Do Women Matter in Monetary Policy Boards?

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Motivation

- Increasing representation of women in central banks

- Effects of board composition of monetary policy decision-making and performances: heterogeneity and diversity

- Women representation in corporate boards

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- Increasing representation of women in central banks

- Effects of board composition of monetary policy decision-making and performances: heterogeneity and diversity

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- What is the relationship between the gender composition of monetary policy committees and monetary policy decisions?

- Data on women in Central Banking are not immediately available

Contribution

- A rich and new dataset with information of members of Monetary Policy Committees in 86 countries for the period 2001-2017

- A measure of gender representation in central bank boards for a large sample of countries

- Investigation of the potential drivers of an increased presence of women in central banks

- Implications for the conduct of monetary policy

Relation to literature

Monetary Policy Committees and decision-making:

- More efficient decisions via heterogeneity and diversity (Blinder, 2007)

- Heterogeneity can trigger regularities (Eijffinger et al., 2015)

- Impact educational, career, tenure or internal vs external members on voting behavior (Besley et.al, 2008; Harris et al., 2011; Gohlmann and Vaubel, 2007)

- Dovish vs hawkish attitude of female members (Chappel and McGregor, 2000; Farvaque et al., 2010)

- Dissenting behaviour of female members (Benanni et al., 2014; Lahner, 2015; Eichler and Lahner, 2017)

**Gender diversity and corporate governance:**

- Glass ceiling (Arfken et al., 2004; Profeta et al., 2014)

- Gender and risk aversion/performance (Gneezy et al., 2003, Sapienza et al., 2009; Beck et al., 2012)

Gender in Monetary Policymaking

The share of women in Monetary Policy Committees (MPCs):

- 86 countries over 2001-2017
- Sources: Central Bank Directories 2001-2017, Annual Reports, Legislation and Websites

Figure: Share of women on Monetary Policy Committees (2017)

Legend:
- \>60%
- \>40% to 60%
- \>30% to 40%
- \>20% to 30%
- \>0% to 20%
- 0%
- Missing data
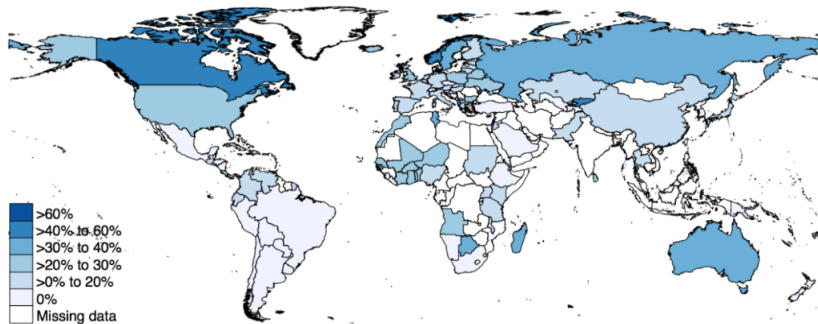
Note: The figure shows the share of women on Monetary Policy Committees in 2017.

Gender in Monetary Policymaking: Data

- Sources: Central Bank Directories and Statutes

United Kingdom (Source of Data: CBD):

Legislative reference:

Monetary policy decisions are taken by the Bank of England's monetary policy committee (MPC) whose members comprise the governor, the two deputy governors, two executive directors responsible for monetary analysis and monetary operations and four non-executive members who are appointed by the chancellor for three year terms.

Governor
Mark Carney*
Term of appointment: 5 years; term began on 1 July 2013;
appointed by the crown.

Deputy Governors
Ben Broadbent* (Monetary Policy)
Nemat (Minouche) Shafik* (Ms) (Markets and Banking)
Jon Cunliffe* (Financial Stability)
Andrew Bailey (Prudential Regulation)

External Members of the Monetary Policy Committee
Kristin Forbes (Ms)*   Ian McCafferty*
~Gertjan Vlieghe*   Martin Weale*

Gender in Monetary Policymaking: Data

- Sources: Central Bank Annual Reports and Statutes

Norway (Source of Data: Annual Reports):

Legislative reference:

Decisions concerning interest rates and other important changes in the use of instruments will normally be taken at the Executive Board's monetary policy meeting held six times a year.

The Executive Board comprises eight members, all appointed by the King in Council. The Governor is Chair and the two Deputy Governors are First Deputy Chair and Second Deputy Chair of the Executive Board. The other five members are not on the staff of Norges Bank. Two alternates for the external members, who attend and have the right to speak at Executive Board meetings, are also appointed.

Norges Bank's Executive Board
Oslo, 20 February 2008

Svein Gjedrem (Chair)	Jarle Bergo (Deputy Chair)	Liselott Kilaas
Vivi Lassen	Brit K. Rugland	Asbjørn Rødseth
Øystein Thøgersen	Jan Erik Martinsen (Employees' representative)	Gunnvald Grønvik (Employees' representative)

Gender in Monetary Policymaking: Data

- Sources: Central Bank Annual Reports and Websites

Evolution of the Share of Women in MPCs

Note: This figure shows the evolution of the share of women on Monetary Policy Committees between 2002 and 2016.

Evolution of the share of women acting as governor or deputy governor
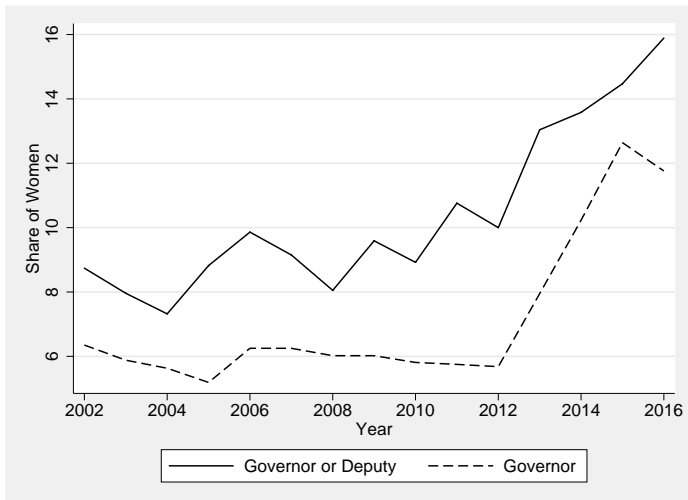
Note: The figure shows the evolution of the share of women acting as central bank governor or deputy governor between 2002 and 2016. The dotted line corresponds to the share of women acting as central bank governor only.

Presence of women on MPCs over time
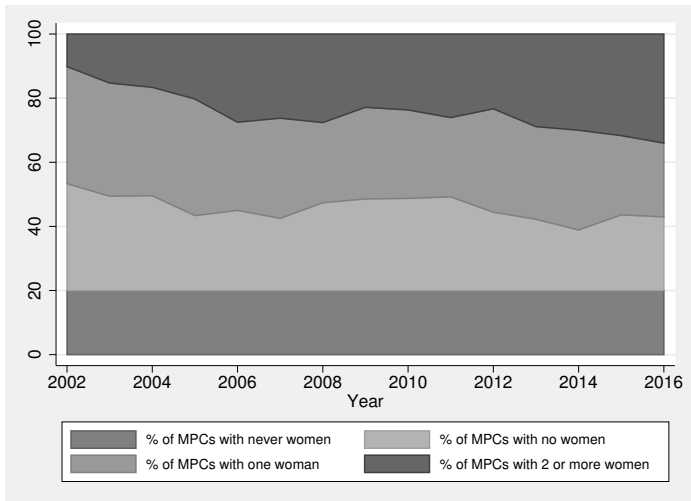
Note: The figure shows the percentage of Monetary Policy Committees that never had a women during the entire 2002-2016 period, the percentage with no women in any given year, and the percentage with one or two and more women.

Share of women on MPCs in 2002 vs 2016

(a) By region
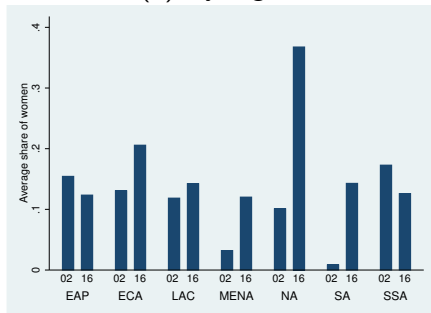
(b) By income group
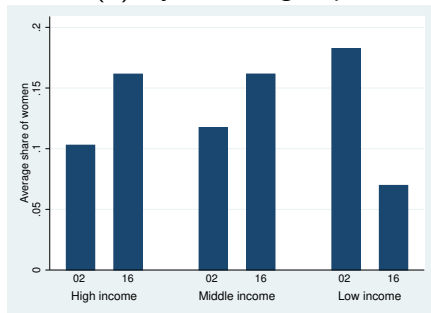
Note: Figure a) shows the average share of women on Monetary Policy Committees by world regions in 2001 (or first available year) and 2017 (or last available year). EAP: East Asia & Pacic; ECA: Europe & Central Asia; LAC: Latin America & Caribbean; MENA: Middle East & North Africa; NA: North America; SA: South Asia; and SSA: Sub-Saharan Africa. Figure b) shows the average share of women on Monetary Policy Committees by income group in 2001 (or first available year) and 2017 (or last available year).

What explains differences in the Share of Women in MPCs?

$$\text{Share of Women in MPCs}_{i,t} = \alpha + \sum_{j=1}^{k} \delta_j X_{ij} + \epsilon_i$$

where X_j includes:

- Staff gender ratio (Central Bank Directories)

- Country Gender Equality Index (World Economic Forum)

- Central bank independence

- Additional control variables

What explains differences in the Share of Women in MPCs?

	OLS						Ordered logit		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Share of women			Share of women (Potential)			Number of women		
Staff gender ratio	0.198*			0.177*			5.349**		
	(0.105)			(0.106)			(2.354)		
Gender gap index		0.125			0.112			-3.309	
		(0.356)			(0.339)			(9.011)	
Central bank independence			-0.118			-0.116			-3.585
			(0.106)			(0.102)			(2.209)
Controls:									
OECD FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MPC size FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Income FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legal origin FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	182	163	164	182	163	164	182	163	164
Number of countries	66	61	59	66	61	59	66	61	59

Does the presence of women impact monetary policy making?

$$i_t = \alpha + \phi_1 \pi_{t+k} + \phi_2 \tilde{y}_{t+q} + \phi_3 SW_t + \phi_4 SW_t \times \pi_{t+k} + \sum_{j=1}^{n} \rho_j i_{t-j} + \epsilon_t,$$

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
			OLS					GMM	
		Annual data					Quarterly data		
Share of women × Inflation		0.708**	0.857**		0.698*	0.758*		0.729*	0.882**
		(0.338)	(0.402)		(0.380)	(0.389)		(0.391)	(0.402)
Share of women			-2.546			-0.492*			-0.961**
			(1.527)			(0.289)			(0.447)
Inflation	0.228***	0.119*	0.092	0.327***	0.233***	0.225***	0.345***	0.248***	0.229***
	(0.046)	(0.064)	(0.069)	(0.042)	(0.038)	(0.040)	(0.039)	(0.038)	(0.043)
Output gap	-0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Lagged policy rate	0.476***	0.473***	0.471***	0.864***	0.862***	0.862***	0.881***	0.883***	0.880***
	(0.081)	(0.076)	(0.077)	(0.014)	(0.012)	(0.011)	(0.019)	(0.017)	(0.017)
Constant	1.882***	1.987***	2.369***	0.303***	0.330***	0.403***	0.193**	0.195**	0.351**
	(0.575)	(0.608)	(0.709)	(0.089)	(0.068)	(0.076)	(0.094)	(0.087)	(0.134)
Observations	690	703	696	1,418	1,382	1,382	1,418	1,382	1,382
R-squared	0.354	0.377	0.374	0.938	0.940	0.940			
Hansen J test							35.11 [1.00]	30.79 [1.00]	27.91 [1.00]
Number of countries	60	60	60	37	37	37	37	37	37

Women and monetary policy: dummy for women on MPCs

$$i_t = \alpha + \phi_1 \pi_{t+k} + \phi_2 \tilde{y}_{t+q} + \phi_3 SW_t + \phi_4 SW_t \times \pi_{t+k} + \sum_{j=1}^{n} \rho_j i_{t-j} + \epsilon_t,$$

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
			OLS					GMM	
			Annual data				Quarterly data		
Women on board × Inflation		0.156*	0.177*		0.196**	0.206**		0.209*	0.253**
		(0.086)	(0.095)		(0.086)	(0.087)		(0.106)	(0.102)
Women on board			-0.433			-0.092			-0.283**
			(0.407)			(0.140)			(0.107)
Inflation	0.228***	0.105	0.086	0.327***	0.163**	0.155**	0.349***	0.170**	0.136*
	(0.046)	(0.092)	(0.099)	(0.042)	(0.071)	(0.073)	(0.040)	(0.083)	(0.080)
Output gap	-0.001	0.001*	0.001*	0.001	0.001	0.001	0.001	0.001	0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Lagged policy rate	0.476***	0.473***	0.473***	0.864***	0.865***	0.865***	0.875***	0.879***	0.880***
	(0.081)	(0.072)	(0.072)	(0.014)	(0.013)	(0.013)	(0.019)	(0.017)	(0.017)
Constant	1.882***	2.050***	2.335***	0.303***	0.350***	0.406***	0.219**	0.252**	0.428***
	(0.575)	(0.631)	(0.765)	(0.089)	(0.081)	(0.110)	(0.094)	(0.094)	(0.117)
Observations	690	703	696	1,418	1,382	1,382	1,418	1,382	1,382
R-squared	0.354	0.371	0.366	0.938	0.940	0.940			
Hansen J test							33.90 [1.00]	32.09 [1.00]	30.95 [1.00]
Number of countries	60	60	60	37	37	37	37	37	37

# Women and monetary policy: alternative Taylor rule

$$i_t = \alpha + \phi_1 \pi_{t+k} + \phi_2 \tilde{y}_{t+q} + \phi_3 WB_t + \phi_4 WB_t \times \pi_{t+k} + \sum_{j=1}^{n} \rho_j i_{t-j} + \epsilon_t,$$

	(1)	(2)	(3)	(4)	(5)	(6)
Share of women × Inflation	0.856**	0.749*	0.747*			
	(0.400)	(0.394)	(0.436)			
Share of women	-2.502	-0.432	-1.817			
	(1.527)	(0.294)	(1.678)			
Women on board × Inflation				0.175*	0.211**	0.242**
				(0.094)	(0.085)	(0.104)
Women on board				-0.435	-0.089	-0.242
				(0.407)	(0.137)	(0.234)
Inflation	0.089	0.224***	0.230***	0.083	0.149**	0.135
	(0.069)	(0.038)	(0.046)	(0.099)	(0.071)	(0.081)
Unemployment rate gap	-0.143	-0.138**	-0.223***	-0.156	-0.145**	-0.223***
	(0.135)	(0.060)	(0.072)	(0.124)	(0.059)	(0.078)
Lagged policy rate	0.473***	0.863***	0.875***	0.475***	0.866***	0.882***
	(0.078)	(0.010)	(0.017)	(0.073)	(0.012)	(0.016)
Constant	2.366***	0.395***	0.504	2.339***	0.406***	0.400**
	(0.711)	(0.071)	(0.314)	(0.767)	(0.109)	(0.178)
Observations	696	1,382	1,382	696	1,382	1,382
R-squared	0.375	0.941		0.367	0.941	
Hansen J test			29.43 [1.00]			34.46 [1.00]
Number of countries	60	37	37	60	37	37

Robustness tests

- Different share of (potential) women on board

- Taylor rules with women governor or deputy governor

- Including policy changes only

- Alternative time horizons for inflation and the outputgap

An empirical investigation of the behavior of the Riksbank's MPC members
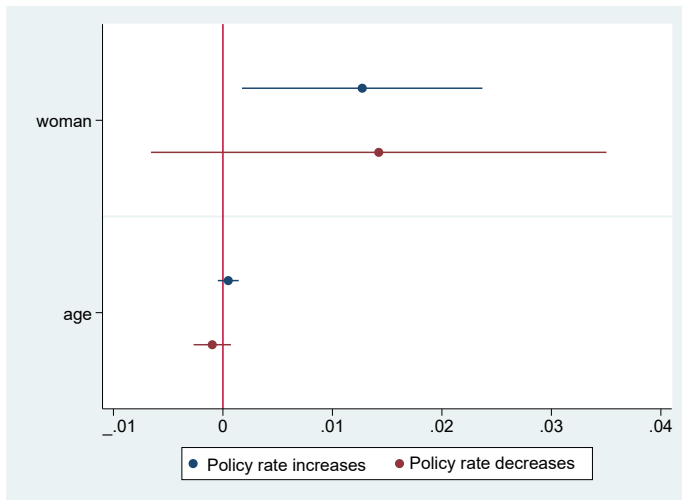
Concluding remarks

- We build a database on gender representation in monetary policy committees

- The share of women in central bank boards is quite low, averaging at around 16% in 2017

- Share of women has been increasing over the past decade

- We show that gender representation on monetary policy boards can be explained by some country or institutional factors

- Female representation can impact monetary policy making, as a higher share of women members is associated with a more hawkish attitude