

New Advantages in Tying One's Hands: Supervision, Monetary Policy and Central Bank Independence

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Introduction

- ▶ Recent financial crisis and central bank interventions:
 - ▶ Wide intervention on liquidity aggregate
 - ▶ Interbank market operation
 - ▶ Diversified central bank reactions:
 - Bilateral lending
 - Increased volume of the open market operations
 - Softer policies

- ▶ Impact on economic performance of different interventions

- ▶ Cost-benefit analysis of policy makers in deciding the shape of financial supervision structure

Design of a financial supervisory structure

- ▶ Literature on financial supervision models:
 - ▶ Single vs multiple supervisory authorities
 - ▶ Abrams and Taylor (2002), Masciandaro (2006, 2007),
 - ▶ Masciandaro and Quintyn (2008), Cihak and Podpiera (2007)
 - ▶ Unification outside the central bank
 - ▶ Central bank involvement in financial supervision and CB fragmentation effect
 - ▶ Masciandaro (2005)
- ▶ No 'superior' model of supervision:
 - ▶ Schoenmaker (2003) and Quintyn et al. (2006)
- ▶ Recent evidence (before crisis): unique supervisors different from the central banks

Financial Supervision after the crisis

- ▶ 2007-2008 financial crisis and reforms in central banking
 - ▶ Obama's White Paper
 - ▶ European Systemic Risk Board
 - ▶ German BaFin
 - ▶ UK's FSA

- ▶ Assigning banking supervision to Central Banks
 - ▶ Pros: (Cihak & Podpiera, 2007)
 - information advantage
 - reputation
 - ▶ Cons (Masciandaro, 2009; Goodhart, 2000):
 - moral hazard (Goodhart & Shoenmaker, 1995; Llewellyn, 2005)
 - specialization (Goodhart, 2007; Bini Smaghi, 2007)
 - bureaucracy

Monetary policy and Supervisory tasks

- ▶ Literature: two different functions managed by specialized agencies (Goodhart, 2007; Arnone and Gambini, 2007)
- ▶ Temptation of CB to relax monetary policy standard in order to mitigate financial sector problems
 - ▶ Exacerbate both financial and monetary instability
- ▶ Pros may be overcome by cons to create a monopolistic central bank



trade-off between supervision and monetary policy

Research Question(s)

- ▶ What issues concerning the design of the banking supervision framework
 - ▶ To what extent policymakers involve central banks with supervisory tasks? Governance arrangements and supervision concentration (Masciandaro and Quintyn, 2008)
 - ▶ Are policymakers willing to concentrate too many powers in the hand of (independent) central banks? CB independence and financial supervisory task concentration (Freitag & Masciandaro, 2005)
 - ▶ Open the “black box” of independence
- ▶ How the choices on the conduct of monetary policy affect the decision on assigning bank supervisory powers
 - ▶ Do more stringent monetary policy goals influence the decision of assigning supervision to central banks?

Research Approach

- ▶ Positive approach: see what policymakers do and try to provide an interpretation of their choices
- ▶ Policymakers: cost effectiveness criteria
- ▶ Decision on how to assign supervisory tasks:
 - ▶ Natural bias towards CB? (information, reputation)
 - ▶ The role of monetary policy (moral hazard, CB's tied hands)
 - ▶ Decision depends on the context and policymaker type

Summary results:

- ▶ Central banks should be assigned also with supervisory tasks over the banking sector
- ▶ Different dimensions of independence have different impacts on the choice to give central banks with supervisory powers
- ▶ The definition of 'precise' statutory mandates in terms of monetary policy have a significant impact on the decision to empower central banks also with supervisory tasks

Presentation Overview

- ▶ Data
 - Measures and aspects of central bank independence
 - Central bank statutory goals
- ▶ Model
- ▶ Results
- ▶ Discussion

Data and Variables

- ▶ **Sample:** 88 countries worldwide and at different stage of economic development

- ▶ **CBBA:** central bank's involvement in banking supervision

- ▶ **Alternative definitions of CB's Independence:**
 - Grilli, Masciandaro, Tabellini (1991) GMT Index:
 - 15 criteria of political and operational independence
 - Distinction: GMT_p (political independence)/GMT_o (operational independence)
 - Single criteria of political and operational independence

Grilli-Masciandaro-Tabellini Index (1991)

POLITICAL INDEPENDENCE	Label	GMTp	GMTp _bis	GMTp _ter
(1) governor is appointed without government involvement	Governors' Appointment			
(2) governor is appointed for more than five years	Governor's Terms of office			
(3) board of directors is appointed without government involvement	Board's Appointment			
(4) board is appointed for more than five years	Board's Terms of Office			
(5) there is no mandatory participation of government representative(s) in the board	Government participation in the Board			
(6) no government approval is required for formulation of monetary policy	Government approval for monetary policy			
(7) central bank is legally obliged to pursue monetary stability as one of its primary objectives	Monetary Stability Primary Objective			
(8) there are legal provisions that strengthen the central bank's position in the event of a conflict with the government.	CB position in conflict with government			

Grilli-Masciandaro-Tabellini Index (1991)

OPERATIONAL INDEPENDENCE	Label	GMT₀	GMT₀ _bis	GMT₀ _ter
(1) there is no automatic procedure for the government to obtain direct credit from the central bank	No direct credit to Government			
(2) when available, direct credit facilities are extended to the government at market interest rates	Market interest rates for Government			
(3) this credit is temporary	Temporary credit for Government			
(4) and for a limited amount	Credit amount limit			
(5) the central bank does not participate in the primary market for public debt	No participation in market for public debt			
(6) the central bank is responsible for setting the policy rate	Policy rate setting responsibility			
(7) the central bank has no responsibility for overseeing the banking sector	Banking sector supervision			

Data and Variables

▶ Central bank's statutory Goal (**GOAL**)

- a. Price and inflation control
- b. Liquidity control
- c. Output/real economy growth
- d. Others (residual)

Inflation control	Liquidity control (M2)	Output growth	Other
...'The primary objective of the central bank is to achieve and maintain price stability through the control of inflation'.	The central bank achieves price stability using a target growth rate for a monetary aggregate, such as reserve money, M1, or M2	'The objective of the central bank is to contribute to the economic and social development of the country...'	Others, including ...'preserving the value of the currency', mostly intended as functional to other objectives.

Banking Supervision, CB Independence and Statutory Goals

	CBBA	GMT	GMT	GMTp	GMTp	GMTo	GMTo	Statutory goals (GOAL)			
	1	2	3	4	5	6	7	8			
	Average=0.67		Average=0.57		Average=0.76						
	= 1 in 52 countries	(below average)	(above average)	(below average)	(above average)	(below average)	(above average)	1	2	3	4
Inflation rate											
Below 5%	48.08	41.03	67.35	46.81	65.85	45	78.57	67.24	50.00	27.27	27.27
Betw. 5% and 10%	21.15	25.64	18.37	21.28	21.95	25	14.29	15.52	50.00	45.45	18.18
Above 10%	30.77	33.33	14.29	31.91	12.20	30	7.14	17.24	0.00	27.27	54.55
Income group											
Low income	5.77	7.69	0	6.38	0	5	0.00	1.72	0.00	0.00	9.09
Lower middle	26.92	30.77	18.37	25.53	21.95	28.33	14.29	20.69	33.33	54.55	9.09
Upper-mid. Income	32.69	33.33	30.61	34.04	29.27	36.67	21.43	27.59	33.33	27.27	54.55
High income	34.62	28.21	51.02	34.04	48.78	30	64.29	50	33.33	18.18	27.27
Corruption											
(average=4.73)											
High corruption (below average)	30.77	28.21	51.02	36.17	46.34	35	53.57	50	33.33	18.18	27.27
Low corruption (above average)	69.23	71.79	48.98	63.83	53.66	65	46.43	50	66.67	81.82	72.73

Estimation technique

▶ Probit estimation:

$$CBBA_i = \alpha + \beta GMTp_i + \gamma GMTo_i + \sum_{n=1}^N \delta GOAL_{ni} + \sum_{m=1}^M \phi_m x_{mi} + \varepsilon_i$$

▶ Additional Regressors (x_{mi}):

- Population
- Continental fixed effects
- Corruption
- Religion
- Measures of development (OECD membership, unemployment rate)
- Measures of financial sector development (market/bank based; bank assets/GDP, latitude)

Results (I)

	(1)	(2)	(3)	(4)
GMTp	1.179 (1.027)			
GMTo	-11.38*** (2.278)			
GMTp_bis		-0.02 (0.736)	0.304 (0.715)	
GMTo_bis		-4.416** (1.925)		-4.513** (1.969)
GMTo_ter			-3.956** (1.818)	
GMTp_ter				-0.256 (0.675)
GOAL1: inflation	3.897*** (1.095)	1.916** (0.774)	1.727** (0.758)	1.914** (0.768)
GOAL2: M2	6.798*** (1.627)	3.843*** (1.266)	3.582*** (1.24)	3.880*** (1.275)
GOAL3: output	4.149*** (1.03)	1.909** (0.868)	1.728** (0.815)	1.934** (0.863)
Constant	8.437*** (2.117)	4.999** (2.377)	4.264** (2.117)	5.076** (2.41)

Results (II)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
GMTp_1: Gov	0.33							
appointment	(0.406)							
GMTp_2: Gov Tof		-0.014						
Office		(0.385)						
GMTp_3: Board			-0.021					
Appointment			(0.524)					
GMTp_4: Board Tof				0.537				
Office				(0.413)				
GMTp_5: Gov					-0.157			
participation					(0.371)			
GMTp_6: Gov						0.0653		
approval						(0.382)		
GMTp_7: Monetary							0.0179	
stability							(0.482)	
GMTp_8: CB								0.0706
confict with gov								(0.435)
GOAL1: inflation	0.368	0.382	0.389	0.486	0.393	0.388	0.385	0.377
	(0.584)	(0.589)	(0.569)	(0.579)	(0.564)	(0.565)	(0.565)	(0.566)
GOAL2: M2	1.884*	1.878*	1.874	2.003*	1.986*	1.856*	1.875	1.882*
	(1.131)	(1.141)	(1.144)	(1.075)	(1.135)	(1.124)	(1.142)	(1.134)
GOAL3: output	0.452	0.499	0.506	0.516	0.544	0.499	0.5	0.501
	(0.699)	(0.686)	(0.673)	(0.715)	(0.679)	(0.674)	(0.672)	(0.679)
Constant	1.647*	1.636*	1.625	1.830*	1.642	1.624	1.608	1.652*
	(0.938)	(0.926)	(1.225)	(1.091)	(1.245)	(1.222)	(1.382)	(0.997)

Results (III)

	(1)	(2)	(3)	(4)	(5)	(6)
GMTo_1: No credit to Gov	-1.389 (0.862)					
GMTo_2: Mkt rate to Gov		-1.639*** (0.502)				
GMTo_3: Temporary credit			0.166 (0.943)			
GMTo_4: credit limit				-0.55 (0.875)		
GMTo_5: No mkt for public debt					-1.465** (0.582)	
GMTo_6: policy rate setting						-1.196** (0.583)
GOAL1: inflation	0.862 (0.718)	0.951 (0.581)	0.359 (0.611)	0.573 (0.712)	0.53 (0.658)	0.783 (0.663)
GOAL2: M2	2.306* (1.188)	2.415** (1.075)	1.839 (1.195)	2.068* (1.22)	2.787** (1.342)	2.427* (1.25)
GOAL3: output	0.95 (0.797)	0.707 (0.664)	0.469 (0.726)	0.696 (0.808)	0.805 (0.725)	0.889 (0.796)
Constant	1.903 (1.498)	2.536 (1.706)	1.463 (1.919)	2.04 (1.697)	3.387* (1.822)	3.155* (1.834)

Conclusions

- ▶ Assigning supervisory powers to central banks seems a “natural choice” for policymakers
Interpretation: information advantage, reputation, resources.
- ▶ Different aspects of CB’s independence have different effects on supervision assignment:
 - ▶ Stronger operational independence implies lower supervisory powers
 - ▶ Political independence interpreted as government interference has no effects on supervisory tasks
 - ▶ Tying agency’s hands with clearly specified/measurable statutory goals helps mitigating the trade-off
- ▶ Macro-prudential supervision to CB?