

# Macroprudential frameworks: communication<sup>1</sup>

Nikhil Patel

## Abstract

This note discusses key issues regarding communication of macroprudential frameworks and draws on a recent survey of emerging market economy central banks to highlight factors that are of particular relevance to emerging market economies.

Keywords: Macroprudential frameworks, communication, emerging market economies

JEL classification: D83, E58, G28

<sup>1</sup> This note has been prepared by Nikhil Patel. Matthias Lörch and Diego Urbina provided excellent research assistance. The paper draws on a recent survey of EME central banks that was conducted specifically for this meeting.

## Introduction

Effective communication is a critical element of any policy framework. This is particularly true of macroprudential frameworks, given their short history and the complex linkage between actions and goals. Communication serves a variety of purposes. First, it can help the public understand the objectives, strategy and policy process. This allows the public to put any warnings and measures into context. Second, communication helps the authorities share their risk assessment with both the affected parties and the broader public, which should enhance the effectiveness of policy instruments. In the extreme, communication may even be viewed as a separate tool, used to influence market participants' behaviour or to pre-commit to future actions.<sup>2</sup> Third, communication is essential for accountability and reputation.

For communication to achieve the desired effects, the message needs to be delivered effectively to the right audience. The content, sophistication and channels used are in large part determined by the primary target audience.

Drawing on our survey responses as well as the broader literature, this note discusses the key issues involved in communicating macroprudential policy and how central banks deal with them. Section 1 outlines the main issues and Section 2 the different communication channels. It gives particular emphasis to financial stability reports (FSR), which most central banks identify as the main communication channel. A box presents evidence showing that the language used in the FSRs of emerging market economies (EMEs) is often very complex, suggesting that simpler language might improve communication.

### 1. Main issues

Communication is a particularly challenging element of macroprudential frameworks, probably more so than in other policy areas such as monetary policy. This is related to the broad scope of frameworks, the long and diverse list of potential instruments, and difficulties in defining the relevant objectives,<sup>3</sup> let alone observing how specific actions contribute to attaining them. Contrast this with monetary policy today, where the link between objectives, actions and their likely outcome is relatively well understood, or at least agreed upon. Numerical benchmarks such as inflation targets also provide a natural scorecard for assessing the performance of monetary policy. On the other hand, difficulties in quantifying financial stability make the assessment of macroprudential policy much harder.

The diverse timing of costs and benefits of macroprudential action makes communication both more challenging and more important. While the benefits of macroprudential action cannot be seen in real time and may be apparent only in retrospect, and even then with uncertainty, the costs are often immediate and visible. For example, regulation restricting bank leverage is likely to have an immediate

<sup>2</sup> See CGFS (2016) for an overview of the literature on expectations formation and learning in the context of macroprudential policies.

<sup>3</sup> Policy objectives are discussed in the note on Macroprudential frameworks: objectives, decisions and policy interactions.

impact on profits, whereas the impact on financial stability, say, in terms of reducing the probability or depth of an economic downturn, cannot be clearly identified over a short horizon. This makes communication of the reasons and analysis behind a decision even more important.<sup>4</sup>

Content and timing are the most critical aspects of communication. Risk warnings may be most beneficial in the early phase of a financial cycle, but the absence of tangible risks means that it is precisely at that point that they are most likely to be ignored, questioned or criticised (see note by Malaysia).

The danger of waiting too long is that communicating vulnerabilities at a later stage in the cycle, just before financial distress sets in, can in fact be counterproductive (see note by Brazil). In the presence of vulnerabilities in the financial system, crises can often be precipitated by coordination failure among market participants. Authorities therefore need to be careful of not instigating self-fulfilling prophecies that do more harm than good. For example, a warning from the regulatory agency expressing concern about the fragility of bank funding models can lead to a bank run, causing the risk to actually materialise. Communicating at a relatively early stage, before banks get too reliant on fragile funding, may give them time to shift to more stable funding sources.

The example also illustrates that complete transparency may not be in the public interest, especially in later phases of the financial cycle. There may also be situations in which truthful and detailed communication to the public about vulnerabilities (pertaining to systemically important financial institutions, for instance) may not be feasible for legal reasons. Conversely, as pointed out by the note from the People's Bank of China, communication may also be hampered if the regulator has an informational disadvantage vis-à-vis the market.

The complexity of communication is another dimension that raises trade-offs. While on the one hand the increasing complexity of financial systems calls for more information to be communicated, clarity and brevity are crucial to ensure that the message is effective. In our survey, the Reserve Bank of India (RBI) provides an interesting option to address this trade-off. For regulations that have a wide ambit and are relevant to the general public, they design short press releases explaining the regulation in a simplified manner that is accessible to an audience with limited financial literacy, while the rationale behind the policies is explained more elaborately and technically through supplementary publications for more sophisticated audiences. Similarly, for measures relating to the mortgage market, the Hong Kong Monetary Authority (HKMA) reports organising special media briefings to reach out to individuals who are less informed about financial markets.

More generally, the media are an important conduit for reaching a broader audience. Establishing links with the media is an important part of the communication strategy of many central banks. For example, the Reserve Bank of India (RBI) reports conducting media workshops to explain the background and rationale behind different regulatory decisions. Similarly, the Bangko Sentral ng Pilipinas (BSP) has launched a programme to promote economic and financial learning among the media and the public. Moreover, the BSP also maintains a media management unit,

<sup>4</sup> One way to deal with the lack of an observable final objective is to set and communicate intermediate objectives (CGFS (2016)). These could include measures of credit growth, lending standards, currency volatility and asset prices (see Arslan (2017) for a discussion of different measures used by central banks that participated in our survey).

explicitly dedicated to handling challenges arising from communication through different facets of the media, including social media.

In addition to content and timing, agencies also have to decide on the frequency of communication. On the one hand, while a higher frequency may ensure that the public is kept well informed, it may also lead to communication fatigue if the same message is repeated too often, giving rise to an escalating spiral of ever stronger risk warnings with limited effectiveness. On the other hand, reducing the frequency of communication too much could allow risks to build up until it is too late. Our survey responses indicate that most central banks follow a regular cycle (annual or semiannual) for publishing financial stability reports and other publications, and augment these with press releases, speeches and interviews on a discretionary basis when information needs to be disseminated more promptly.

Communication becomes even more complex when different agencies are tasked with assessing and implementing macroprudential measures. To the extent that these agencies work and communicate to the public independently from one another, the audience ostensibly benefits from perspectives based on more than one assessment. However, contrasting messages from multiple agencies may be self-defeating, as they make it more difficult to distil the information. Moreover, some agencies may adjust their communication to try to influence the actions of other agencies, for example by overemphasising risks in order to elicit a response from those agencies. This could compromise the clarity and transparency of communication, thereby hurting the reputation and credibility of the authorities concerned.

## 2. Financial stability reports (FSRs)

Responses to our survey suggest that financial stability reports (FSRs) have become the primary and most efficient means of communication of financial stability risks. All but one of the central banks publish FSRs. And the exception plans to start publishing one soon.

### 2.1 Evolution and effectiveness

FSRs have a relatively long history and have become very common. The first central banks to start publication were the Bank of England, Sweden's Riksbank, and the Central Bank of Norway, all in 1996–97 (Čihák (2006)). Less than a decade later, the number of central banks producing FSRs had increased to 40 (Oosterloo et al (2007)), and it has grown substantially since then.

The aims and motivations behind the publication of FSRs are bound to vary across countries and over time. As an example, while the Bank of England introduced its FSR primarily as a forum for the discussion and debate of issues related to risks in the financial system,<sup>5</sup> the focus changed, following a major revision in 2006, in favour of explicitly identifying downside risks to the financial system and communicating

<sup>5</sup> In their first FSR published in 1996, the Bank of England stated three explicit aims: (i) to promote the latest thinking on risk, regulation and financial markets; (ii) to facilitate discussion of issues that might affect risks to the UK financial system; and (iii) to provide a forum for debate among practitioners, policymakers and academics.

them effectively to flag vulnerabilities and forestall any disruptions. Our survey responses indicate that most EME central banks also consider communicating assessments of risks to the financial system as the primary purpose of FSRs.

In line with the spread of FSRs, evidence documenting their impact on both financial variables and the real economy has grown. In their analysis of 1,000 releases of FSRs and speeches by 37 central banks over the past 14 years, Born et al (2014) find that FSRs have a significant effect on the stock market (in the expected direction) and dampen market volatility. Based on this type of metric, Wilkinson et al (2010), who study the United Kingdom, Sweden, Netherlands and Spain, also find FSRs to be the most effective means of communication, although they find that speeches and interviews were also highly effective during the financial crisis between 2007 and 2010. Alegría et al (2016) show that the FSRs introduced in Chile in 2010 significantly affected bank lending terms. In particular, warnings about vulnerabilities in the real estate market were followed by a shift towards lower-LTV loans. However, given the limited timespan, the jury is still out on whether FSRs are able to reduce systemic risk in a broader sense – for instance, by reducing the frequency of deep downturns and crises.

## 2.2 Content and complexity of financial stability reports

FSRs, as in the case of any central bank publication, must strike a balance between accessibility and sophistication. In practice, they appear to have become both more complex and rigorous. For example, Čihák (2006) reports substantial improvements in the underlying analytical tools, including surveys, stress tests, and other model-based risk analysis frameworks. In our survey, the People's Bank of China, which started publishing FSRs in 2005, pointed out the increased role of quantitative methods, including stress tests. While analytical rigour has its benefits, there might be a risk that communication may be becoming too complex to be effective (see eg Oosterloo et al (2007)).<sup>6</sup>

The complexity of the language used may also affect the efficiency of communication (Domanski and Ng (2011)). A textual analysis on the complexity of language used suggests simplifying the use of language may improve effectiveness (Box A). The gains may be particularly high where financial literacy and sophistication are lower.

<sup>6</sup> They report that FSRs have become increasingly sophisticated and analytically rigorous, but that this does not seem to have increased the banking system's health, as measured by Moody's weighted average bank financial strength index (source: IMF, *Global Financial Stability Report*) and the financial system soundness indicator of Das et al (2004).

## Measuring the complexity of financial stability reports

Language complexity can have a significant bearing on the ease of reading and comprehensibility of a text. Based on two metrics designed for the English language, this box reports results of a textual analysis of FSRs from select central banks that participated in our survey.

For background, Table A provides an example of how two short paragraphs conveying broadly the same information can differ significantly in their ease-of-reading scores. It presents two widely used statistics, namely the Flesch-Kincaid grade level and the Flesch reading ease index. Both indices are based on the length of words and sentences. A higher Flesch-Kincaid grade level indicates a passage that is harder to read, while the opposite is true for the Flesch reading ease index (see Kincaid et al (1975) for details of the statistics).<sup>7</sup>

Ease of reading indicators: Illustrative example

Table A

	F-K grade level	Flesch reading ease level
Paragraph 1: What makes the financial system particularly vulnerable is not only risk that is exogenous to the system, but also risk that can materialize endogenously within the system. While central banks can have a direct impact on the latter through their policies, they can also affect the sensitivity of the economy to exogenous risk.	12.0	25
Paragraph 2: The vulnerability of the financial system depends on both exogenous as well as endogenous risk. Central banks can have a direct impact on the latter through their policies. In addition, they can also affect the sensitivity of the economy to the former.	10.9	41.5

Note: The reading ease index is defined as  $RE = 206.835 - (1.015 \times ASL) - (84.6 \times ASW)$ , where ASL = Average Sentence Length (ie the number of words divided by the number of sentences) and ASW = Average number of syllables per word (ie the number of syllables divided by the number of words). The F-K grade level is defined as  $RE = (0.39 \times ASL) + 11.8 \times ASW - 15.59$

Table B presents an analysis of readability statistics for FSRs from selected central banks that participated in our survey, along with some comparators including the Bank of England's November 2016 FSR, the *BIS Annual Report*, an article on macroprudential regulation by the *Economist* magazine and a popular novel. The numbers reported in Table 2 seem to indicate that the FSRs in our survey by and large use more complicated language and are harder to read than the Bank of England FSR, the *BIS Annual Report* or the *Economist* article, which in turn are more difficult to read than a popular novel like Harry Potter.

<sup>7</sup> The F-K grade level is defined as  $RE = (0.39 \times ASL) + 11.8 \times ASW - 15.59$ , where ASL = Average Sentence Length (ie the number of words divided by the number of sentences) and ASW = Average number of syllables per word (i.e., the number of syllables divided by the number of words). The reading ease index is defined as  $RE = 206.835 - (1.015 \times ASL) - (84.6 \times ASW)$ .

## Ease of reading indicators for Financial Stability Reports

Table B

Country	F-K grade level	F reading ease level	Benchmarks	F-K grade level	F reading ease level
Argentina	18.01	32.35	BIS Annual Report	13.53	35.81
Brazil	19.06	20.55	Bank of England FSR	15.32	31.02
Chile	15.19	35.9	Harry Potter 1	6.25	73.79
China	16.44	23.53	Economist article	12.0	32.3
Czech Republic	16.69	30.9			
Hungary	18.11	40.4			
India	17.91	26.04			
Israel	15.52	35.59			
Korea	23.06	13.21			
Malaysia	21.24	8.78			
Mexico	20.15	32.23			
Poland	16.06	27.27			
Russia	17.55	25.54			
Singapore	19.2	25.91			
South Africa	17.72	23			
Thailand	19.26	34.98			
<b>Mean</b>	<b>18.2</b>	<b>27.3</b>			

Note: In each case, the latest financial stability report available in English as of mid-December 2016 is used. Appendices are omitted from the document before computing the indices. "Harry Potter 1" is the first book of the series by J K Rowling: *Harry Potter and the Philosopher's Stone* (1997). "Economist article" refers to an article published in an August 2014 edition of the *Economist* entitled "What macroprudential regulation is, and why it matters".

## References

Alegría, A, R Alfaro and F Córdova (2016): "The impact of financial stability reports' warnings on loan-to-value ratios", mimeo, BIS CCA CGDFS working group.

Arslan, Y (2017): "Implementation and effectiveness of macroprudential frameworks", background paper for this meeting.

Born, B, M Ehrmann and M Fratzscher (2014): "Central bank communication on financial stability", *The Economic Journal*, vol 124, pp 701–34.

Committee on the Global Financial System (2016): "Objective-setting and communication of macroprudential policies", *CGFS Papers*, no 57.

Čihák, M (2006): "How do central banks write on financial stability?", *IMF Working Paper*, WP/06/163.

Das, U, M Quintyn and K Chenard (2004): "Does regulatory governance matter for financial system stability? An empirical analysis", *IMF Working Paper*, no 04/89.

Domanski, D and T Ng (2011): "Getting effective macroprudential policy on the road: eight propositions", *BIS Papers*, no 89.

Kincaid, J, R Fishburne, R Rogers and B Chissom (1975): "Derivation of new readability formulas (automated readability index, fog count, and Flesch reading ease formula) for Navy enlisted personnel", *Research Branch Report*, no 8-75, Chief of Naval Technical Training: Naval Air Station Memphis.

Oosterloo, S, J de Haan and R Jong-A-Pin (2007): "Financial stability reviews: A first empirical analysis", *Journal of Financial Stability*, vol 2, no 4, pp 337-55.

Wilkinson, J, K Spong, and J Christensson (2010): "Financial stability reports: How useful during a financial crisis?", *Economic Review*, Federal Reserve Bank of Kansas City, vol 95, no 1.