Monetary policy after the crisis

Alan Blinder, Michael Ehrmann, Jakob de Haan and David-Jan Jansen

DeNederlandscheBank
EUROSYSTEEM

Motivation

- The key question today is to what extent recent changes in monetary policy will prove to be temporary, primarily motivated by the financial crisis, or whether we are seeing permanent changes in the practice of monetary policy.

- Four sub-questions: central bank mandates, monetary policy instruments, communication, and the place of the central bank within the government.

- Our approach: First, we take stock of the findings of the academic literature. Second, we present an overview of the views of both governors of central banks and academic specialists, based on two new surveys.

Our surveys

	Received		Response rate
Governors	55		57.9%
Africa		8	
Americas		11	
Asia and Oceania		18	
Europe		18	
Advanced economy [a]		16	
BIS member		32	
Inflation targeter [b]		20	
Country affected by crisis [c]		12	
Academics [d]	159		39.7%
Euro area		31	
United Kingdom		14	
United States		101	
Other countries		13	
Female		18	
U.S. PhD		134	
Central bank experience [e]		41	
Monetary economist [f]		81	
EME background [g]		17	
Full crisis exposure [h]		131	

DeNederlandscheBank
EUROSYSTEEM

Main findings (1)

Necessity has indeed been the trigger for many central bank inventions —central banks in crisis countries are much more likely to have resorted to new policies, to have had discussions about their mandates, to have communicated more and to have received criticism.

But the thinking has changed more broadly—for instance, central banks in non-crisis countries are also likely to have reconsidered their mandate or to have implemented macro-prudential measures.

Based on the surveys, we hypothesize that central banks in the future will have broader mandates, use macro-prudential tools more widely, and communicate more than before the crisis.

Main findings (2)

Even though there is not yet an agreement about the future use of unconventional monetary policy tools, we think that most of them will remain in central banks' toolkits, in particular because central bank governors who gained experience with a particular tool are considerably more likely to assess that tool positively.

Governors and academics agree that central bank communication has become more frequent since the crisis, and that these changes are here to stay, or might go even further, suggesting that central bank communication will be even more important going forward.

But the agreement ends at this general level.

Main findings (3)

When it comes to judging the usefulness of forward guidance as a future policy and communication tool, academics have a strong preference for data-based forward guidance, whereas the central bank governors who have already formed their view prefer a forward guidance that is purely qualitative in nature.

Finally, the relationship between the central banks and their governments might well have changed, with central banks "crossing the line" more routinely in the future.

Reconsidered mandate?

	Governors		Academics	Chi-sq.	
	All	AEs		vs. all	vs. AEs
Reconsidered the mandate? (N_G=55, N_A=159)				2.1	1.2
Yes	61.8	62.5	54.1		
No	36.4	37.5	39.6		
Difficult to say	1.8	0.0	6.3		
If yes (N_G=34, N_A=86)					
Change inflation target	20.6	50.0	31.4	1.4	1.4
Replace objective	5.9	0.0	5.8	0.0	0.6
Add objective	50.0	40.0	60.5	1.1	1.5
Other	55.9	50.0	24.4	10.9***	3.0*

Why higher inflation target? (1)

Price stability remains the primary objective of most central banks, and our survey results show that this consensus was untouched by the crisis.

Price stability is most often defined as an inflation rate around 2 per cent, but a discussion on the optimal level has been triggered by suggestions that central banks raise their inflation targets (see, for example, Blanchard *et al*., 2010; Ball, 2014).

Once the policy rate reaches the lower bound, which may be below zero, conventional monetary easing becomes impossible. This last point is the focus of the current discussion.

Why higher inflation target? (2)

Whether central banks should raise their inflation targets to account for the risk of hitting the lower bound hinges on:

1) how serious this risk is;
2) how high the lower bound is;
3) the welfare costs of hitting the bound; and
4) the costs (including loss of credibility) of transitioning to a higher inflation target.

Furthermore, it is important to distinguish between two different concerns: avoiding the effective lower bound in the first place, and boosting the economy once the bound is binding. We take these up in turn.

Why higher inflation target? (3)

Several papers quantifying risks of hitting the lower bound by simulating New Keynesian models of the economy find that the problem is not serious enough to justify a higher rate of inflation.

But proponents of raising the inflation target argue that the risks are greater than these models suggest—because, for example, inflation and both nominal and real interest rates were much higher in the simulation periods than they are likely to be going forward (Ball, 2014; Krugman, 2014). So smaller shocks will suffice to push the policy rate to its lower bound.

Why higher inflation target? (4)

Despite its theoretical importance to this issue, recent empirical studies have not come up with a uniform empirical definition of the natural rate of interest. Well-known estimates by Laubach and Williams (2015) suggest that the natural rate in the U.S. fluctuates over time but exhibits a downward trend, reaching about 2 per cent in 2007 and plummeting to zero (where it remains) by 2010. Hamilton *et al*. (2015), however, emphasize the large uncertainty around such estimates.

When Blanchard *et al*. (2010) proposed to raise the inflation target, the lower bound was thought to be no lower than zero. Now, we think it is negative. Furthermore, central banks have viable tools once the lower bound on nominal interest rates is hit.

Why higher inflation target? (5)

Having said that, what are the costs of raising the inflation target? Two types of costs are discussed in the literature, namely the costs of higher inflation *per se* and the loss of central bank credibility from *raising* the inflation target. Since the first is well-trodden territory (cf., Mishkin, 2011), we'll concentrate on the second—which is the one relevant to post-crisis changes.

A survey by Blinder (2000) some years ago found that a large majority of central bankers viewed their credibility as "of the utmost importance" (the highest possible ranking). Raising target while it is already difficult to reach current target will reduce credibility. Perhaps more central banks would opt for higher inflation targets if they were starting from scratch today. But they are not.

Why higher inflation target? (6)

Another important open issue is how changing the inflation target would influence inflation expectations. The experience of New Zealand may shed some light on this issue.

Lewis and McDermott (2015) apply the Nelson-Siegel (1987) model to inflation expectations data in New Zealand to generate inflation expectations curves fitted over various time horizons. Such curves suggest that changes to the inflation target change inflation expectations significantly.

However, Kumar *et al.* (2015) find that inflation expectations of New Zealand business managers are not at all well anchored despite twenty-five years of inflation targeting

Unconventional policies

	Adopted	Considered, but rejected	Not considered
Policy rate(s) near zero (N=49)	28.6	0.0	71.4
Negative interest rates (N=50)	12.0	10.0	78.0
QE using government debt (N=49)	20.4	6.1	73.5
QE using other assets (N=48)	12.5	14.6	72.9
Forward guidance (N=47)	51.1	10.6	38.3
Macro-prudential policy (N=47)	78.7	2.1	19.2

Determinants

	Adopted rates near zero	Adopted negative rates	Adopted QE with govt debt	Adopted QE other assets	Adopted forward guidance	Adopted macro prudential	Adopted other tools
Advanced Economy	0.300***	0.193***	0.201**	0.076	-0.052	0.099	0.042
	(0.076)	(0.058)	(0.087)	(0.097)	(0.148)	(0.135)	(0.161)
Hit by crisis	0.122	0.092*	0.200**	0.102	0.416***	-0.142	0.107
	(0.097)	(0.056)	(0.083)	(0.087)	(0.127)	(0.148)	(0.170)
Inflation Targeting	0.125	-0.157*	-0.015	-0.102	0.338***	0.260**	-0.088
	(0.102)	(0.080)	(0.101)	(0.105)	(0.105)	(0.126)	(0.144)
Observations	55	55	55	55	55	55	55
Pseudo R^2	0.285	0.400	0.262	0.114	0.181	0.083	0.014

Negative rates?

As of mid-2016, there is a short list of countries that also use (in some shape or form) negative rates on central bank lending facilities. These negative rates are often not used in isolation, but constitute part of a larger set of unconventional instruments to stimulate growth and return inflation back to target.

How comfortable have central bankers become with policy rates near or even below zero?

What is the new normal?

	Governors		Academics	Chi-sq.	
	All	AEs		vs. all	vs. AEs
Policy rate(s) near zero (N_G=32, N_A=157)				36.3***	12.6***
Remain potential instrument	43.8	69.2	73.3		
Remain, but in modified form	3.1	0.0	2.6		
Be discontinued	9.4	0.0	18.5		
Too early to judge	43.8	30.8	5.8		
Negative rates (N_G=32, N_A=156)				27.1***	14.9***
Remain potential instrument	21.9	38.5	52.6		
Remain, but in modified form	0.0	0.0	2.6		
Be discontinued	25.0	7.7	31.4		
Too early to judge	53.1	53.9	13.5		

Mixed views on QE (1)

Four of the world's largest central banks used QE-type policies in response to the financial crisis. The Fed and the Bank of Japan both launched initial programs in late 2008, while the Bank of England announced its in January 2009. A full-scale QE program would not be introduced by the ECB until January 2015.

Many (from outside as well as inside the central banking community) have pointed to potential side-effects of sustained low interest rates, such as risks to financial stability and reduced market discipline, and increasing inequality.

One difficulty in making judgments about these downsides is that the potential side-effects take time to materialize. Another: we are yet to experience the exit from QE. So, judgment on QE may have to be deferred.

Mixed views on QE (2)

Initially, focus on direct effects of QE on financial markets, especially on interest rates. Here, the evidence is mostly positive: Many papers find evidence for declining yields in response to (announcements of) purchase programs. At times, the effects are estimated to be sizeable, especially concerning the initial programs in the U.S. and the U.K.

More recently, the debate has shifted to the transmission of QE from financial markets to the real economy. More academic work is needed, but several Fed policymakers, for example, have noted that the transmission channels of QE to the real economy are not well understood and that estimates are subject to substantial uncertainty.

In assessing QE, the effects will most likely depend on the context: diminishing returns.

Future for QE?

	Governors		Academics	Chi-sq.	
	All	AEs		vs. all	vs. AEs
QE using government debt (N_G=34, N_A=157)				42.1***	27.9***
Remain potential instrument	35.3	53.9	68.2		
Remain, but in modified form	5.9	0.0	10.8		
Be discontinued	20.6	7.7	17.8		
Too early to judge	38.2	38.5	3.2		
QE using other assets (N_G=31, N_A=155)					
Remain potential instrument	29.0	40.0	52.9	32.7***	32.1***
Remain, but in modified form	0.0	0.0	11.0		
Be discontinued	29.0	0.0	29.7		
Too early to judge	41.9	60.0	6.5		

Profound changes in communication

As central banks resorted to unconventional monetary policies, they entered unfamiliar and highly complex terrain, with concomitant needs to explain their novel policies and their expected effects more fully than ever before. This is a prime example of what we mean by necessity being the mother of invention.

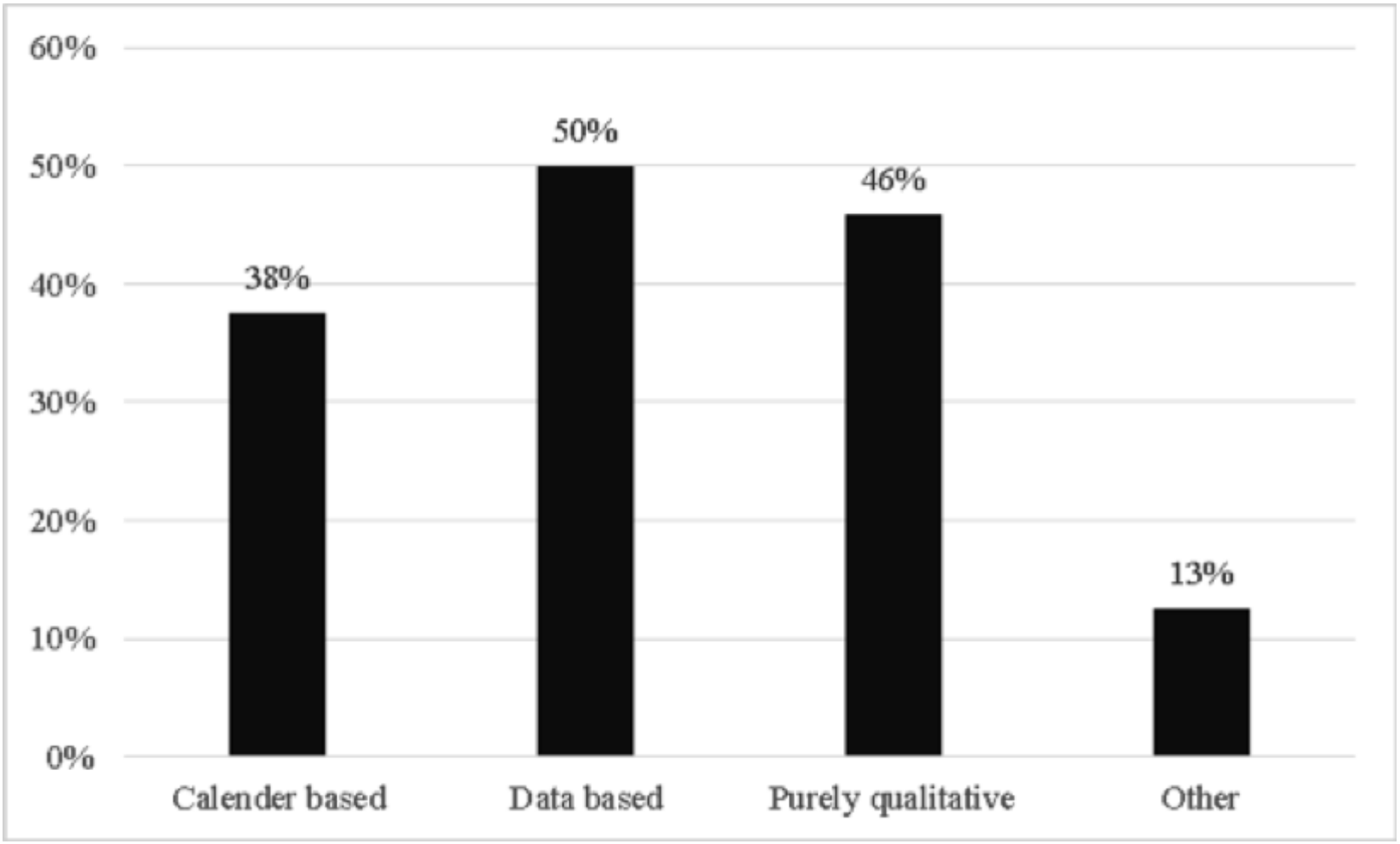
Indeed, one of these unconventional tools, forward guidance, relies *entirely* on communication.

But more communication was also required regarding other policies. Examples: announcing inflation target, dot plot of FOMC members, publication of minutes, dissent.

Communication during crisis

	Governors		Academics	Chi-sq.	
	All	AEs		vs. all	vs. AEs
CB has communicated with the public... (N_G=55, N_A=159)				14.8**	2.9
Much less	0.0	0.0	3.1		
Somewhat less	0.0	0.0	0.6		
No change	14.6	6.3	3.1		
Somewhat more	34.6	37.5	52.8		
Much more	49.1	56.3	39.0		
Difficult to say	1.8	0.0	1.3		

What forward guidance?



Disconnect of academia and policy

In academic theories, FG often translates into true *commitment* on behalf of the central bank (cf. Eggertsson and Woodford, 2003). In the words of Campbell *et al.* (2012), it is "Odyssean". By keeping rates 'lower for longer' the ELB is not binding anymore.

In fact, however, actual FG as practiced does not commit the central bank (Moessner *et al.*, 2016). Rather, it falls under Campbell *et al.* (2012)'s classification of "Delphic", that is, FG merely forecasts the macro economy and the likely future path of monetary policy, with at most a conditional commitment.

But even if we conclude that FG has, overall, been effective, it was not without problems (Svensson, 2015). Notably, FG had to be adapted over time in most circumstances, e.g. by moving from calendar-based to data-based FG, or by broadening the data-based criteria.

Forward guidance after the crisis

	Governors		Academics	Chi-sq.	
	All	AEs		vs. all	vs. AEs
Forward guidance (N_G=39, N_A=156)				26.0***	30.3***
Remain potential instrument	59.0	50.0	75.6		
Remain, but in modified form	12.8	7.0	11.5		
Be discontinued	0.0	0.0	9.0		
Too early to judge	28.2	42.9	3.9		

What type of forward guidance?

Table 9. Preferred types of forward guidance in the future

	Governors	Academics	t statistic
Forward guidance in the future (N_{Gov}=51, N_{Acad}=157)			
Calendar based	13.7	10.8	0.6
Data based	27.5	68.8	-5.6***
Purely qualitative	37.3	21.7	2.2**
None	11.8	4.5	1.9*
Other	15.7	3.8	3.0***
Too early to judge	21.6	4.5	3.9***

Assessment positively affected by use

	Evaluation of rates near zero	Evaluation of neg. rates	Evaluation of QE govt debt	Evaluation of QE oth. assets	Evaluation of forward guidance	Evaluation of macro prudential	Evaluation of other tools
Adopted respective tool	0.411***	0.166	0.254**	0.153	0.434***	0.403***	0.352***
	(0.057)	(0.114)	(0.124)	(0.136)	(0.067)	(0.029)	(0.069)
Observations	55	55	55	55	55	55	55
Pseudo R^2	0.268	0.0476	0.0561	0.0243	0.188	0.429	0.286

Central banks under fire?

	Governors		Academics	Chi-sq.	
	All	AEs		vs. all	vs. AEs
CB has received _____ criticism (N_G=55, N_A=159)				59.8***	16.0***
None	49.1	31.3	5.7		
A little	12.7	25.0	18.9		
A moderate amount	14.6	25.0	30.2		
A lot	16.4	12.5	42.1		
Difficult to say	7.3	6.3	3.1		

Determinants of criticism

	Criticism received
Adopted QE using government debt	-0.078
	(0.071)
Adopted QE using other assets	0.203**
	(0.081)
Adopted forward guidance	0.192***
	(0.073)
Hit by crisis	0.156**
	(0.079)
Observations	51
Pseudo R^2	0.144

CBI compromised?

	Governors		Academics	Chi-sq.	
	All	AEs		vs. all	vs. AEs
CB independence was _____ during the crisis (N_G=54, N_A=158)				34.8***	15.0***
Gained	13.0	0.0	5.1		
Neither gained nor lost	79.6	93.8	43.0		
Lost a little	1.9	6.3	40.5		
Lost a lot	1.9	0.0	4.4		
Difficult to say	3.7	0.0	7.0		

CBI index: before and after the crisis

	1995-2007	2008-2010
Advanced economies	0.63	0.69
Emerging and developing economies	0.59	0.67

CBI in the future

	Governors		Academics	Chi-sq.	
	All	AEs		vs. all	vs. AEs
CB independence is threatened _____ (N_G=55, N_A=159)				75.4***	25.4***
None	61.8	50.0	13.2		
A little	10.9	12.5	46.5		
A moderate amount	7.3	18.8	27.7		
A lot	1.8	0.0	9.4		
Too early to judge	18.2	18.8	3.1		

Determinants of changes in CBI

	Change in independence	Expected change in independence
Adopted QE using other assets	-0.234*	0.090
	(0.134)	(0.133)
Had external mandate discussions	0.005	-0.253**
	(0.073)	(0.101)
Received a lot of criticism	-0.059	-0.309**
	(0.153)	(0.151)
Observations	49	42
Pseudo R^2	0.0696	0.140

Thank you for your attention.