Emerging Market Central Banking and Communication: The Great Catchup*

Piroska Nagy Mohácsi — Tatiana Evdokimova — Olga Ponomarenko — Elina Ribakova —

Emerging market (EM) central banks have made remarkable progress in improving their policy frameworks and communication over the past two decades. Their transparency has improved dramatically; the readability of their statements has been better overall than in advanced economies; their focus on inflation has been sharper; several have proven to be better inflation-forecasters; and they have been more sparing in their use of "forward guidance", which reduces data-dependence. All this has served them well in the post-Covid period of high inflation. EM central banks have recently outperformed central banks from the advanced economies in two critical respects: addressing and appropriately communicating post-Covid inflationary pressures in a timely manner, and avoiding banking sector stress during the monetary policy tightening cycle. EM central banks also started easing monetary policy from early/mid-2023, ahead of the Federal Reserve and ECB, although reducing inflation sustainably will be the ultimate test of their framework. This study demonstrates these points through the prism of central bank communication, using novel artificial intelligence (AI) methods. We conclude with policy lessons for both EM and advanced country central banks.

Journal of Economic Literature (JEL) codes: B22, C55, E42, E52, E58

Keywords: central banking, monetary policy, emerging markets, Federal Reserve, ECB, communication, forward guidance, AI

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1. Introduction and context

After decades of struggling with high inflation and the underlying failure of various monetary regimes, from the mid-2000s emerging market (EM) central banks increasingly focused on inflation using variants of the "inflation targeting" regime deployed in advanced economies (AEs). Their peculiar circumstances and the global financial crisis (GFC) of 2008-2009 tested the EM central banks' evolving frameworks and highlighted still-existing vulnerabilities. By the time of the Covid crisis, most EMs were reasonably well-prepared to recognise and address inflationary pressures (Ribakova et al. 2020; Nagy Mohácsi 2020). Specifically, compared to their advanced-economy counterparts (Velasco 2022), EM central banks reacted much earlier - starting from the spring of 2021 - to the signs of emerging inflation and their early action appears to have limited the previously often devastating negative impact of the eventual monetary policy tightening in the US and other AEs, as some academics stressed early on. Apart from outliers such as Argentina or Turkey, the emerging markets are currently recording only somewhat higher inflation rates than the advanced economies, in line with their consumption baskets – that have a higher share of energy and food – the two key components of global inflation. In this regard, we would like to stress the importance of a new global policy development from the onset of the pandemic: the wide availability to the emerging markets of currency swaps and repo operations by globally systemic central banks, i.e. the US Federal Reserve (Fed), the European Central Bank (ECB), and, to an extent, the People's Bank of China. To some limited extent, these tools were already available in the context of the global financial crisis, but during the pandemic the Fed and the ECB (for emerging Europe) made these tools available to most EMs, crucially helping them to maintain their economic stability during the most challenging moments of the Covid crisis and in its aftermath (Choi et al. 2022; Vujčić 2020). This has confirmed the indispensable role of currency swaps and repos in the modern global financial safety net.

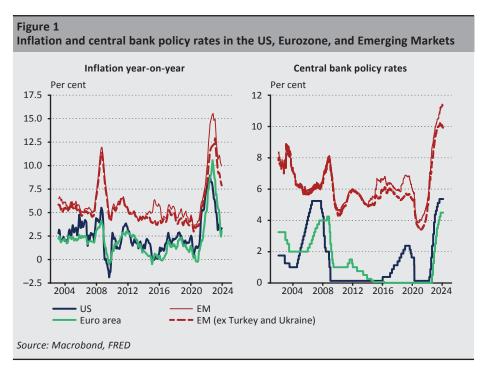
Even when the Fed and the ECB eventually started tightening in the spring/summer of 2022, capital outflows from EMs and associated exchange rate pressures remained limited, in sharp contrast to past AE tightening cycles. EMs' early policy tightening with rising interest rates in the context of ample global liquidity may have helped them to meet their foreign capital needs and avoid capital outflows that used to take place in such contexts in the past. Indeed, the IMF has finally recognised that emerging markets have managed the post-pandemic period very well. In the words of the IMF's chief economist: "Emerging markets have been remarkably resilient in the past 3 years or so" (Gourichas 2024).

With inflation pressures subsiding, several emerging markets have already started to first signal and then to ease monetary policy, while advanced economy central banks have not yet done so (*Figure 1*). That said, the ability of EM central banks to reduce inflation in a sustainable manner will be the ultimate test of their improved frameworks.

The aim of our analysis is to assess the record of EM central banks in *communicating* their policy and then *delivering* commensurate policy action over the past two decades.

Communication is now well established as a core element of central bank effectiveness and, ultimately, credibility (see, for example, *Blinder et al.* (2008) for a survey of evidence). Communicating policy intentions and actions in a clear, timely and impactful way strengthens monetary policy transmission mechanisms and improves both central bank effectiveness and credibility.

In this study, we compare the progress of EM central banks to that of the Fed and the ECB. In the process, we gain some insights into the policy and communication record the latter two central banks as well.



2. Literature review

Our study builds upon earlier literature that analyses EM central bank communication and how it compares to that by AE central banks.

González and Tadle (2022) present the most comprehensive sample of 18 countries to date, consisting of 6 AEs and 12 EMs. They investigate the use of sentiment analysis in predicting monetary policy changes, relying on custom dictionaries. For a significant majority of the inflation-targeting countries, they find that the sentiment score provides additional information that helps predict monetary policy rate movements. Sentiment across countries tended to co-move during the 2008–2009 crisis. We expand on their methodology (for details, see the appendices in Evdokimova et al. (2023)).

The analysis of the length and readability of the statements for five Latin American central banks in an *IMF study* (2018) found that more readable press releases were associated with lower policy forecast error when using the statement tone index.

Armelius et al. (2020) ran a study on 23, mostly AE, central banks to understand how central banks influence each other's communication across borders, with the Fed's communication being at the centre. They found co-movement in sentiment across central banks, which was partially explained by trade or financial flow exposures.

Laungaram and Wongwachara (2017) focused on the readability of statements of 22 central banks, including EMs. Statements were found to have become longer over time, but the average number of words per sentence was declining. Readability tended to fall when central banks lowered their policy interest rates. Among the six communication topics analysed using Latent Dirichlet Allocation, the net tone of inflation and growth topics were found to be most strongly correlated with the interest rate path.

Tadle (2022) showed a statistically significant strengthening of the US dollar following the publication of hawkish Fed minutes, but no significant response from the stock markets. The analysis also found a positive correlation between minutes sentiment and policy rate, peaking around 12 to 15 months ahead of meeting releases.

In country-specific research, *Carvalho et al.* (2013) decomposed the effect of Brazil's Monetary Policy Committee's (COPOM) statements on the term structure of interest rates. The authors measured the hawkishness or dovishness of the statements using Google search and sentiment analysis, showing that a one standard deviation shift in the hawkish direction increased 4-month to 2-year yields by 2 to 5 basis

points. In a similar vein, Hansen et al. (2019) examined the effect of the Bank of England's Inflation Report on the yield curve. Kawamura et al. (2019) used Latent Dirichlet Analysis (LDA) to analyse the ambiguity of sentences of the Bank of Japan's communication and found a correlation between obfuscation and negative signals. Hendry and Madeley (2010) used latent semantic analysis to check whether Bank of Canada statements affect the returns and volatility of interest rate markets over the 2002–2008 period. Apel and Grimaldi (2014) used a custom dictionary as well as LDA to analyse the information content of Riksbank's monetary policy minutes. Tobback et al. (2017) constructed an index that measured the tone perceived by the media of the ECB press conferences. Bohl et al. (2023) compared the sentiment focus by the Fed and the ECB and found that the mandate of the central bank does affect speech sentiment.

With regards to central bank transparency measurement, we use the well-recognised index by *Dincer et al.* (2022). Their findings are confirmed and expanded in a recent broader study by *Unsal et al.* (2022), which considers central bank independence, accountability, policy and operational strategy, and communication (IAPOC). They compile the IAPOC index for 50 countries over the period 2007–2018. For statement readability we use the also well-established Flesch–Kincaid index (originally in *Kincaid et al. 1975*).

Although the body of the literature is becoming vast, to our knowledge only a few papers look into the evolution of EM communication over time as mentioned above, and only our study focuses on comparing EMs to AEs, covering a long time period as well as the post-Covid inflation shock.

3. Methodology and data

We assess the evolution of EM central bank communication by using artificial intelligence (AI) tools to analyse the monetary policy statements of 22 EM central banks over the last two decades. These central banks were: Brazil, Chile, Colombia, Czech Republic, Egypt, Hungary, India, Israel, South Korea, Malaysia, Mexico, Nigeria, Pakistan, Peru, Philippines, Poland, Romania, Russia, South Africa, Thailand, Turkey

and Ukraine. ¹ The texts of the statements were collected from these central banks' websites. ^{2, 3}

The dataset from the statements collected is quite rich and starts before the GFC for most of the countries in the sample, in or around 2003, and thus covers the past two decades. A few countries (Czech Republic, Brazil, Colombia, Mexico, South Africa and Ukraine) have a shorter archive of statements.

We also collected monetary policy statements from the Fed and ECB (since 2002 and 2000, respectively), which we use as comparators for policy communication by EM central banks. In the case of the ECB, we use the introductory statements of the ECB President at press conferences instead of the ECB's statements, because the format and content of the ECB introductory statements is much closer to that of statements issued by other central banks and they provide a more detailed reasoning of the ECB Governing Council's decisions.

On average, we have around 170 statements per country from the roughly 20-year period. Starting from 2003, we have between 5 and 20 monetary policy statements per month for the analysis. We analyse the resulting unique dataset in several dimensions:

- Overall transparency of central banks and the readability of their monetary policy statements,
- Policy "sentiment" and stance,
- "See-say-act" analysis,
- Use of forward guidance in communication,
- Selected central bank topics and specific EM issues,
- Macroprudential focus, and
- References to fiscal policy and the policy mix.

¹ Given the long time period, some of the countries included here have become advanced economies, such as Israel and Korea. We have also conducted our analyses excluding these economies, but the results we present here do not change materially. Most of the countries in the sample (with the exception of Egypt, Nigeria, Pakistan and Malaysia) have an inflation targeting framework, according to the *IMF Annual Report on Exchange Arrangements and Exchange Restrictions* (2018).

² We collected the published statements in English, and not in the native language of the central banks. One of the key methodological questions in cross-country comparative language studies is whether to use single (typically English) or multi-language text input. The first approach is easier to implement since it does not require setting up language-specific dictionaries or using more advanced multilingual text processing techniques. The caveat though is that translation always carries the risk of not conveying in full the original message, and some central banks include a disclaimer that the native language version prevails in case of a conflict. Similar to the majority of cross-country studies on central bank communication (*González and Tadle 2020, 2022; Tobback et al. 2017* and others), we decided to use English versions of the monetary policy statements published by the central banks.

³ Further details on the methodology and various sources can be found in the authors' PIIE paper and its annexes (*Evdokimova et al. 2023*).

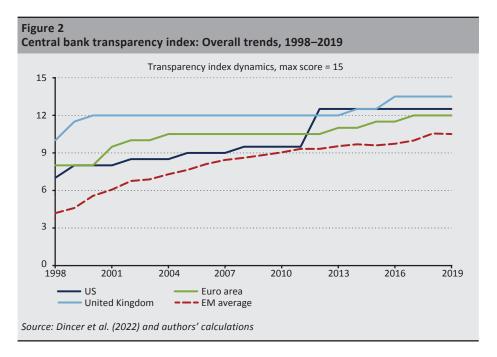
In addition to the dictionary method used in several studies cited above, we also applied machine learning (ML) methods⁴ to analyse our large data set.

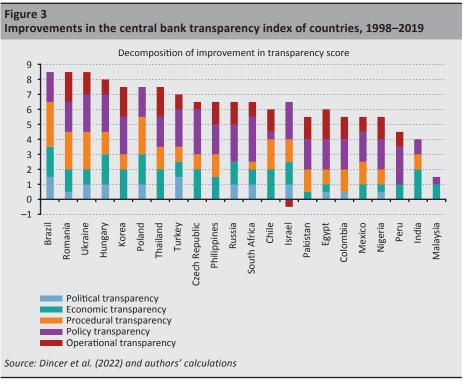
4. Main results

Our main findings are as follows:

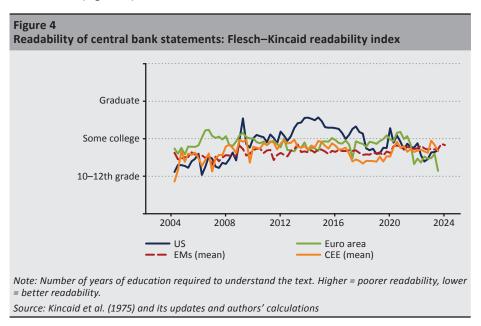
- 1. EM central banks have adopted many of the principles of advanced economy central banks both in policy conduct and communication, and with appropriate modifications that reflect their different economic circumstances. Specifically, EM central banks follow, and refer in their communication more often to, areas where they have more vulnerability than AEs. These include capital flow volatility, financial dollarisation and more frequent economic or political shocks, in the context of overall weaker institutional capacity and policy credibility. In such settings, EM central banks pay more attention to exchange rate policy even under inflation targeting regimes as well as to supply side factors that can translate quickly into inflationary pressures amid less-anchored inflation expectations. Moreover, EM central banks are less committed in their "forward guidance" language than AE central banks, in view of their more frequent external and domestic shocks. They also keep an eye on fiscal policy that traditionally carries higher risk of fiscal dominance in their countries.
- EM central banks have strongly improved their overall transparency (Figure 2).
 Some countries Chile, Czech Republic, Hungary, South Korea and South Africa have made major strides (Figure 3) and reached or even surpassed levels seen in the AE comparators.

⁴ These are detailed in our PIIE paper (Evdokimova et al. 2023).



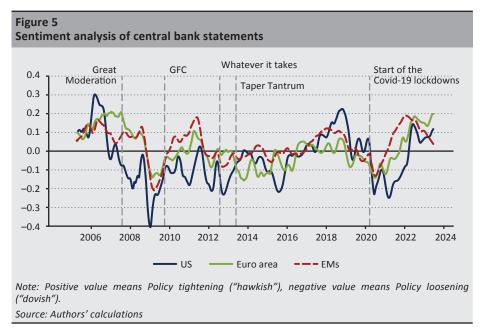


3. The overall readability of central bank statements has been better in EMs than in AEs most of the time, meaning that it requires a lower level of education to achieve comprehension. However, thanks to recent specific efforts of the Fed and the ECB to improve the accessibility of their communication following their respective reviews, the gap between EM and AE communication readability has disappeared. Central Eastern Europe (CEE) stands out as the best EM region for this score (Figure 4).



4. Our sentiment analysis of central bank policy statements reveals how the policy stance and tone of central bank communication have evolved over time. The sentiment analysis assesses how central banks communicate their policy intentions. For that we break down each statement sentence into smaller units where we search for key words. For example, we take the key word "prices", and then look for modifiers "upward pressure" (on prices) or "downward pressure" (on prices). The former indicates a "hawkish", i.e., policy tightening sentiment, while the latter a "dovish" i.e., policy loosening sentiment. We assign (+1) value to hawkish statements and (-1) to dovish statements and indicate the average value of such scores in statements. More (+1) values make the statements more hawkish, and vice versa (Figure 5).⁵

⁵ We have developed a dictionary of about 200 words that are featured in economic analysis and thus central bank statements; see our PIIE paper's appendices for further technical details.

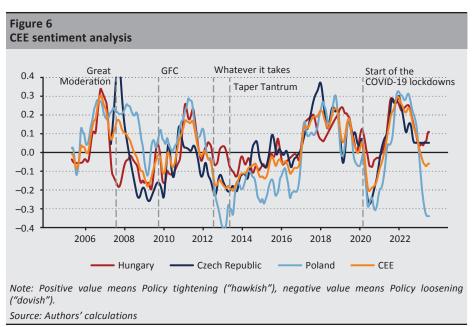


This analysis offers several noteworthy findings:

- Outside of stress/crisis periods,⁶ the tone of central bank statements (hawkishdovish) is quite similar among AE and EM central banks, mainly driven by Fed policy, in line with the Fed's leading role in the global financial cycle (*Rey 2015*, *Akinci et al. 2022*).
- During crises, AE-EM policy and tone had diverged in the past, but this changed during the Covid crisis. In the past, EM central banks had been left to their own devices and had to react to shocks "alone" (apart from available IMF and other international financial institution (IFI) facilities). During the global financial crisis, initial Fed loosening provided some room for EM central banks to cut policy rates as well, but they soon had to reverse those cuts to defend their exchange rates and fend off inflationary pressures. By contrast, we find that the policy stance during the Covid crisis was credibly synchronised for the first time in economic history, thanks to both EM policy improvements and the wide availability of direct US dollar and euro liquidity support from the Fed and the ECB, respectively (Choi et al. 2022).

⁶ 2008/2009 global financial crisis, the 2011–2014 Eurozone crisis, and the 2020–2021 Covid pandemic.

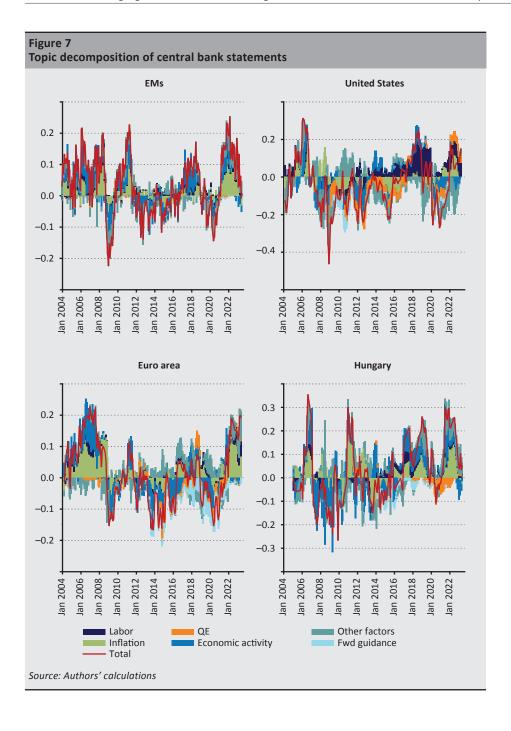
- Post-pandemic, policy and communication became different again between EMs on the one hand, and the Fed and the ECB on the other hand. While *all* central banks noticed mounting inflationary pressures from the beginning of 2021, EM central banks responded faster and stronger to surging inflation than AEs, and communicated their policy change clearly. Early action in EMs not only helped address inflationary pressures in a timely manner but may have also enabled their financial sector/banks to adjust to the rising interest rate environment earlier and in a more gradual way. In other words, EMs' early monetary tightening may have ushered in smoother adjustments in the financial sector, thus supporting financial stability. No EM countries experienced a banking sector crisis such as the middle-bank crises in the US in the spring of 2023.
- Zeroing in on the CEE among EMs, this is the region that has experienced the highest inflation among mature EMs, in part due to their high exposure to the fallout from the Russia-Ukraine war, and in part to country-specific expansionary (non-defence) fiscal policies such as in Hungary and Poland during the run up of the last elections. The CEE countries moved quickly, albeit cautiously, with policy tightening back in 2021, and Hungary was among the first to signal hawkish/tightening sentiment. The CEE overall sentiment message has recently changed towards "dovish" mode even though inflation is still in the high single-digit range (Figure 6). This however reflected Poland's strong language and policy action of loosening ahead of national elections in October 2023; other countries are appropriately still in "hawkish" territory.



5. We use *topic decomposition analysis* to assess central bank focus, breaking the sentiment analysis into several topics (inflation, labour market, economic activity, QE/QT, and so on) within the overall sentiment trend discussed above (*Figure 7*).

In line with their main mandate, all central banks focus on inflation, although the Fed is equally preoccupied with labour market conditions as per its dual mandate. However, we demonstrate in our sentiment analysis that during the post-pandemic inflation shock EMs were more focused on inflation, possibly reflecting their historically more recent high-inflation experiences and related policy concerns about less well-anchored inflation expectations. Perversely, they may have also benefitted from the fact that they may not have elaborate models that AE central banks use to analyse inflationary trends or that their confidence in such models is more circumspect. Those elaborate models proved to be of little use or even misleading, because they had been built on data that did not contain inflationary periods. The Fed was initially mainly concerned with labour market conditions. Moreover, the Fed's post-Covid communication has occasionally gone "both ways": some parts (such as economic activity and continued QE) signalled dovish sentiment, while others (such inflation) hawkish sentiment from 2021 on, which may have muddled the overall message for a while. The ECB did focus on inflation in its communication but still acted with a lag relative to EM central banks to a large degree, with strong reliance on dovish forward guidance.

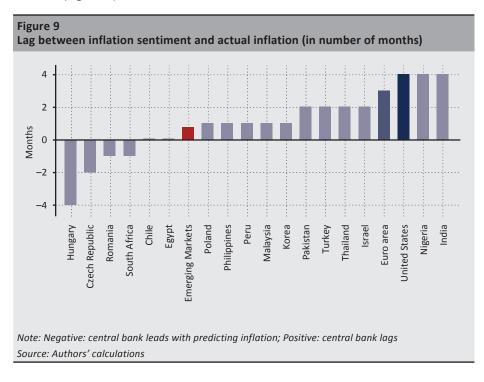
The topic decomposition analysis for Hungary reveals a few noteworthy points: (i) central bank messaging is quite consistent over time (i.e. mostly hawkish or mostly dovish), in line with other EMs; (ii) the central bank already communicated that inflation was a concern *before* the start of the pandemic; (iii) the central bank used QE extensively during and post-pandemic and communicated this; and (iv) hawkish inflation sentiment was communicated early from 2021 on, though, as in quite a few countries, with some overlap with QE.



- 6. We assess how well EMs central banks indicate policy change, i.e. how much "heads-up" they give for rate changes. Is the link between that communication and actual policy rate changes strong? Using econometric analysis, we find that EMs give reasonable forewarning and have been particularly successful in indicating policy change during the post-Covid period, but their policy implementation (actual rate change) often remains uncertain. The link between the signal they send and the actual rate change they deliver tends to be weaker than in their AE counterparts: on average, the correlation between signalled policy rate and actual rate change is around 50 per cent, in contrast to the Fed's and ECB's 80 per cent or more. This may weaken EM central bank credibility and thus could be an area for improvement for EM central banks.
- 7. We ask whether the length of inflation targeting experience helps improve the link between communication and policy rate action. We find some evidence that it does: for countries that started inflation targeting earlier, communication correlates more strongly with policy decisions (*Figure 8*).

Figure 8 Correlation between tone of monetary policy statements and policy rates versus the time of adopting inflation targeting* 0.7 Correlation (average across periods) 0.6 CL 0.5 **↑**TH 0.4 **▲**IN 0.3 0.2 0.1 1995 2000 2005 2010 2015 Inflation targeting start year Note: * Mexico and Brazil are excluded because of short time series. Source: Authors' calculations

8. We also investigate the *link between central banks communicating their inflation concerns and actual inflation*, which can be seen as a proxy for predicting inflation. We find that, worryingly, central banks in general do not foresee/predict inflation in their communication and only react to the observed inflation with a 2-to-3-month lag. There are some exceptions such as the Czech Republic – which predicts inflation most consistently – as well as Hungary, Romania and South Africa (*Figure 9*).



9. EM central banks understandably focus more on factors that are more specific to their own circumstances. Exchange rate references (even under inflation targeting) are more frequent than in the AE comparators (around 6 per cent of sentences versus close to zero in AE). For the small open economies with a history of financial dollarisation that many EMs are, the exchange rate remains important including for its role in the monetary transmission mechanism and financial stability considerations and thus justifies this focus, even in inflation-targeting countries (*Velasco 2022*). EMs traditionally concentrate more on the supply-side factors of inflation. Macroprudential policy aspects have been increasingly incorporated into EM central bank statements since the GFC, in line with the AE comparators.

10. Finally, despite the importance of the interaction between monetary and fiscal policy in terms of delivering on central bank mandates (the "policy mix"), central banks both in EMs and AEs only refer to fiscal policy trends and never discuss policy coordination.

5. Policy lessons

Central bank policy and communication has undergone a major shift — if not a revolution — over the past two decades. Our paper covers and compares the record of 22 mature EM central banks with those of the Fed and the ECB in this regard. We offer a few policy lessons both for policy and communication, including for advanced economies:

- Both AE and EM central banks need to improve their inflation projection tools and willingness to recognise price pressures in their communication. Our analysis finds that, with a few notable exceptions, central banks (AE and EM alike) do not generally foresee/predict inflation in advance. This is a problem, suggesting ample room for improvement on this front.
- EM central banks need to be better at "walking the talk." EM central banks appear to follow up on their signalled policy change less consistently than AE counterparts. While some of this communication-policy action gap may be explained by more frequent shocks in EMs, this can weaken central bank credibility over the longer term.
- Forward guidance can be detrimental at a time of rapid change. Forward guidance, introduced in the wake of the global financial crisis in the context of deflationary pressures, was intended to provide additional assurance by central banks on their monetary policy stance (Bernanke 2022). Views on whether it has served its original purpose differ. Here, we would note that it has weakened monetary policy's data dependence in de facto terms, which in turn has proven, in our view, to be detrimental during times of rapid economic change. Until very recently the Fed and the ECB utilised a form of forward guidance despite the gradual easing of inflation pressures since the middle of 2023 ("higher for longer"). Yet forward guidance has proven ill-suited in rapidly changing conditions, and we wonder if its use is advisable during the disinflationary, equally wobbly, path. EM central banks have generally used forward guidance in a less committed and more vague way, which has served them well during times of rapidly changing inflation data and dynamics.
- Multiple central bank mandates that require multiple policy tools need a
 particularly clear communication strategy to identify the primary focus during
 times of stress and potential conflicts among policy goals. Many central banks

have dual — or even triple or quadruple — mandates. In addition to their price stability goal, financial stability, employment and, more recently, climate change have become part of their mandate. The well-established policy rule of one goalone instrument underscores the critical importance of a more nuanced, but clear central bank communication strategy in this regard. In addition, during times of stress or rapid change, there can be conflict — at least in the short run — between some of the goals. At such times, central bank communication should explain which goal has priority. In our view, in 2021 and early 2022 the Fed struggled in its communication between its dual mandate on maximum employment and price stability. More broadly, our findings support *Bohl et al.* (2023) that unemployment expectations have driven the tone of Fed speeches since the global financial crisis, while inflation expectations have influenced the sentiment of ECB speeches.

- Changing the policy goal inflation target amid changing economic conditions can be ill-advised. The debate is on currently whether central banks should change their inflation target. Here we only refer to the experience of the Fed, which changed its inflation objective to "flexible average inflation targeting" (FAIT) precisely when inflation was starting to rise. We wonder if this decision did not inadvertently contribute to its confusing messaging that year. Changing the inflation target, as desirable as it may be, is best done outside of volatile monetary conditions.
- The distinction between first-round and second-round effects of inflation becomes blurred when inflation rises rapidly. EM central banks did not waste time and acted fast when inflation started to rise in early 2021. They knew that inflation expectations can quickly de-anchor when prices rise rapidly, blurring the distinction between "first-round" and "second-round" effects. AE central banks need to internalise this policy lesson going forward.
- It is important to monitor and communicate supply-side factors behind demandsupply imbalances. AE central banks have typically focused on the macroeconomic (demand) side of inflation pressures, whereas EMs appear to have always had supply side factors on their policy radar screen as well. This served them well in the post-Covid inflationary period. We note that AE central banks have started to internalise this lesson already.
- EMs have successfully adapted their communication policy to their specific economic circumstances. Nevertheless, their reduced communication on the exchange rate to conform with the inflation targeting framework might raise questions, given their vulnerability to exchange rate shocks. EMs continue to conduct FX intervention when market stress requires and can increasingly rely on the currency swaps or repo operations that the Fed and the ECB offer. EM central banks could examine if their policy effectiveness would benefit from clearer

communication on exchange rate policy actions. Coordinated communication with the Fed and the ECB during times of currency swaps/repos would help EMs in this regard (though we recognise that this maybe challenging).

• Finally, both AE and EM central banks should reconsider their communication with regards to coordination with their fiscal authorities. The Fed is virtually silent on fiscal policy. The ECB and EMs do better in terms of referencing fiscal policy but are still not fully transparent about any coordination of policies. Yet the fiscal and monetary policy mix has become part and parcel of modern macroeconomic policy-making everywhere in the world (Allen et al. 2021). In this setting, joint review and communication of a country's policy mix would help the transparency, credibility and accountability of both the monetary and fiscal authorities.

Overall, EM central banks have come a long way in their policy and communication, adopting many of the principles of leading AE central banks in both the conduct and the communication of policy over the past two decades. In some important respects, they have recently performed better than their AE counterparts. There is, of course, room for improvement in certain areas that we have highlighted above. Yet in the core area of central banking, fighting inflation and maintaining banking sector stability, EM central banks appear to have come ahead of their AE counterparts, and communicated their divergent views clearly and confidently in the post-Covid period. In these critical areas of central banking, the EM central banks may have overtaken their role models — the advanced country "masters". With inflationary pressure on the decline, the final test of their improved frameworks will, of course, be if they can bring down inflation sustainably in the period ahead.

References

- Blinder, A.S. Ehrmann, M. Fratzscher, M. de Haan, J. Jansen, D.-J. (2008): *Central Bank Communication and Monetary Policy: A Survey of Theory and Evidence*. Journal of Economic Literature, 46(4): 910–945. https://doi.org/10.1257/jel.46.4.910
- Allen, F. Nagy Mohácsi, P. Reis, R. Gordon, J. (2021): New Rules for Finance and the Global Financial Architecture. In: A New Policy Paradigm for the Post-COVID World by LSE for Maryam Forum. https://issuu.com/g20magazine/docs/maryam_forum_ebook_january_2021/s/11752628
- Akinci, O. Benigno, B. Pelin, S. Turek, J. (2022): *The Dollar's Imperial Cycle*. Federal Reserve Bank of New York Staff Reports No 1045. https://www.newyorkfed.org/research/staff_reports/sr1045
- Apel, M. Grimaldi, M.B. (2014): *How Informative Are Central Bank Minutes?* Review of Economics, 65(1): 53–76. https://doi.org/10.1515/roe-2014-0104

- Armelius, H. Bertsch, C. Hull, I. Zhang, X. (2020): *Spread the Word: International Spillovers from Central Bank Communication*. Journal of International Money and Finance, 103(May), 102116. https://doi.org/10.1016/j.jimonfin.2019.102116
- Bernanke, B. (2022): 21st Century Monetary Policy: The Federal Reserve from the Great Inflation to Covid-19. W.W. Norton & Company.
- Bohl, M.T. Kanelis, D. Siklos, P.L. (2023): Central bank mandates: How differences can influence the content and tone of central bank communication. Journal of International Money and Finance, 130(February), 102752. https://doi.org/10.1016/j. jimonfin.2022.102752
- Carvalho, C. Cordeiro, F. Vargas, J. (2013): *Just words?: A quantitative analysis of the communication of the Central Bank of Brazil*. Revista Brasileira de Economia, 67(4). https://doi.org/10.1590/S0034-71402013000400004
- Choi, M. Goldberg, L. Lerman, R. Ravazzolo, F. (2022): *The Fed's Central Bank Swap Lines and FIMA Repo Facility*. Federal Reserve Bank of New York, Economic Policy Review, 28(1): 93–113. https://doi.org/10.2139/ssrn.4155548
- Dincer, N. Eichengreen, B. Geraats, P. (2022): *Trends in Monetary Policy Transparency:* Further Updates. International Journal of Central Banking, 18(1): 331–348. https://www.ijcb.org/journal/ijcb22q1a8.pdf
- Evdokimova, T. Nagy Mohácsi, P. Ponomarenko, O. Ribakova, E. (2023): Overtaking the Masters? Comparison of Policy Communication of Emerging Market Central Banks with the Fed and ECB. PIIE Working Paper, Peterson Institute for International Economics, September. https://www.lse.ac.uk/africa/assets/Documents/Working-papers/PIIE-Overtaking-Masters-Final-clean-Sept-2023.pdf
- González, M. Tadle, R.C. (2020): Signaling and Financial Market Impact of Chile's Central Bank Communication: A Content Analysis Approach. Economía, 20(2): 127–178. https://doi.org/10.1353/eco.2020.0005
- González, M. Tadle, R.C. (2022): *Monetary policy press releases: an international comparison*. BIS Working Paper 1023. https://www.bis.org/publ/work1023.htm
- Gourichas, P.-O. (2024): *Macroeconomic Policy in Emerging Markets* ERSA Keynote. https://www.youtube.com/watch?v=W0JimHwrvT8
- Hansen, S. McMahon, M. Tong, M. (2019): *The long-run information effect of central bank communication*. Journal of Monetary Economics, 108(December): 185–202. https://doi.org/10.1016/j.jmoneco.2019.09.002

- Hendry, S. Madeley, A. (2010): *Text Mining and the Information Content of Bank of Canada Communications*. Bank of Canada Working Paper 2010–31. https://doi.org/10.34989/swp-2010-31
- IMF (2018): Regional Economic Outlook. Western Hemisphere: Seizing the Momentum. Washington: International Monetary Fund. https://www.imf.org/en/Publications/REO/WH/Issues/2018/05/09/wreo0518
- Kawamura, K. Kobashi, Y. Shizume, M. Ueda, K. (2019): Strategic central bank communication: Discourse analysis of the Bank of Japan's Monthly Report. Journal of Economic Dynamics and Control, 100(March): 230–250. https://doi.org/10.1016/j. jedc.2018.11.007
- Kincaid, J.P. Fishburne, Jr., R.P. Rogers, R.L. Chissom, B.S. (1975): *Derivation of New Readability Formulas (Automated Readability Index, Fog Count and Flesch Reading Ease Formula) For Navy Enlisted Personnel*. Naval Technical Training Command: Research Branch Report, No. 8. https://apps.dtic.mil/sti/pdfs/ADA006655.pdf
- Laungaram, P. Wongwachara, W. (2017): *More Than Words: A Textual Analysis of Monetary Policy Communication*. PIER Discussion Paper No 54, Puey Ungphakorn Institute for Economic Research. https://www.pier.or.th/files/dp/pier_dp_054.pdf
- Nagy Mohácsi, P. (2020): *The Quiet Revolution in Emerging-Market Monetary Policy*. Project Syndicate, August 18. https://www.project-syndicate.org/commentary/emerging-markets-unconventional-monetary-policy-by-piroska-nagy-mohacsi-1-2020-08
- Rey, H. (2015): Dilemma not Trilemma: The Global Financial Cycle and Monetary Policy Independence. NBER Working Paper No. 21162, National Bureau of Economic Research. https://doi.org/10.3386/w21162
- Ribakova, E. Rebucci, A. García-Herrero, A. Hartley, J. Benigno, G. (2020): *Credible emerging market central banks could embrace quantitative easing to fight COVID-19*. VoxEU, June 29. https://cepr.org/voxeu/columns/credible-emerging-market-central-banks-could-embrace-quantitative-easing-fight-covid
- Tobback, E. Nardelli, S. Martens, D. (2017): *Between hawks and doves: measuring central bank communication*. ECB Working Paper No 2085. https://doi.org/10.2139/ssrn.2997481
- Tadle, R.C. (2022): FOMC minutes sentiments and their impact on financial markets. Journal of Economics and Business, 118(January–February), 106021. https://doi.org/10.1016/j.jeconbus.2021.106021

- Unsal, F.D. Papageorgiou, C. Garbers, H. (2022): *Monetary Policy Frameworks: An Index and New Evidence*. Working Paper No. 2022/022, International Monetary Fund. https://www.imf.org/en/Publications/WP/Issues/2022/01/28/Monetary-Policy-Frameworks-An-Index-and-New-Evidence-512228
- Velasco, A. (2022): *Early to Hike, Early to Thrive?* Project Syndicate, October 31. https://www.project-syndicate.org/commentary/prospects-for-countries-that-raised-interest-rates-before-fed-and-ecb-by-andres-velasco-2022-10?barrier=accesspaylog
- Vujčić, B. (2020): Speech at the Governors' Panel of the Virtual Conference at the Bank of Albania "COVID-19: Impact on the Economy and Central Bank Policies". https://www.bankofalbania.org/plugins/pdfjs/1.5.188/web/viewer.html?file=https%3A%2F%2Fwww.bankofalbania.org%2Frc%2Fdoc%2FLIBRI_KONF_2020_ENG_20686.pdf