Financial stability governance and central bank communication*

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*The views in this presentation are the responsibility of the authors and not those of the BIS or the Federal Reserve.

What we do in this paper

We investigate how differences in governance frameworks explain central banks' (CBs) financial stability communication strategies and their effects on the evolution of the financial cycle.

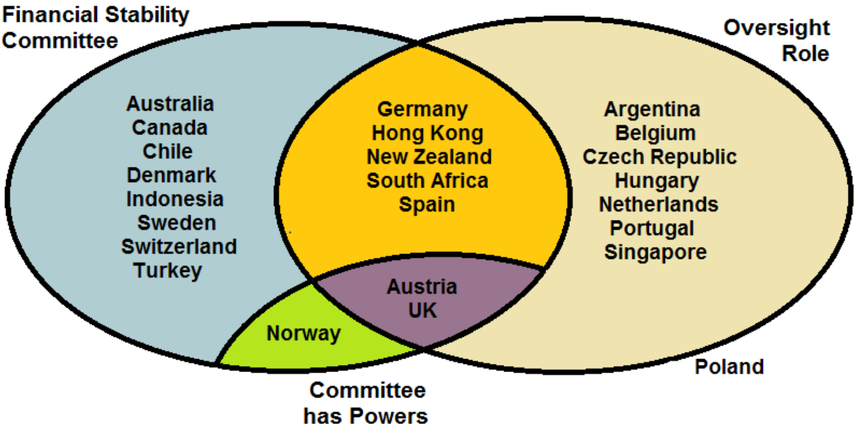
- Communication by CBs that are part of a financial stability committee or have a supervisory role is **relatively more** effective at alleviating the deterioration of financial cycle conditions.
- Communication strategy by CBs with these characteristics is to transmit a **calmer** message: either they have tools other than communication or they do not need to "warn" other agencies with the ability to implement these tools.

Related literature

This paper bridges a gap between the literature on financial stability governance frameworks and the literature on financial stability communication strategies and their effectiveness

- Renewed interest in central bank governance: Edge and Liang (2017); Masciandaro and Volpicella (2016)
- Central bank communication mostly focused on monetary policy: Blinder et al. (2008); Ericsson (2016); and Stekler and Symington (2016)
- Most literature on financial stability communication is descriptive: Allen et al. (2004); Cihak (2006 and 2012)
- Financial stability communication strategies are homogenous: Osterloo et al. (2011); Born et al. (2014); Harris et al. (2019); Correa, Garud, Londono, and Mislang (2017)
- Other literature on news-based early-warning indicators: Huang et al. (2019)

Governance characteristics



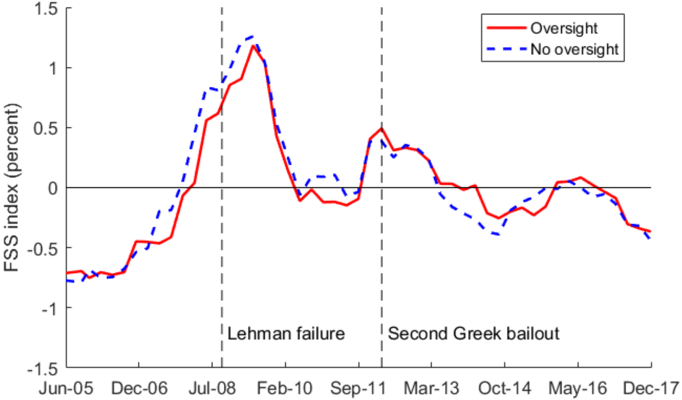
Financial stability communication

- Using the text in FSRs, we calculate a sentiment index as follows:

$$FSS_{country,period} = \frac{\#Negative\ words - \#Positive\ words}{\#Total\ words},$$

where the positive and negative connotation of words is taken from the financial stability dictionary in Correa, Garud, Londono, and Mislang (2017).

Financial stability communication and governance



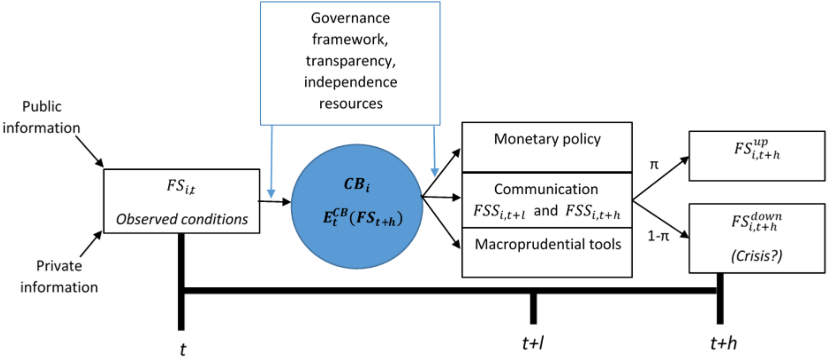
Financial stability conditions

- Financial cycle characteristics:
  - ⇒ Slow-moving credit variables: Credit-to-GDP gap, debt-service ratio (DSR), total credit to nonfinancial corportations
  - ⇒ High-frequency financial cycle characteristics: bank CDS, SRISK-to-GDP ratio, valuation pressures
- Financial stability events:
  - ⇒ Turning points in credit-to-GDP gap (local maximums followed by one-year drops in the gap)

FS communication, governance, and FS conditions

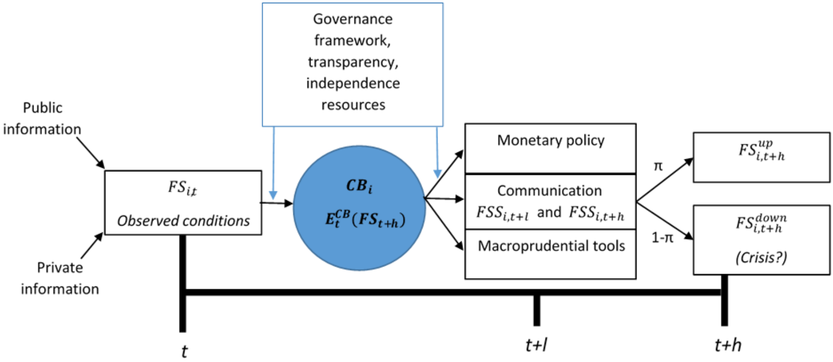
Effectiveness of Communication: Is the wolf gone?
Communication Strategy: How close was the wolf? Can we prevent the damages it might cause?

FS communication, governance, and FS conditions



Period 1: CB in country i observes initial financial conditions, $FS_{i,t}$, and forms expectations about final financial conditions, $E_{i,t}^{CB}(FS_{t+h})$

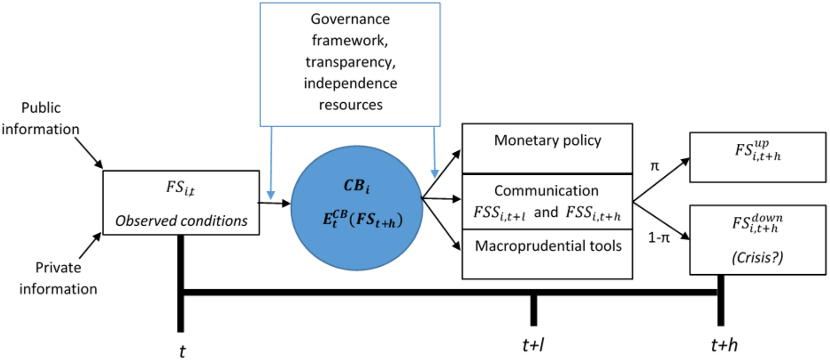
FS communication, governance, and FS conditions



Period 2: CB communicates assessment of current and expected conditions, $FSS_{i,t+l}$ and $FSS_{i,t+h}$

Communication strategy: $FSS_{i,t+l}$ could differ from $FS_{i,t}$ and/or $FSS_{i,t+h}$ from $E^{CB}_{i,t}(FS_{t+h})$

FS communication, governance, and FS conditions



Period 3: Final conditions, which depend on previous conditions, tools implemented by CB, and shocks

Effectiveness of communication: prevent the surge of financial crises

1. Effects of FS communication

$$CGDG_{i,t+4} = \alpha_i + (\beta_1 + \underbrace{\beta_2 D_{i,t-1}})FSS_{i,t} + \beta_{AR} CGDPG_{i,t} + \epsilon_{t+4},$$

where $D_{i,t}$ takes the value of 1 if the central bank has one of the governance characteristics.

		Committee	FS mandate	Oversight	Committee+ Oversight	Committee+ mandate
β_1	-0.27	0.55	-0.68	-0.04	-0.14	0.09
β_2		-1.73**	0.45	-0.42	-0.73	-1.3
$\beta_1+\beta_2$		-1.19*	-0.23	-0.46	-0.87	-1.22
R^2	0.69	0.69	0.69	0.69	0.69	0.69
N	1544	1522	1522	1522	1522	1522

1. Effects of FS communication

$$DSR_{i,t+4} = \alpha_i + (\beta_1 + \underbrace{\beta_2 D_{i,t-1}})FSS_{i,t} + \beta_{AR} DSR_{i,t} + \epsilon_{i,t+4}$$

		Committee	FS mandate	Oversight	Committee+ Oversight	Committee+ mandate
β_1	-0.17	-0.05	-0.38	-0.03	-0.15	-0.11
β_2		-0.25**	0.21	-0.42	-0.21	-0.17*
$\beta_1+\beta_2$		-0.30*	-0.17	-0.44*	-0.36	-0.28
R^2	0.54	0.55	0.54	0.55	0.54	0.54
N	1153	1136	1136	1136	1136	1136

2. Financial stability communication around crises

Are the effects of FS communication different around crises?

$$CGDPG_{i,t+4} = \alpha_i + (\beta_1 + \beta_2 C + (\beta_3 + \beta_4 C) D_{i,t-1}) FSS_{i,t} + \ldots,$$

where C is a turning point (local maximum) in credit-to-GDP gap.

	Committee	FS mandate	Oversight	Committee+ Oversight	Committee+ mandate
β_1	0.08	-0.74	-0.33	-0.49	-0.56
β_2	3.94*	0.57**	1.90***	3.11**	3.07**
$\beta_1 + \beta_2$	4.02	-0.18	1.57*	2.62	2.51
β_3	-1.43**	0.18	-0.46	-0.52	-0.30
β_4	-2.56	2.48*	3.33	-2.59	-3.10**
$\beta_3 + \beta_4$	-3.99*	2.66	2.87	-3.10	-3.40

Probit setting for the predictive power of FSS for turning points for CBs with and without a certain characteristic:

$$C_{i,t+4} = f(FSS_{i,t}, D_i)$$

	Committee		Committee powers		FS mandate		Oversight		Committee+ oversight		Committee+ mandate	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
FSS	0.06	0.24**	-1.67***	0.21***	0.16	0.30*	-0.05	0.32***	-0.33	0.25***	0.05	0.24**
	[0.14]	[0.09]	[0.20]	[0.06]	[0.09]	[0.13]	[0.14]	[0.05]	[0.25]	[0.06]	[0.15]	[0.08]

Potential identification problem: very "succesful" CBs will be able to prevent all crises. Our results hold if we consider turning points that are not accompanied or followed by (Laeven and Valencia) financial crises

Does CB communication deviate from observed financial cycle characteristics?

$$FSS_{i,t+1} = \alpha_i + (\beta_1 + \beta_2 D_{i,t-1}) RHS_{i,t} + \beta_{AR} FSS_{i,t-4} + \epsilon_{i,t+1},$$

where $D = 1$ for CBs in interagency committees

	CGDP gap	log CGDP	DSR	SRISK	Bank CDS	Bank Volatility	log house prices	log hsehold credit
β_1	0.01**	0.41	0.10**	0.08***	0.09	0.02***	0.00	0.37
β_2	0.00	-0.06**	-0.02*	-0.01	0.05	0.00	-0.07**	-0.08**
$\beta_1 + \beta_2$	0.01	0.43	0.08**	0.08***	0.13*	0.02***	-0.31	0.35
R^2	0.10	0.08	0.15	0.12	0.11	0.18	0.10	0.09
N	1550	1553	1153	1550	1138	1764	1847	1544

3. Communication strategies

Is CB communication coherent?

Is the message "calmer" because CBs implement macro prudential policies?

$$Cumpru_{i,t+4} = \alpha_i + (\beta_1 + \beta_2 D_{i,t-1}) FSS_{i,t} + \beta_{AR} Cumpru_{i,t} + \epsilon_{t+4},$$

		Committee	Committee powers	FS mandate	Oversight	Committee+ Oversight	Committee+ mandate
β_1	-0.04	-0.15*	-0.06	-0.36**	-0.02	-0.03	-0.14*
β_2		0.25*	0.61***	0.33*	-0.06	-0.10	0.27*
$\beta_1+\beta_2$		0.10	0.54***	-0.03	-0.08	-0.13	0.13
R^2	0.68	0.68	0.68	0.68	0.68	0.68	0.68
N	1414	1387	1387	1387	1387	1387	1387

Do they change their monetary policy stance after sentiment deteriorates?

$$IR_{i,t+4} = \alpha_i + (\beta_1 + \beta_2 D_{i,t-1}) FSS_{i,t} + \beta_{AR} IR_{i,t} + \epsilon_{t+4},$$

		Committee	Committee powers	FS mandate	Oversight	Committee+ Oversight	Committee+ mandate
β_1	-0.47***	-0.38***	-0.46***	-0.49	-0.37***	-0.45***	-0.43***
β_2		-0.21**	-0.29	0.02	-0.25*	-0.14	-0.13*
$\beta_1+\beta_2$		-0.59***	-0.75**	-0.47***	-0.62***	-0.59***	-0.56***
R^2	0.45	0.45	0.44	0.44	0.45	0.45	0.45
N	2017	1959	1959	1959	1959	1993	1993

Are changes in monetary policy rates different around crises?

$$IR_{i,t+4} = \alpha_i + (\beta_1 + \beta_2 C + (\beta_3 + \beta_4 C) D_{i,t-1}) FSS_{i,t} + \beta_{AR} IR_{i,t} + \epsilon_{i,t+4},$$

	Committee	Committee powers	FS mandate	Oversight	Committee+ Oversight	Committee+ mandate
β_1	-0.42***	-0.50***	-0.87**	-0.41***	-0.49***	-0.47***
β_3	-0.18*	-0.30	0.38	-0.22	-0.09	-0.10
β_2	-0.06	0.04	0.55	-0.09	-0.01	0.00
β_4	0.25	1.55**	-0.51	0.43**	0.92*	0.13
$\beta_1 + \beta_2$	-0.48***	-0.45***	-0.32	-0.50***	-0.50***	-0.46***
$\beta_3 + \beta_4$	0.07	1.25***	-0.13	0.21	0.83	0.03

4. Conclusions

- Communication by CBs in committees or with an oversight role is relatively more effective at alleviating the deterioration of financial conditions and the surge of financial crises.
- CB with these characteristics transmit a "calmer" message: sentiment deteriorates **less** following a deterioration in financial indicators.
- A "calmer" message could be explained by the ability to implement macro prudential policies or to change the monetary policy rate.