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ARTICLES IN THIS ISSUE

Some reflections on the state of development economics in Asia — **Hal C. Hill, Sisira Jayasuriya**

The monkey in the mirror and other tales of central bank forward guidance — **Eli M. Remolona**

A BSP closer to the people: spreading the benefits of monetary and financial stability — **Benjamin E. Diokno**

Digit ratio and prosocial behavior: the role of innate aggression in public goods and trust games — **Jahm Mae E. Guinto, Charlotte May DC. Amante, Franz Nicole L. Carlos, Arlene B. Daro, Mariella Jasmin P. Marasigan, Joseph J. Capuno**

A note on cooperative hunting: Holmstrom, Fabella, and the Dumagat of Tanay — **Orville C. Solon**

The case against the case for land reform: transaction costs and misplaced exogeneity — **Karl L. Jandoc, James A. Roumasset**

Toward a fairer society: inequality and competition policy in developing Asia — **Arsenio M. Balisacan**

Sovereign determination or disguised protectionism?: the vitamin C case — **Ma. Joy V. Abrenica**

Recent trends in the gender gap in the labor market in the Philippines — **Mitzie Irene P. Conchada, Dominique Hannah A. Sy, Marites M. Tiongco, Alfredo R. Paloyo**

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1 Some reflections on the state of development economics in Asia
Hal C. Hill
Sisira Jayasuriya

16 The monkey in the mirror and other tales of central bank forward guidance
Eli M. Remolona

28 A BSP closer to the people: spreading the benefits of monetary and financial stability
Benjamin E. Diokno

42 Digit ratio and prosocial behavior: the role of innate aggression in public goods and trust games
Jahm Mae E. Guinto
Charlotte May DC. Amante
Franz Nicole L. Carlos
Arlene B. Daro
Mariella Jasmin P. Marasigan
Joseph J. Capuno

73 A note on cooperative hunting: Holmstrom, Fabella, and the Dumagat of Tanay
Orville C. Solon

80 The case against the case for land reform: transaction costs and misplaced exogeneity
Karl L. Jandoc
James A. Roumasset

127 Toward a fairer society: inequality and competition policy in developing Asia
Arsenio M. Balisacan

147 Sovereign determination or disguised protectionism?: the vitamin C case
Ma. Joy V. Abrenica

173 Recent trends in the gender gap in the labor market in the Philippines
Mitzie Irene P. Conchada
Dominique Hannah A. Sy
Marites M. Tiongco
Alfredo R. Paloyo

187 Automation, gigs, and other labor market tales: the Philippines in the Fourth Industrial Revolution
Emmanuel F. Esguerra

219 Revisiting the aid-growth nexus in light of the Sachs-Easterly debate
Sarah Lynne S. Daway-Ducanes
Irene Jo E. Arzadon

236 Public debt and the threat of secession
Rhea M. Molato-Gayares

257 What the new institutional economics owes Marx
Emmanuel S. de Dios

Festschrift for Raul V. Fabella

This special edition of the *Philippine Review of Economics* honors Dr. Raul V. Fabella in his 70th year and recognizes his invaluable contribution to the economics discipline and profession. This edition comprises 13 articles from his colleagues and several generations of former students inspired or mentored by Dr. Fabella who are themselves making their mark in economics. The broad spectrum of topics covered—agricultural economics, competition policy, contract theory, game theory, history of economic thought, international economics, issues in productivity, growth and development, monetary policy, political economy and rent-seeking, public economics, and the theory of teams—are issues that Dr. Fabella himself has written on or taught his students during his long, productive years as a Professor of Economics at the UP School of Economics, nurturing an "oasis of excellence" in his spheres of influence, as well as advocated as a roving academic in his later years, endeavoring to engage policymakers and the public in general, in pursuit of welfare-improving changes for a better Philippines.

The wide gamut of topics in this issue is a testament to Dr. Fabella's eclectic intellectual interests yet unwavering devotion to upholding a high standard of academic excellence. As his biographical sketch at the National Academy of Science and Technology summarizes:

> Fabella's very development as a scholar and intellectual leader presents numerous paradoxes: a classicist turned mathematical economist; a rational-choice theorist who derives material and metaphor from both history and physics; a solitary thinker who agonizes over pedagogy; a pure theorist immersed in policy-debate; an inherently shy, private man who must deal with crowds. His career displays to the fullest the range of issues – from the mathematical to the moral – that economists can and must confront if they are to attain to that "cool head and warm heart" that was Marshall's ideal. A classicist, however, might simply recall Terentius: *Homo sum: humani nil a me alienum puto*.

Indeed, to Dr. Fabella, nothing related to human behavior is outside his interest. At 70 years of age, National Scientist of the National Academy of Science and Technology (Philippines) and Professor Emeritus at the University of the Philippines, he is yet to reach the zenith of his intellectual verve: Fabella the economist is transfiguring into Fabella the social scientist – one to whom *homo economicus* is no longer the norm, but the exception in the vast complexity of human interactions in society. It is thus unlikely that this will be the last festschrift in his honor.

Sarah Lynne S. Daway-Ducanes
Emmanuel S. de Dios

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The monkey in the mirror and other tales of central bank forward guidance

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Asia School of Business

The literature advises central banks to provide forward guidance so as to make themselves predictable to markets. If possible, forward guidance should be Odyssean, in which the central bank commits itself to a clear course of action in the future. Central banks, however, often find themselves defying the theory by offering forward guidance that is rather reticent. Sometimes, the central bank may even deliberately surprise the markets. These departures from theory make sense in markets that behave as Keynesian beauty contests, in which some signals carry inordinate weight and thus lead markets astray. A degree of reticence compels market participants to do their own analysis and offer an independent view that can be useful to central banks. Otherwise, the central bank would find itself merely watching itself in the mirror. In some circumstances, the market may get stuck in a deleterious equilibrium, one born out of a false but well-told narrative. This may call for a "shock and awe" strategy, in which the central bank acts to surprise the market to force a rethinking of the narrative.

JEL classification: E52, E58, G1, G4
Keywords: forward guidance, Odyssean, Delphic, monetary policy, central bank, Keynesian beauty contest, date-dependent, data-dependent, reticence, shock and awe

1. Introduction

On May 1, 2019, the Federal Open Market Committee (FOMC) in the United States released its usual short statement. Market participants focused on only a small part of the statement, and this part said, "In light of global economic and financial developments and muted inflation pressures, the Committee *will be patient* [italics supplied] as it determines what future adjustments to the target range…may be appropriate…." At the close of its next meeting on June 19, the

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FOMC then released a statement that said: "In light of these uncertainties and muted inflation pressures, the Committee *will closely monitor* [italics supplied] the implications of incoming information…and will act as appropriate to sustain the expansion…."

When the FOMC dropped the words "will be patient" from its statement, this small change in language somehow telegraphed to market participants the message that the FOMC would cut its policy rate at the next meeting. As it turns out, on July 31, 2019, the FOMC did exactly that. The interesting aspect of this episode, however, is not what the FOMC did on July 31, but the way it communicated its intentions to the market in the previous statements. That communication is called "forward guidance", and it is the subject of this paper.

The economic theory about how to conduct forward guidance is still a work in progress. Nonetheless, there is what amounts to a mainstream view. This view says central banks should act as predictably as possible. In practice, however, central banks tend to deviate from this view, providing forward guidance with some degree of reticence. Sometimes, they even set out to surprise the markets.

In this paper, I argue that reticence is a virtue. Reticence in forward guidance would compel market participants to do their own homework and form an independent view. Such a view would often be of great value to the central bank. There are also situations that call for catching the market by surprise. These are the situations in which the market is pushed by a popular but false narrative into a bad equilibrium. It is then up to the central bank to jolt the market out of that equilibrium by engineering a monetary surprise.

2. Why forward guidance?

Forward guidance has become a thing among central banks. The reason for this is the need to bridge the gap between the policy rate that the central bank controls and the interest rates that matter for the real economy. The central bank uses forward guidance to influence the interest rates that do matter, and the transmission of monetary policy depends crucially on such guidance.

The policy rate for monetary policy tends to be an interest rate for transactions with a term that is too short to matter for consumption and investment decisions. Indeed, this policy rate is often an overnight interest rate. In the United States, the policy rate of the Federal Reserve is the federal funds rate, the rate at which banks borrow from each other on an overnight basis using the balances they hold at the Federal Reserve. In the Philippines, the policy rate of the Bangko Sentral ng Pilipinas is the overnight reverse repurchase (RRP) rate. This is the rate at which the central bank effectively sells government securities, with a commitment to buy the securities back the very next day.

The interest rates that do matter for the real economy tend to be of longer maturities. In the Philippines, for example, the transmission mechanism of monetary policy works largely through bank lending. Term loans extended by banks can be anywhere from one year to 10 years in maturity. In the United States, corporate bonds would often have a 5-year maturity and home mortgages a 30-year maturity.[1]

For policy rates to affect these longer-term interest rates, market participants would need to form expectations about where policy rates will be in the future and these expectations would need to be reflected in longer-term interest rates.[2] Forward guidance is how central banks try to manage those expectations. These expectations will depend on the central bank's past rate-setting behavior as well as on forward guidance as conveyed in short statements. In such rate-setting behavior, cuts tend to be followed by more cuts and hikes, more hikes.[3] Hence, forward guidance becomes especially important in signaling the turning points in policy rates.

3. The theory

These days, economists take it for granted that central banks should be as transparent as possible. It was not always so. As recently as 1987, William Greider published the bestseller, *Secrets of the temple: how the Federal Reserve runs the country*. The book describes the Fed as more secretive than the CIA and more powerful than the US President. The secrecy was justified by the idea that central banking is an esoteric art. As Karl Brunner [1981:5] explained, "The esoteric nature of the art is moreover revealed by an inherent impossibility to articulate its insights in explicit and intelligible words and sentences." Indeed, speaking to a US Senate Committee in 1987, then Fed Chairman Alan Greenspan famously said, "Since becoming a central banker, I have learned to mumble with great incoherence. If I seem unduly clear to you, you must have misunderstood what I said."

These attitudes began to change in the 1990s. In February 1994, the Federal Open Market Committee (FOMC) released its first ever statement. In his 1996 Robbins Lectures at the London School of Economics, Alan Blinder [1998:70-72] expressed a view that increasingly became the mainstream one:

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[1] In one of Raul Fabella's most cited papers, he and his co-author propose initiatives to help develop the bond markets in East Asia [Fabella and Madhur 2003]. If these initiatives do lead to the development of the corporate bond market, the transmission mechanism will also work through this market and forward guidance will play a more important role than before.

[2] In what came to be called "the expectations puzzle of interest rates", Campbell and Shiller [1991] show that long-term interest rates typically fail to reflect expectations of short-term rates in a simple way. Dai and Singleton [2002] and Duffee [2002] show that allowing for time-varying risk premia can help resolve the puzzle.

[3] As explained by Garcia-Herrero and Remolona [2008], rate-setting behavior reflects reversal aversion, and some central banks tend to be more reversal averse than others.

> [E]xpectations about future central bank behavior provide the essential link between short rates and long rates…By making itself more predictable to the markets, the central bank makes market reactions to monetary policy more predictable to itself. And that makes it possible to do a better job of managing the economy.

Finn Kydland and Edward Prescott [1977:473] had anticipated these views but the implications for monetary policy were not fully appreciated at the time. This may have been partly because they had couched their views in the language of control theory:

> [D]iscretionary policy, namely, the selection of that decision which is best, given the current situation and a correct evaluation of the end-of-period position, does not result in the social objective function being maximized. The reason for this apparent paradox is that economic planning is not a game against nature but, rather, a game against rational economic agents. We conclude that there is no way control theory can be made applicable to economic planning when expectations are rational.

The Kydland-Prescott admonition against discretion ruled out the use of surprise as part of the strategy of monetary policy, because surprises are time inconsistent. Such surprises, of course, go against Blinder's view that central banks should make themselves predictable.

The genesis of the term "forward guidance" itself is from a time when the Fed was attempting to ease monetary policy while its policy rate was at the zero lower bound. Monetary easing then meant flattening the yield curve by extending the horizon in which the policy rate would be kept at zero. The way the Fed communicated its commitment to this form of monetary easing came to be known as "forward guidance". Hence, as shown in Table 1, the FOMC statement of December 2008 said, "The Committee anticipates that weak economic conditions are likely to warrant exceptionally low levels of the federal funds rate *for some time* [italics supplied]". In the March 2009 statement, the phrase "for some time" was replaced by "an extended period". The August 2011 statement then used the phrase "at least…mid-2013". Finally, the January 2012 statement extended the period of such low rates to "late 2014". By the end of that year, however, the FOMC would shift from such "*date*-dependent" forward guidance to a "*data*-dependent" one. Hence, the December 2012 statement said "at least as long as the unemployment rate remains above 6-1/2 percent".

TABLE 1. Odyssean forward guidance by the Fed at the zero lower bound

Date	Statement	Dependence
December 16, 2008	"for some time"	Date dependence
March 18, 2009	"an extended period"	Date dependence
August 9, 2011	"at least … mid-2013"	Date dependence
January 25, 2012	"late 2014"	Date dependence
December 12, 2012	"at least as long as the unemployment rate remains above 6 ½ percent"	Data dependence

A Chicago Fed distinction is useful in deciding between what is good forward guidance and what is not so good forward guidance. Four economists at the Chicago Fed, Campbell, Evans, Fisher, and Justiniano [2012], distinguish between "Odyssean forward guidance" and "Delphic forward guidance". Just as Odysseus had himself tied to the mast, Odyssean forward guidance ties the central bank to specific future actions. By contrast, just as the high priestess of the Temple of Apollo at Delphi offered cryptic predictions, Delphic forward guidance implicitly forecasts macroeconomic performance and the corresponding policy actions. It is Odyssean forward guidance that is favored by Blinder's dictum that central banks should make themselves predictable to the market.

Both the date-dependent and data-dependent announcements by the FOMC during the time of unconventional monetary policy would be regarded as good examples of Odyssean forward guidance. They are to be emulated by central banks in general. Hence, even away from the zero lower bound, central banks are supposed to be clear about their intentions. In the short run, the date-dependent guidance would be the more effective one in making the central bank predictable. However, the data-dependent guidance would be about explaining the reaction function and would therefore be more informative and thus more effective in the long run. In either case, Odyssean forward guidance in practice is likely to mean somehow signaling what the central bank intends to do with its policy rate at future meetings.

One way for a central bank to signal its policy rate intentions is to publish an expected future path of policy rates. This is something a few inflation-targeting central banks do. The Norges Bank, Reserve Bank of New Zealand, and Swedish Riksbank, for example, publish an interest rate path. It is often emphasized, however, that the path represents a forecast, not a commitment.[4] As such, an interest rate path is strictly speaking, not Odyssean forward guidance.

[4] For the case of the Swedish Riksbank, see: https://www.riksbank.se/en-gb/monetary-policy/what-is-monetary-policy/what-is-the-interest-rate-path/. For its part, the FOMC publishes four times a year its famous "dot plot" which shows what individual members of the Committee see as where the policy rate is likely to be at various points in the future, without identifying the member associated with each dot.

4. Forward guidance in practice

When reading the more recent statements released by central banks about their monetary policy decisions, the uninitiated would be hard-pressed to know the central bank's intentions. We are now living in a regime of forward guidance that is different from that of the zero lower bound regime. It is a forward guidance that is less than Odyssean, a reticent kind of forward guidance. The Fed is a practitioner of this kind of forward guidance but it is not the only one.

A cursory search of central bank websites reveals examples of reticent forward guidance by central banks other than the Fed:

In the case of the Reserve Bank of Australia, the statement by Phil Lowe of July 2, 2019 said, "The Board will continue to monitor developments in the labour market closely and *adjust monetary policy if needed* [italics supplied] to support sustainable growth in the economy and the achievement of the inflation target over time."

In the case of the Bangko Sentral ng Pilipinas, the Media Release of August 8, 2019 said, "Going forward, the BSP will continue to monitor price and output conditions to *ensure that monetary policy remains appropriately supportive* [italics supplied] of sustained non-inflationary economic growth over the medium term…."

In the case of the Bank of Thailand, the Press Release of June 26, 2019 said, "The Committee would *continue to monitor* [italics supplied] developments of economic growth, inflation, and financial stability…."

In these examples, it is hard to escape the sense that central banks are being more reticent than predictable. There is an absence of either date dependence or data dependence. Such forward guidance appears to be not so much like tying Odysseus to the mast as like tying Odysseus to a toothpick!

5. When the central bank changes its mind

The obvious reason for the reticence in forward guidance is that central banks would like to be able to change their minds without sacrificing credibility. Situations abound in which reticence pays off in this way. Examples of this are not hard to identify, because they show up as surprises in the market.

On January 22, 2008, for example, the FOMC acted to lower its Fed funds target rate by 75 basis points. That is an unusually large cut for a central bank that normally moves the policy rate by only 25 basis points. The reason given was not so convincing: "The Committee took this action in view of a weakening of the economic outlook and increasing downside risks to growth…." As a result of this action, the US Treasury 10-year yield fell by 20 basis points, one of the largest yield changes on a single day.

The policy rate decision was unusual for another reason. It came on a day when there was no scheduled FOMC meeting. The members of the committee met by teleconference to make the decision. This suggested a sense of urgency behind the decision.

Indeed, what actually precipitated the FOMC decision may have been what was revealed in the New York Times two days later. The headline on January 24 read, "Société Générale loses $7 billion in trading fraud". The newspaper reported that Société Générale, one of the largest banks in Europe…disclosed that a rogue employee had made a series of "elaborate, fictitious transactions" that cost the bank the biggest loss ever recorded in the financial industry by a single trader.

What perhaps transpired before the newspaper article and the FOMC decision was a phone call to Chairman Ben Bernanke by Christian Noyer, then Governor of the Banque de France. Reflecting the way central banks around the world cooperate these days, the French Governor had informed Mr. Bernanke of the disaster that had befallen Société Générale. The disaster would have created panic in financial markets. Instead, the FOMC was able to act to pre-empt the news and avert the panic.

TABLE 2. Ten largest FOMC events for the US 10-year yield since 2000

Date of event	Scheduled FOMC meeting?	Easing or tightening?	Change in 10-year yield (basis points)
March 18, 2009	Yes	Easing	- 47.4
December 16, 2008	Yes	Easing	- 25.7
January 3, 2001	No	Easing	24.3
November 25, 2008	No	Easing	- 21.6
January 22, 2008	No	Easing	- 19.6
December 1, 2008	Austin speech	Easing	- 18.9
December 11, 2007	Yes	Easing	- 18.7
March 18, 2008	Yes	Easing	17.7
August 27, 2010	Jackson Hole	Easing	16.8
June 19, 2013	Yes	Tightening	16.7

As mentioned above, when the central bank changes its mind, the decision would naturally come as a surprise to markets. Indeed, some of the largest shocks in the US bond market are instances of the Fed's changing its mind. Table 2 reports the 10 largest shocks in that market since 2000. The monetary events of January 3, 2001, November 25, 2008, and January 22, 2008 are evidently, instances of

the Fed's changing its mind, where the urgency of the situation meant making a policy decision without waiting for a scheduled meeting and without setting it up with forward guidance.

6. The monkey in the mirror

Apart from the desire of a central bank to be able to change its mind without loss of credibility, there is a subtler reason for reticence in forward guidance.

When a freshly-minted Ph.D. economist joins a market-savvy central bank, the new economist should be told the tale of the "monkey in the mirror":

> There once was a monkey in the jungle that saw another monkey. The first monkey waved its arms to try to attract the other monkey's attention. The other monkey responded by also waving its arms. The first monkey tried scratching its head and made other more complicated gestures. In each case, the other monkey did exactly the same thing. In the end, the first monkey realized that it was watching itself in a mirror that was hanging from the branch of a tree.

The tale is a cautionary metaphor for a central bank that wishes to monitor the market to extract information. For example, the central bank may wish to analyze the yield curve to see whether economists in the market are predicting a recession.[5] It may well be, however, that the yield curve merely reflects what those economists think the central bank plans to do. In this case, the central bank is simply watching itself, like the monkey in the mirror.

In the United States, the monkey-in-the-mirror phenomenon is what happens when the markets go into an extreme "Fed-watching mode". The so-called "street economists" who are believed to have special insight on the Fed's thinking become monarchs of the market. They are the ones who are seen to have special powers for interpreting the Fed's body language and nothing else matters. This kind of market has little information of value to provide to the central bank. It is a market where analysts do not do their own homework. Instead, they rely entirely on the central bank to analyze the economy.

How a market is reduced to a central-bank watching market can be explained by the idea of a Keynesian beauty contest. In 1936, John Maynard Keynes described the stock market as a beauty contest where the winner is the one who comes closest to everyone else's idea of the winner:

> It is not a case of choosing those that…are really the prettiest, nor even those that average opinion generally thinks the prettiest…[W]e devote our intelligences to anticipating what average opinion expects the average opinion to be.

[5] There is a large literature on the use of the slope of the Treasury yield curve to predict US recessions. See, for example, Estrella and Mishkin [1996].

Such a market tends to be subject to multiple equilibria. To find an equilibrium in such a market, the literature often resorts to game theory and the notion of a Nash equilibrium. In experiments, however, there is often no stable equilibrium unless the game is repeated a number of times [Duffy and Nagel 1997].

It was Morris and Shin [2002] who first identified the conditions for a stable equilibrium in a beauty-contest market. They specify a model with higher-order beliefs and a public signal. The public signal serves as a focal point that anchors the beliefs of market participants. This leads to a unique equilibrium but it is one where the public signal gets an inordinate weight in asset prices. Everyone knows that everyone observes the public signal. Hence, that signal must play an outsized role in deciding the outcome.

A central-bank-watching market seems to be such a market. The public signal would be the central bank's forward guidance. If the signal is precise enough, as in an Odyssean forward guidance, it would swamp all private signals. In this situation, the market becomes uninformative to the central bank. It would be watching itself in the mirror.

In principle, the central bank should approach financial markets with intellectual humility. It should let the economists in the markets do their homework. One way in which the central bank could allow this is by conveying deliberately imprecise public signals, which means it should be reticent in its forward guidance. Economists in the market would then react to the forward guidance by asking, "If I were in the shoes of the central bank, what exactly would I do with the policy rate in the next few meetings?" In this case, their answers would be reflected in asset prices, from which the central bank could extract useful information.[6]

Indeed, most of the time, market participants seem to grasp the intentions of the central bank. The reticence seems to work. The surprise to the market at the time of central bank policy decisions tends to be smaller than the surprises when macro-economic announcements are released.[7] Hence, most policy rate changes are well-anticipated. This suggests market participants are doing their homework.

7. "Shock and awe" as a monetary strategy

On March 18, 2009, the FOMC did something completely outrageous from the point of view of Odyssean forward guidance.[8] The Committee set out to surprise the markets. In the military, this would have been the equivalent of a "shock

[6] One way to extract such information is by analyzing the yield curve. See, for example, Hoerdahl, Remolona and Valente [2018].

[7] Fleming and Remolona [1999] look at the sharpest price changes in the US Treasury 5-year note in narrow windows around the release of public information. They find that even in the early days of FOMC statements, the sharpest changes occur at the release of the US employment report and the Produce Price Index. The FOMC announcement of its fed funds target rate is only the third sharpest.

[8] The observant reader will note that this was revealed in the same statement in which the FOMC announced the date-dependent guidance "for an extended period".

and awe" strategy. Somewhere in the middle of the third paragraph, the FOMC statement released that day said:

> To provide greater support to mortgage lending and housing markets, the Committee decided today to increase the size of the Federal Reserve's balance sheet further by purchasing up to an additional $750 billion of agency mortgage-backed securities, bringing its total purchases of these securities to up to $1.25 trillion this year, and to increase its purchases of agency debt this year by up to $100 billion to a total of up to $200 billion.

The Fed essentially announced that it would increase its large-scale asset purchases by more than 240 percent. While the market had expected some increase, the actual increase was massive, going well beyond the range of expectations. As a result, the 10-year Treasury yield fell by more than 47 basis points, its largest one-day move since 2000 (Table 2).

What could have motivated this action by the FOMC? What this author believes happened is that the markets were caught up in a false narrative and had thus fallen into a bad equilibrium, something that can happen with beauty-contest markets. This narrative claimed the Fed as well as other major central banks had "run out of ammunition" and could do nothing about the crisis that was raging at that time. Just as there are times when beauty-contest markets become little more than central-bank watching markets, there are also times when these markets become hostages to a well-told narrative. A private signal can become the focal point in markets and can crowd out all other information.

To jolt the markets out of this deleterious equilibrium, central banks had to resort to "shock and awe". Hence, the Fed's March 2009 surprise was the FOMC's way of saying, "So you think we've run out ammunition? Well, watch this!" It was Chairman Ben Bernanke's shining moment. This moment was followed sometime later by Governor Mario Draghi's dramatic speech in London in July 2012, when he said the European Central Bank will do "whatever it takes". Not to be outdone, Governor Haruhiko Kuroda of the Bank of Japan surprised the markets in April 2013 by launching his Quantitative and Qualitative Easing (QQE). These central banks all seem to have succeeded in their objective, and it required defying the dictates of Odyssean forward guidance.

8. Concluding remarks

Central banks do not operate in financial markets that always efficiently digest disperse information about the underlying economy. Investor sentiment often plays an outsized role. In the bond market, this sentiment is at times driven by what the central bank says and at times by a captivating narrative told by a popular analyst. It is in this Keynesian beauty-contest environment that the central banks must craft their forward guidance.

In the world of forward guidance, the central bank feeds the market some information to achieve an end, which is to influence long-term interest rates. The danger of this strategy is that the central bank may feed the market *too much* information. In a beauty-contest market, such transparency can lead to market analysts who focus entirely on watching the central bank. In such a situation, the central bank would be unable to extract from the market potentially useful information that reflects a somewhat different perspective. When the central bank looks at the market, it would be a monkey looking at itself in a mirror. That would be a shame, because the central bank is not omniscient. It can always benefit from a second opinion, especially that of informed market participants.

Fortunately, forward guidance in practice is somewhat reticent. The central bank plays dumb. Wittingly or unwittingly, this reticence strikes a balance between being predictable to the market and leaving room for market participants to express their views. This reticence seems to work. For the most part, most policy rate decisions by major central banks are well anticipated, suggesting that market analysts are doing their job. They are doing it to be able to decipher the forward guidance. In the process, however, they would be expressing a view.

There are also times that call for giving up on forward guidance entirely. These are the times when the market finds itself stuck in a bad equilibrium, driven there by a compelling but false narrative. Even when the central bank resorts to Odyssean forward guidance, it is ignored by the market. Sometimes the beauty contest favors the false narrative over the central bank. In this situation, the central bank can turn to a strategy of last resort, that of "shock and awe". Here the central bank acts to surprise the market so completely that participants are forced to rethink their assumptions. The hope is that the market will then move to a good equilibrium, one in which monetary policy can start to work.

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References

Blinder, A. [1998] *Central banking in theory and practice*. Cambridge, MA: MIT Press.

Blinder, A., M. Ehrmann, M. Fratzscher, J. de Haan and D.-J. Jansen [2008] "Central bank communication and monetary policy: a survey of theory and evidence", *Journal of Economic Literature 46(4): 910-945.*

Brunner, K. [1981] *The art of central banking.* Center for Research in Government Policy and Business, University of Rochester.

Campbell, J. Y. and R. J. Shiller [1991] "Yield spreads and interest rate movements: A bird's eye view", *Review of Economic Studies* 58: 495-514.

Campbell, J., C. Evans, J Fisher and A. Justiniano [2012] "Macroeconomic effects of Federal Reserve forward guidance", *Brookings Papers on Economic Activity 43(1): 1-80.*

Dai, Q. and K.J. Singleton [2002] "Expectations puzzles, time-varying risk premia and affine models of the term structure", *Journal of Financial Economics* 63: 415-441.

Duffee, G. R. [2002] "Term premia and interest rate forecasts in affine models", *Journal of Finance* 57: 405-443.

Duffy, J. and R. Nagel [1997] "On the robustness of behavior in experimental 'beauty contest' games", *The Economic Journal* 107: 1684-1700.

Estrella, A. and F. S. Mishkin [1996] "The yield curve as a predictor of US recessions", *Current Issues in Economics and Finance*. Federal Reserve Bank of New York (June).

Fabella, R. and S. Madhur [2003] "Bond market development in East Asia: Issues and challenges", Asian Development Bank ERD Working Paper No. 35 (January).

Fleming, M. and E. Remolona [1999] "What moves bond prices?", *Journal of Portfolio Management* (Summer): 28-38.

Garcia-Herrero, A. and E. Remolona [2008] "Managing expectations by words and deeds: monetary policy in Asia and the Pacific", BIS Working Papers No. 47: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1457506.

Greider, W. [1987] *Secrets of the temple: how the Federal Reserve runs the country*. New York: Simon and Shuster.

Hoerdahl, P., E. Remolona, and G. Valente [2018] "Expectations and risk premia at 8:30 AM: deciphering the responses of bond yields to macroeconomic announcements", *Journal of Business and Economic Statistics*.

Kydland, F. and E. Prescott [1977] "Rules rather than discretion: the inconsistency of optimal plans", *Journal of Political Economy* 85: 473-492.

Morris, S. and H. Shin [2002] "Social value of public information", *American Economic Review* 92: 1521-1534.

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