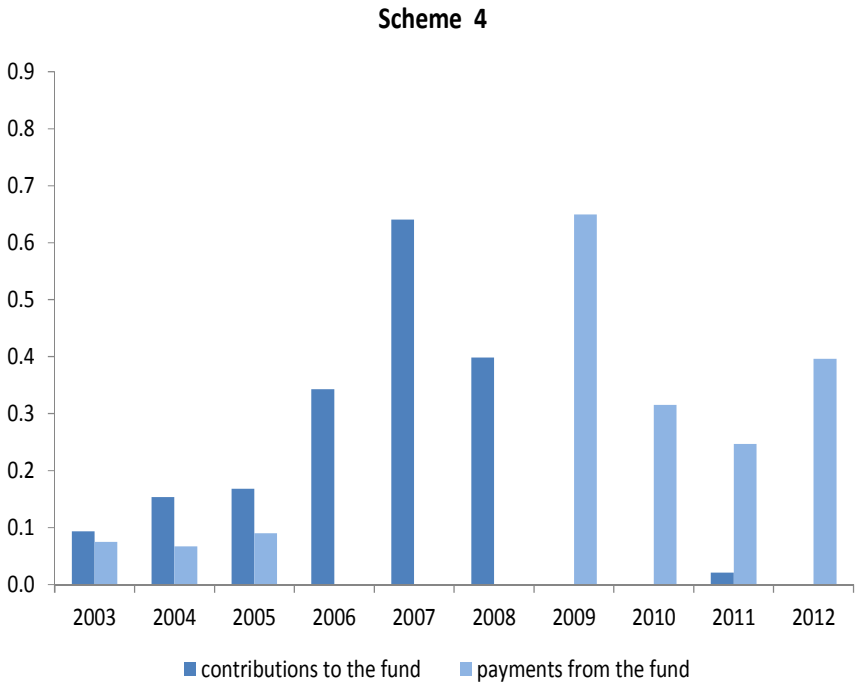
Flows to and from the fund

(% area GDP)









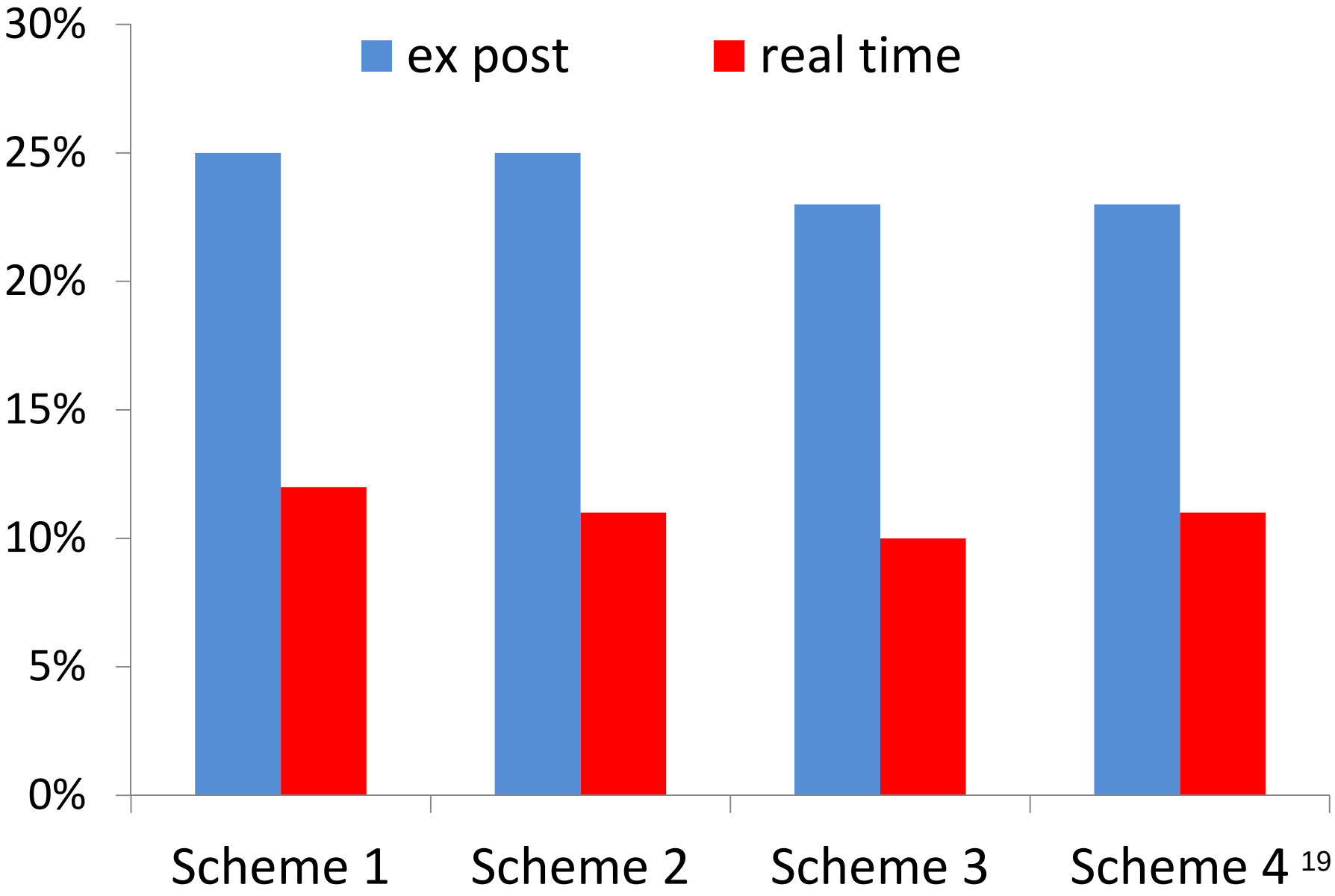
Stabilisation properties
Ex post data, 2003-2012

	Scheme 1	Scheme 2	Scheme 3	Scheme 4
	Pure asymmetric	Pure asymmetric and common	Mainly asymmetric	Asymmetric and common + thresholds
Relative stabilisation	25%	25%	23%	23%
Absolute stabilisation				
Simple average	8%	25%	11%	18%
Weighted average	6%	25%	9%	19%
Cumulated balance (% area-wide GDP)	0.0	-1.2	-0.2	0.0
Average frequency of fund activity	100%	100%	68%	81%

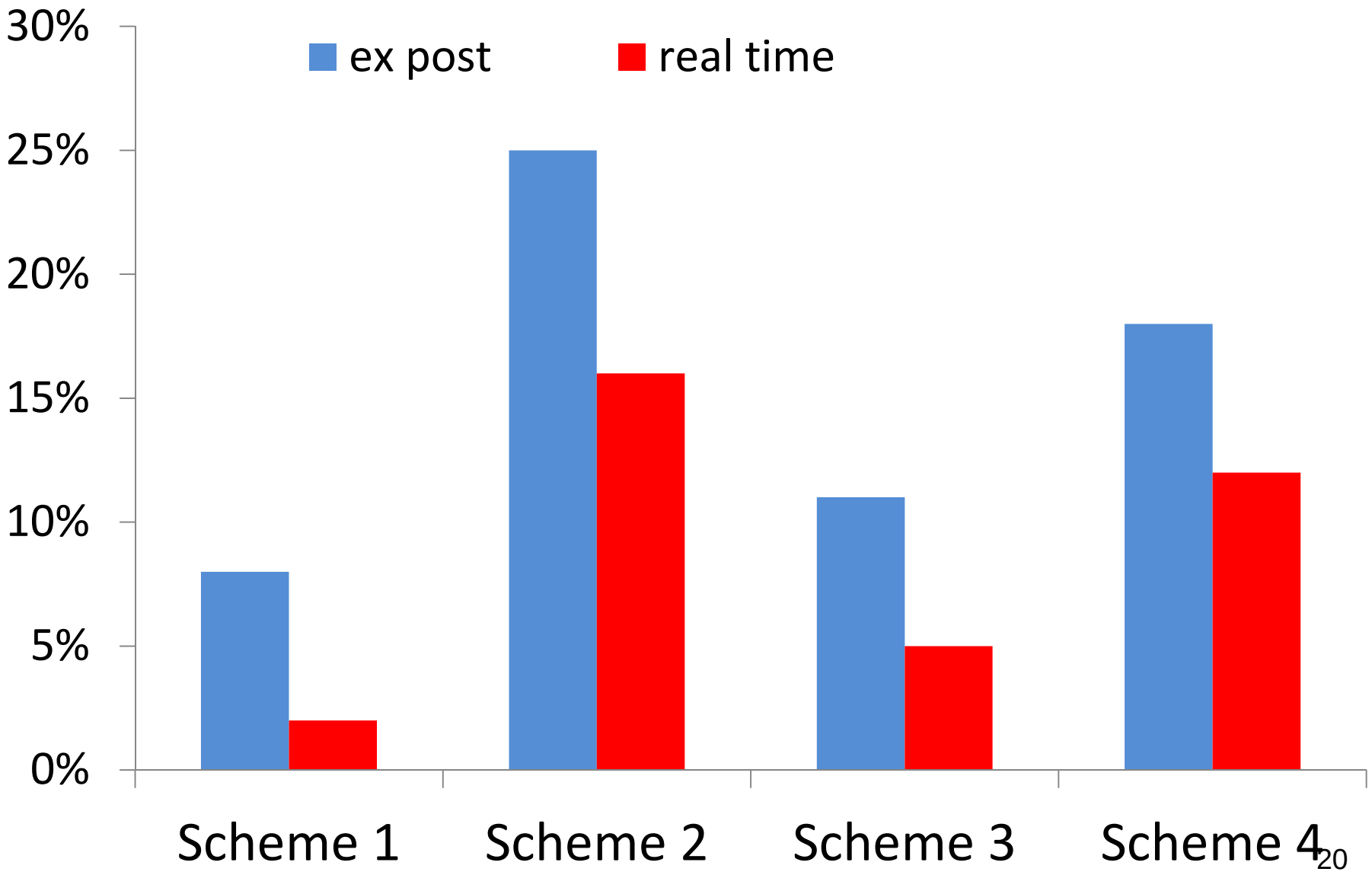
Stabilisation properties over a longer period
Ex post data, 1991-2012

	Scheme 1	Scheme 2	Scheme 3	Scheme 4
	Pure asymmetric	Pure asymmetric and common	Mainly asymmetric	Asymmetric and common + thresholds
Relative stabilisation	25%	25%	21%	22%
Absolute stabilisation *Simple average*	9%	25%	12%	19%
Weighted average	7%	25%	10%	19%
Cumulated balance (% area-wide GDP)	0.0	0.0	0.2	2.0
Average frequency of fund activity	100%	100%	62%	73%

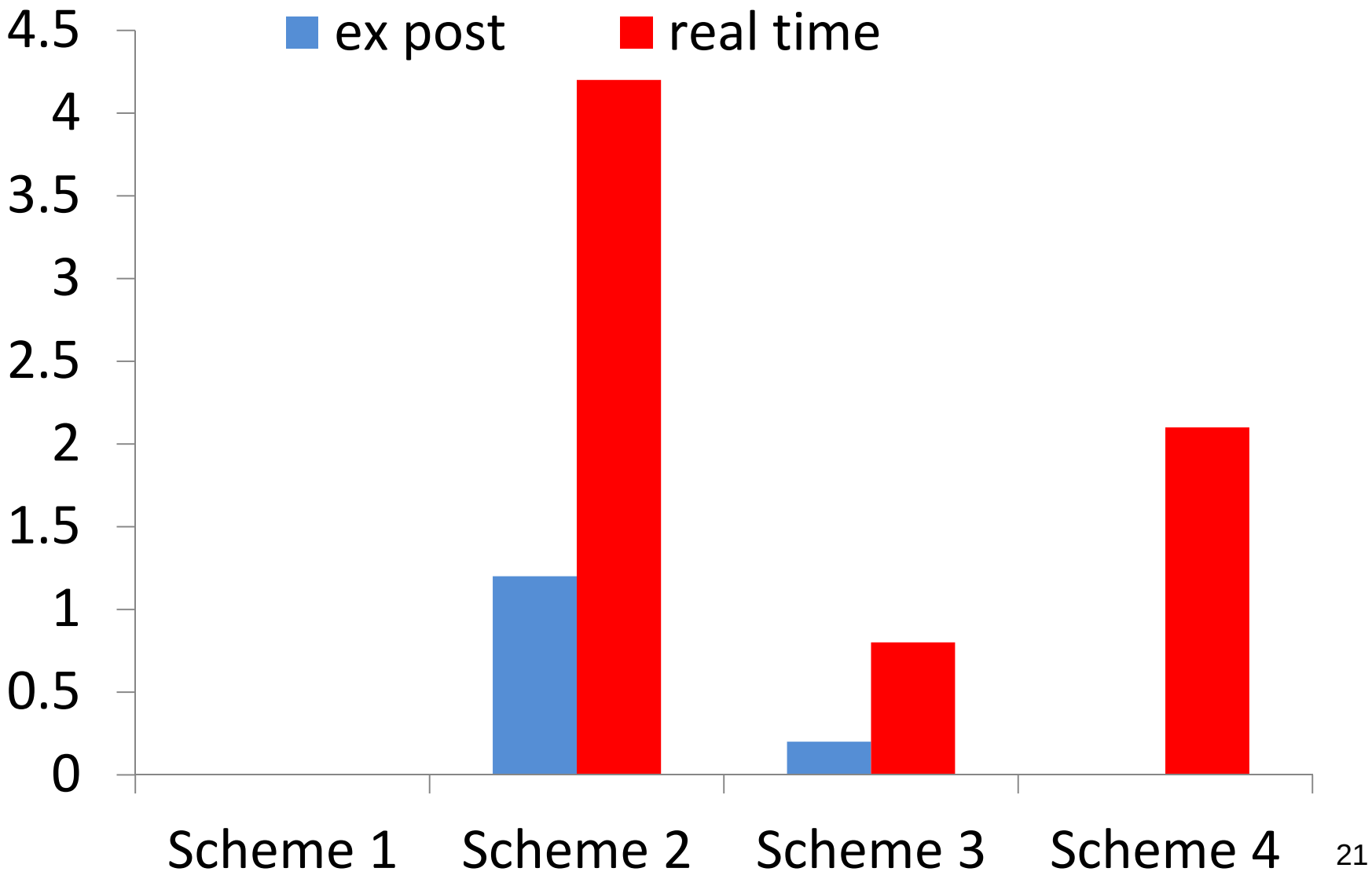
Real time vs ex post: relative stabilisation



Real time vs ex post: absolute stabilisation



Budgetary costs (% euro area GDP)



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Summary characteristics of the schemes

Scheme 1	Scheme 2	Scheme 3	Scheme 4
Only asymmetric shocks Can be procyclical	All asymmetric and common shocks	Focuses on asymmetric shocks Focuses on large shocks Avoids procyclicality	Both asymmetric and common shocks Not intervening in 'normal times'
Always balanced	Significant budgetary risk	Little budgetary risk	Modest budgetary risk

Stabilisation properties
Real time data, 2003-2012

	Scheme 1	Scheme 2	Scheme 3	Scheme 4
	Pure asymmetric	Pure asymmetric and common	Mainly asymmetric	Asymmetric and common + thresholds
Relative stabilisation	12%	11%	10%	11%
Absolute stabilisation *Simple average*	2%	16%	5%	12%
Weighted average	2%	13%	2%	11%
Cumulated balance (% area-wide GDP)	0.0	-4.2	-0.8	-2.1
Average frequency of fund activity	100%	100%	61%	74%

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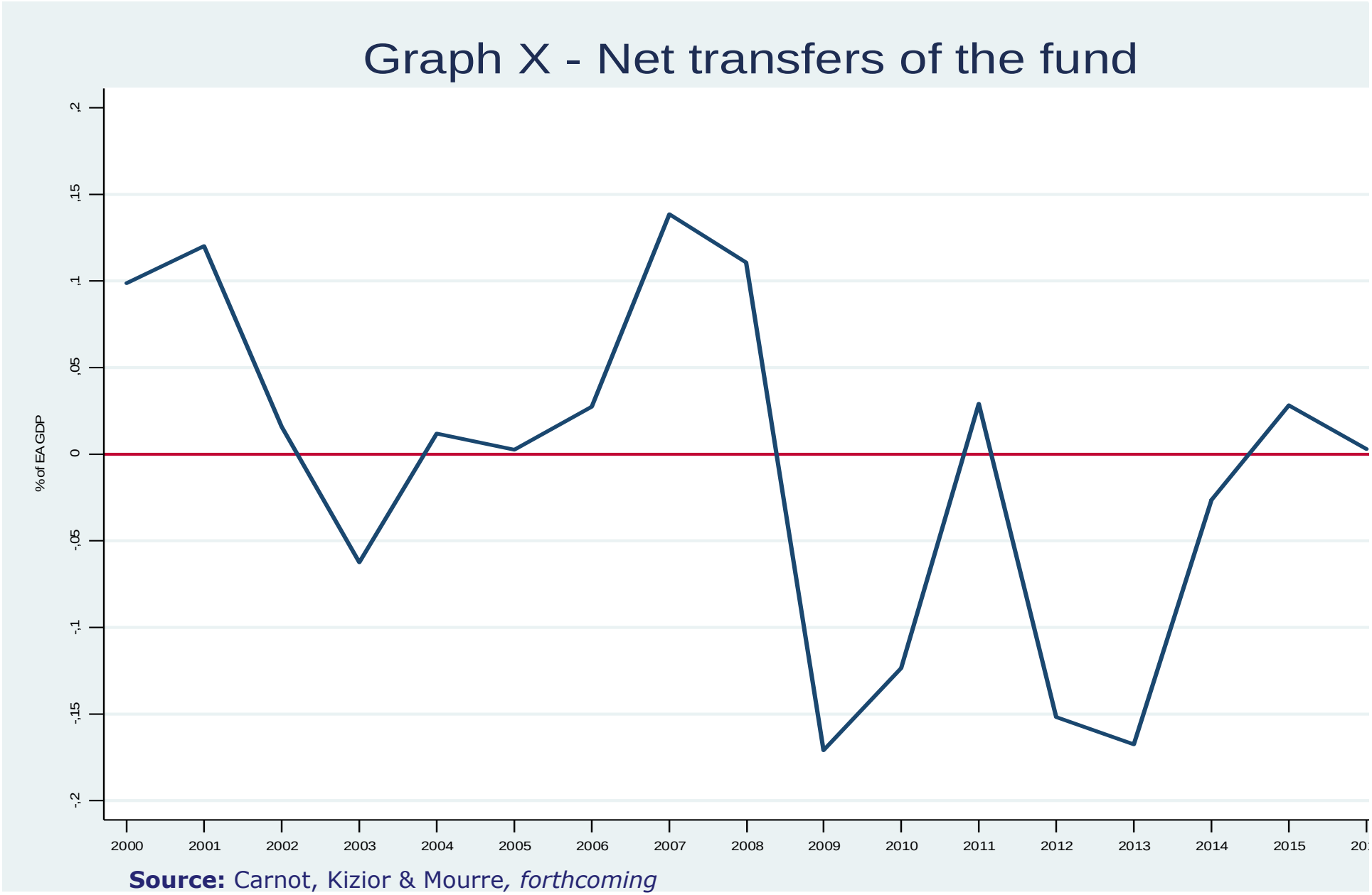
An extension

- Using output gap: could we do better?
- Yes, using unemployment as the triggering variable! Easier to communicate, observable, little revised and harmonised
- Using a double condition with level and change
- But similar features: automatic, symmetric functioning and broadly balance (see Carnot, Kizior & Mourre, *forthcomin*g)

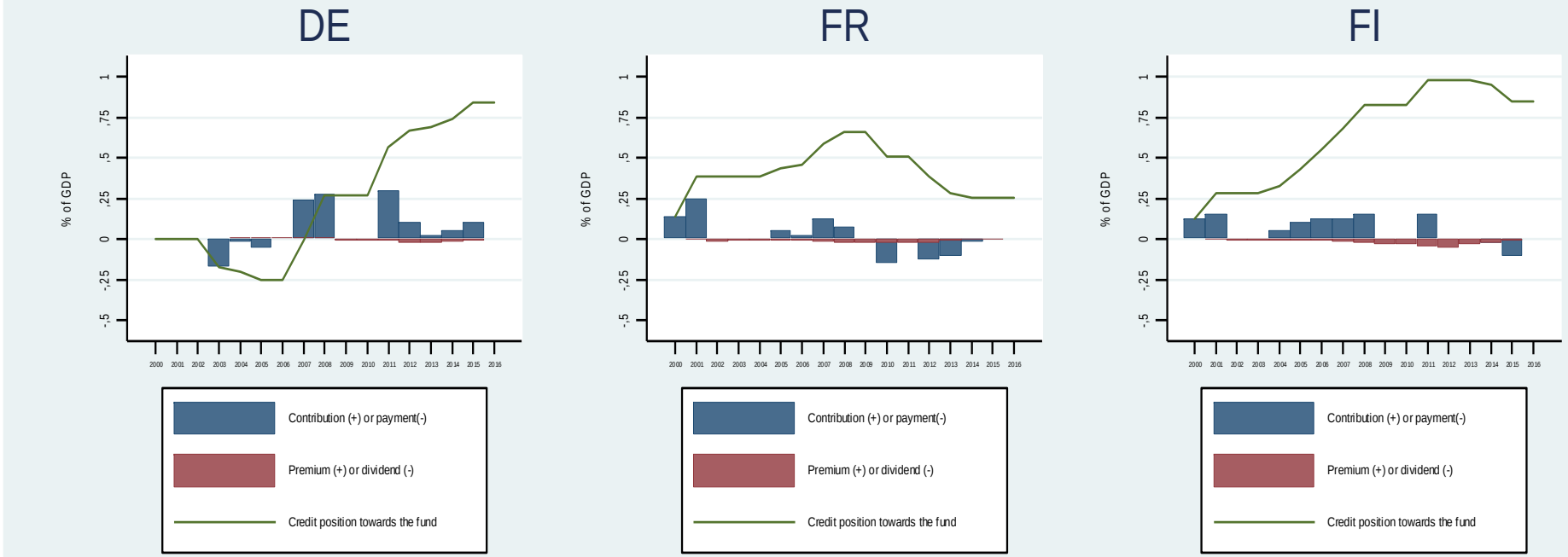
An extension: broadly balanced



Source: Carnot, Kizior & Mourre, *forthcoming*

An extension: stabilisation

Annual transfer



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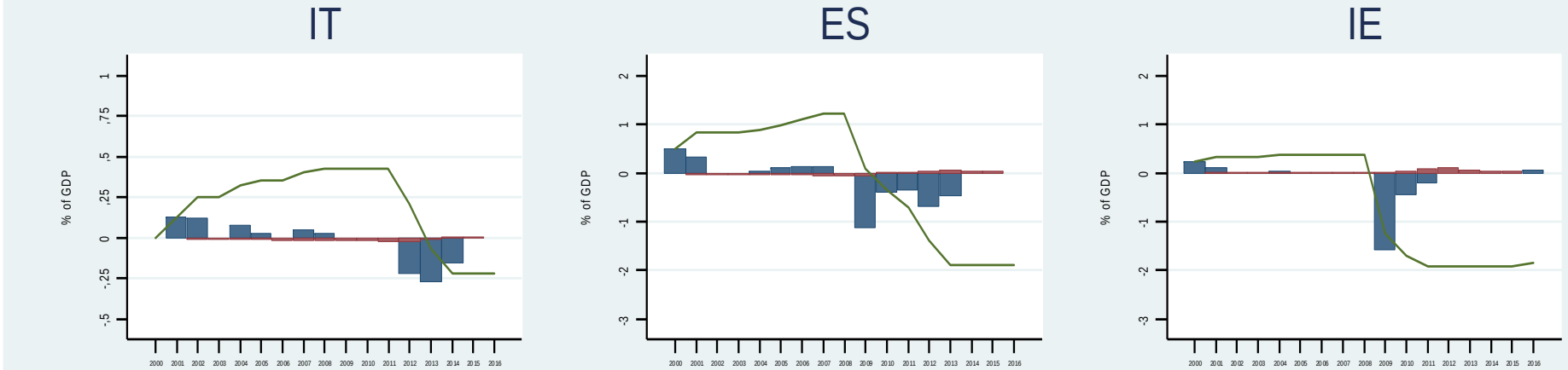
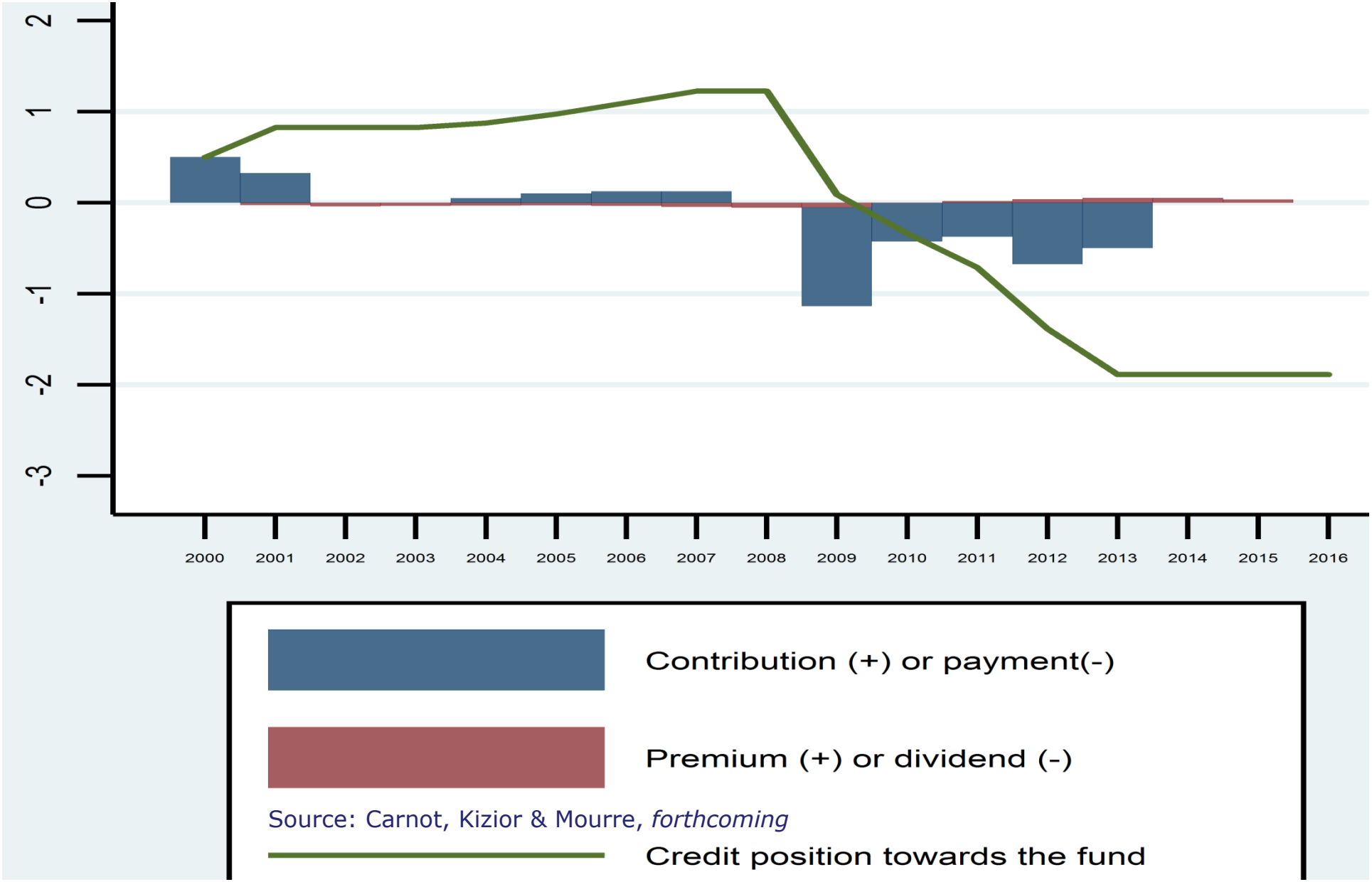


An extension: stabilisation

Annual transfer: eg ES



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Thank you for your attention

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20 May 2016

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Summary statistics for the schemes
Real-time data, 2003-2012

	Frequency of scheme activity	Mean receipt	Mean payment
	%	% national GDP	
Scheme 1	100	0.3	0.3
Scheme 2	100	0.5	0.3
Scheme 3	61	0.3	0.3
Scheme 4	74	0.5	0.3