5. Coordinating expectations in monetary policy

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INTRODUCTION

The last 15 years have seen a remarkable revolution in both the conduct of and the common understanding of monetary policy around the world. This revolution has encompassed instruments, with an increased emphasis on transparency about short- and medium-run central bank policy planning and a decreased emphasis on intermediate targets such as monetary aggregates. This revolution has also encompassed objectives, with an increased emphasis on medium-run inflation targets. However, the objective question cannot be separated from the instrument question. In particular, inflation targeting is seen as a key component of transparent monetary policy.

At the heart of this revolution is a change in perspective about what monetary policy is all about. The traditional perspective viewed monetary policy as an engineering problem. Central bankers had a set of instruments under their control, faced uncertainty outside their control and sought to manipulate their instruments to achieve targets. The modern perspective views monetary policy as a strategic problem. Most of the action comes neither from instruments under the direct control of central bankers, nor from exogenous uncertainty outside their control, but rather from the actions of market participants who are mostly concerned about variables outside the direct control of the central bank – for example, long-term interest rates – but are acutely aware that everyone else is looking at the central bank for clues about where those variables are headed. As Michael Woodford (2005, p. 2) put it, 'central banking is not like steering an oil tanker, or even guiding a spacecraft, which follows a trajectory that depends on constantly changing factors, but that does not depend on the vehicle's own expectations about where it is heading'. Charles Goodhart (in a personal communication) has coined the term 'expectationalists' to denote this school of thought that includes not only Michael Woodford, but other leading monetary economists such as Alan Blinder, Lars Svensson and Ben Bernanke.

In this view, monetary policy is – at its heart – the problem of managing and coordinating expectations in the economy. The instruments under the direct control of the central bank – such as overnight interest rates – are less important than the messages the central bank sends out. But how easy is it to use communication to manage and coordinate expectations, and what are the costs and benefits of doing so? Most readings of the evidence of the last 15 years suggest that it is possible to manage expectations and that the benefits outweigh any costs. None the less, a recent theoretical literature has identified some potential costs and difficulties in trying to coordinate expectations. Sometimes these costs seem related to the concerns expressed by the old-fashioned secretive central bankers about talking too much. Sometimes these costs offer some insights into the 'limits of transparency', in other words, the question of how much should be made public. The next section will review some of these arguments from our earlier work. The subsequent section will discuss how these arguments may relate to some current debates on central bank communication policy. The final section concludes.

The type of theoretical models of social value of information and optimal communication in strategic settings that we shall describe assume away too much institutional detail and microfoundation to offer concrete lessons for the design of central bank policy. On the other hand, we believe it is fair to say that the theoretical models that monetary economists use to debate inflation targeting and transparency assume away too much about strategic interaction and expectations formation to adequately address the real questions. We would say – especially to our academic colleagues – that research has not caught up with the revolution in monetary policy practice, and there is much work to be done.

COORDINATING EXPECTATIONS

An economy consists of a large number of economic actors making individual decisions. Since Adam Smith, we have been aware of the remarkable role that prices and free markets can play in coordinating those decisions into a balanced and perhaps efficient outcome. Each actor cares greatly about what others will do. In our models of perfect competition, however, market prices – and the ability to transact freely at those prices – allow each actor to understand and analyse the market without worrying about what other actors will do, and therefore without worrying about what they think.

The price level, however, creates special difficulties. There is a fundamental indeterminacy in the level of prices. When businesses set prices, they must form beliefs about how others are setting prices now and in the future.
How others set prices will depend on what they think about inflation, and so on. When traders take positions in the financial markets, they must form beliefs about the evolution of short-run rates, knowing that short-run interest rates in turn are influenced by market expectations. Beliefs may be self-fulfilling and – in the absence of good monetary policy – there may be excessive levels and inflation volatility. Thus it is no coincidence that monetary policy in particular is subject to much commentary on how people are interpreting it, how they think others are interpreting it, and so on. There is a large coordination dimension with – in the absence of good monetary policy – much indeterminacy in outcomes.

Economists employ the suggestive metaphor of the ‘sunspot’ to understand outcomes in such settings. Suppose that sunspot activity were observed by everyone in the economy. When sunspot activity was high, economic actors expected inflation to be high and – we are still living in a world of bad monetary policy – this led them to set high prices, which translated into high inflation. When sunspot activity was low, economic actors kept price rises small, and there was low inflation. In this world, sunspot activity has no intrinsic relevance for inflation. From the viewpoint of each individual actor, sunspot activity happens to be a good predictor of others’ pricing behaviour, and thus becomes an important determinant of their pricing decision.

Let us pause to ask what features of these metaphorical sunspots would allow them to coordinate expectations in this economy. We noted that they must be observed by everybody. But more is required: it must be common knowledge among actors in the economy that everyone is observing the sunspot, and everyone is acting on the sunspot in the same way. To stretch the metaphor further, there must also be a common understanding of what is meant by ‘high sunspot activity’ or ‘low sunspot activity’. If some actors classified an intermediate level of sunspot activity as ‘high’ while others classified it as ‘low’, then sunspots would no longer be able to play their expectation coordination role. In short, there must be transparency about sunspots in order for them to coordinate expectations.

Now enter the central bank. One way of summarizing the modern expectationalist view of central banking is to say that central banks have successfully taken over the role of sunspots. If economic actors can be persuaded that it is a central bank announcement, rather than the level of sunspot activity, that will coordinate expectations about interest rates and prices, and thus determine interest rates and inflation, then here is a free instrument for the central bank that offers a more predictable and smoother way of influencing outcomes than actually intervening in markets. The efficacy of central banking as sunspots requires that central bank pronouncements acquire the same features as the sunspots outlined above: they must be observed by all; it must be common knowledge that they are observed by all; and, there must be common knowledge of the exact meaning of the pronouncements. In short, central bank communication must be transparent.

It is, of course, a little more complicated than that. The economists who use the metaphor of sunspots do not believe that it is actual sunspots that serve as equilibrium selection devices. Rather, they think that economic actors could focus on a piece of news that is only a little bit payoff relevant, and via its role in coordinating expectations, that piece of news could play the role of a sunspot.

Likewise, central bank announcements convey real information that is directly relevant to economic actors. In particular, they can or might convey information about current actions of the central bank, future actions of the central bank and the state of the economy. This information is relevant to economic actors, not just in assessing the variables that are the subject of the announcements, in other words, the bank’s current and future actions and the state of the economy, but also about other variables, for example, long-run interest rates and asset prices. Nevertheless – in an environment that is subject to self-fulfilling expectations – this information could play a role in coordinating expectations about long-run interest rates and stock prices that is far greater than could be justified by the information content of the announcement. Indeed, this is simply to repeat the main claim of the modern expectation coordination view of central banking: central banks might be able to coordinate expectations well even when their actions have only small, lagged and unpredictable effects on outcomes.

This analogy between sunspots and central bank communication policy then begs the question: transparent central bank communication may be successful in coordinating expectations, but under what circumstances will expectations be coordinated on something desirable – as in recent experience – and under what circumstances might they be coordinated on something undesirable? We now turn to this question.

**Can More Transparency Reduce Informational Efficiency by Crowding Out Private Information?**

Morris and Shin (2002) considered this question in a stylized model of public communication that we shall use to illustrate a number of points in this chapter. Consider a large group of economic actors. Suppose that each actor wants to set his or her action equal to his or her expectation of an average of (i) the state of the world and (ii) the average actions of others. Each actor has some private information about the state of the world in addition to hearing a public announcement about the state of the world
from the central bank. How accurately should we expect average actions to reflect the information that actors obtain from public and private signals? Because of people’s desire to have their actions close to others’ actions, they will have an incentive to put more weight on public rather than private signals, even if those signals are equally informative about the true state of the world. If it is socially desirable for actions to reflect the best information available, the strategic motive will lead private information to be inefficiently ignored. Now, if the precision of public announcements is increased—think of this reflecting increased transparency of the central bank—there will be two countervailing effects. On the one hand, given any rule by which actors aggregate private and public signals, the increased accuracy of the public signal will improve outcomes. On the other hand, if private information is already being inefficiently ignored, increasing the precision of public announcements will just lead to more inefficient discounting of private information. Which effect prevails? If public announcements are accurate relative to the accuracy of private information, then increased transparency (increased precision of public announcements) is unambiguously good. If, however, public announcements are relatively inaccurate, then their effect in crowding out private information predominates, and increased transparency could be bad.

What lessons might this benchmark observation have for central bank transparency? Note first that the excess reaction of the market to public announcements seems to capture the traditional concern of central bankers that the market may overreact to apparently innocuous statements and that extreme caution in speaking to the public might be a safe response to such overreaction. Moreover, in the extreme case where people’s beliefs about others’ actions are especially important, public announcements will have a large impact on outcomes even when they convey very little payoff-relevant information. In this sense, they act like sunspots.

Two reasons have been suggested for why these observations might have limited relevance for central bank communication in practice.

First, the negative welfare impact relies on the assumption that while economic actors’ desire to coordinate with others yields private benefits, it does not yield social benefits. In many microfounded models, this may not be the case. For example, Christian Hellwig (2005) has shown that when the coordination motive represents strategic complementarities in a monopolistic price-setting model, the social benefit of coordinated action is sufficiently high to prevent the negative welfare impact.

Second, the negative impact of a marginal increase in the accuracy of public announcements arises only when public signals are inaccurate relative to private signals. If the central bank is not significantly less informed than the private sector about the subjects on which it communicates, then the welfare impact is unambiguously positive. Lars Svensson (2006) has argued forcefully that this is the empirically relevant case. Surely, the central bank is more informed about the central bank’s conduct of monetary policy now and in the future. Even in forecasting the economy, there is evidence that, for example, the Federal Reserve performs well relative to the private sector.

These are both important points, but let us argue why we none the less think that there might be lessons here for central bank communication policy.

First, it matters whether the welfare objective is merely to coordinate expectations on some thing or to coordinate expectations on the right thing. Much analysis of monetary policy focuses on reduced-form modelling where heterogeneous expectations are not explicitly modelled and where the loss function is a weighted sum of the output gap and deviation of inflation from its target. Here, coordination of expectations is assumed, but the level of expectations matters, that is, it matters that the expectations (coordinated by assumption) are coordinated at the right level. It is clearly unsatisfactory to have a theory motivated by expectation coordination where coordination is assumed. But the reduced-form loss function presumably reflects some intuition that it does matter what you coordinate on. Remember, it is exactly when levels rather than coordination per se matter that the potentially negative effect of increased precision of public announcements arises. It is important to study further the nature of the relevant coordination for monetary policy. There is some recent work on this topic: Angeletos and Pavan (2007) give an overview of when welfare losses associated with public information might be expected to arise or not arise. In the monopolistic competition pricing model of Hellwig (2005), public information is always valuable, intuitively, because getting relative prices right matters more than the absolute level of prices. Angeletos et al. (2007) describe a scenario in which public information can introduce volatility in asset prices that leads to socially inefficient investment choices.

To understand the welfare impact of using central bank communication to coordinate private-sector expectations, we must take a position on why coordination is required, and what the trade-off is between coordination per se and coordination at the right level.

Second, if central bank communication is to play such an important and beneficial role in coordinating private-sector expectations, it must be because—in the absence of such communication—expectations would not be coordinated, or, in other words, there would be heterogeneous interpretations about what is going on in monetary policy and the economy. Where do these heterogeneous interpretations come from? If you are confident that these heterogeneous viewpoints have no informational value, then no socially
valuable information is lost when these viewpoints are no longer reflected in economics actors' choices. But how confident should we be that no socially valuable information is lost? It certainly sounds safe to argue that if the central bank's information is better than all the information among private-sector actors, the social loss from transparency cannot arise. Proponents of transparency would argue that this is the case at the relevant margins of the debate on transparency. Even if this rule is accepted, there may not be agreement on whether the central bank has more relevant information. Since future central bank actions are crucial to forming coordinated expectations in the market, many central banks have been saying more and more about future policy plans. Mervyn King (2006), on the other hand, insists that he and the Bank of England's Monetary Policy Committee (MPC) have no more information about future policy actions than the private sector: 'We don't say where interest rates will go next for the simple reason that we don't know. And it would be quite misleading to pretend otherwise'.

A closely related issue is the revealed preferences of the central bank as embodied in the forecasts it issues on the path of its policy interest rate. Charles Goodhart (2007) notes that when a central bank issues forecasts of inflation and the output gap, together with its forecast of the policy rate, there is an implied weighting over inflation and the output gap that is revealed in the combined forecasts. Such preferences may not be explicitly held or agreed among MPC members, nor will such preferences necessarily pass the time-consistency test.

Finally, note the important implicit assumption that a central bank has control over the inferences the private sector draws from its communication. Mervyn King may not wish to communicate about the Bank of England's future policy actions, because he believes that he does not have relevant insights over and above his explanation of objectives and current policy. The market, however, will make inferences about future policy, and the MPC minutes might play a role in coordinating expectations about future policy decisions. In doing so, the MPC minutes might crowd out private-sector information that otherwise would have been reflected in market expectations.

Now let us consider more transparent central banks, such as those of Norway and New Zealand (and recently Sweden), which seek to communicate what future policy decisions will be conditional on the future state of the economy. Such announcements may coordinate expectations about future policy, but may also be relevant to private-sector assessments of future stock prices, and might play a role in coordinating expectations about stock prices. Nevertheless, it is surely true that the private sector has valuable information about stock prices that we would not like to see crowded out by either sunspots or misunderstood central bank communication.

Is There a Conflict between Managing Expectations and Learning from Markets?

Ben Bernanke (2004a) has argued:

[When the monetary policy committee regularly provides information about its objectives, economic outlook, and policy plans, two benefits result. First, with more complete information available, markets will price financial assets more efficiently. Second, the policy makers will usually find that they have achieved a closer alignment between market participants' expectations about the course of future short-term rates and their own views.

In other words, Bernanke argues that when the central bank conveys its own views more clearly, (i) market prices are more informationally efficient, and (ii) market expectations may be closer to the central bank's own expectations.

Prima facie, there seems to be a conflict between these two claims. If the central bank is able to successfully coordinate market expectations, it is because market participants put a significant weight on central bank announcements. This means that they must put less weight on their own private information. This would seem to lessen the informational efficiency of market prices. To the extent that the central bank collects information about the economy from the private sector, this suggests that more transparent communication by the central bank might reduce the informational advantage that the central bank itself has.

Advocates of transparent central bank communication downplay the conflict here. Bernanke would surely argue that the economic data that serve as inputs into US monetary policy are distinct from the asset prices that reflect the coordinated expectations generated by transparent central bank communication, and that there is no feedback between the two. This question surely merits further theoretical and empirical investigation.

The Precision–Commonality Trade-off

In our discussion so far, we have assumed that if the central bank has some information, it is feasible for it to make that information public. We have noted that the 'publicity' or common knowledge of the information enables the central bank to have a large role in coordinating expectations, hopefully in the social interest (but conceivably not).

As any central banker knows, however, it is not so easy to communicate information in such a way that it becomes common knowledge within the
private sector. If different listeners interpret an announcement differently, then the content of the announcement does not become common knowledge. The same result is obtained if some listeners pay attention to the announcement, while others do not. Intuitively, the more one attempts to communicate, the more likely it is that some listeners will not pay attention to all the information, resulting in less common knowledge. In this sense, there is a trade-off between the commonality of information communicated and the accuracy of that information.

Morris and Shin (2007) used the following example in illustrating this trade-off. Consider again the coordination problem that we described earlier: each actor is trying to match his or her action to some average of his or her expectation of the state and his or her expectation of the average action of others. Suppose I know the true state and have two alternative communication scenarios available. Under scenario one, I could collect everyone together into one lecture hall and announce the state. This lecture hall, however, would have to be very large, and there would be a large amount of noise added to my announcement of the state. In other words, while I announced the true state of the world, everyone would hear the same noisy signal of what I said. In this case, there would be common knowledge of an inaccurate signal of the state. Under scenario two, however, I could divide everyone into two equal groups and put them in smaller lecture halls with better acoustics. In each lecture, my announcement of the true state would be heard with less noise. Nevertheless, each audience would have a different noise term. In this case, everyone’s information about the state would be more accurate than under scenario one, but there would not be common knowledge of their beliefs. If these were the only communication scenarios available, then there would be an important, non-trivial trade-off between precision and accuracy of communication even if increased accuracy of public signals were always desirable.

There is a trivial sense in which this trade-off is reflected in the design of central bank communication. The MPC goes to some lengths to ensure that there is a single, definitive statement of their policy decisions and reasoning. This enhances the commonality of understanding of what they have said. Repeating their position to multiple audiences, offering further clarifications when confusion arises, might unambiguously increase the accuracy of the public’s understanding of their position. It would not, however, enhance the commonality of the understanding, since some people might miss the clarification.

This trade-off must surely arise in understanding the limits to transparency. Many central bankers comment that markets may absorb unconditional forecasts of future policy; conditional forecasts are too much for the market to bear. One way of understanding this claim is that there is a greater hurdle in attaining common knowledge than merely conveying information to a single individual. An inflation target or unconditional forecast may be sufficiently simple for there to be confidence that ‘everyone’ is observing it, but more complex communication strategies may erode common knowledge and—in this sense—lessen transparency.

CURRENT DEBATES

How can we relate the theoretical ideas outlined above to the current debates surrounding the conduct of monetary policy? We shall focus in greater detail on one issue that we have touched on already—namely, on whether a central bank should publish its own forecast of its policy rate. This question recently came to the fore of the debate following the decision of Sweden’s central bank, the Riksbank, in 2006 to join the central banks of Norway and New Zealand in publishing the forecast of its policy rate. Even among those central banks that have explicit inflation-targeting policy regimes, the practice of publishing the forecast of the policy rate puts these three countries (New Zealand, Norway and Sweden) at the vanguard of the trend towards greater central bank disclosure. The Bank of England (another inflation-targeting central bank) has been less willing to go down this route, as already noted earlier in our discussion.

The Bank of England’s position is at odds with a body of work both in academia and policy circles that has advocated forward-looking guidance by the central bank on its future actions as a way to enhance the effectiveness of monetary policy. We have already noted the key planks in this argument. The argument starts with the observation that the central bank generally controls directly only the overnight interest rate. The links from the overnight rate—the direct lever of monetary policy—to the prices that matter, such as long-term interest rates, depend almost entirely on market expectations, and monetary policy is effective only to the extent that the central bank can shape the beliefs of the market participants.

A second plank in the argument for the central bank providing guidance on its future actions is some version of the expectations theory of the yield curve—in other words that long-term interest rates are determined (or at least influenced in large part) by market participants’ expectation of the future course of short-term rates set by the central bank. By charting a path for future short rates and communicating this path clearly to the market, the central bank can, it is argued, influence market expectations, thereby affecting mortgage rates, corporate lending rates and other prices that have a direct impact on the economy. Having thus gained a lever of control over long-term rates, monetary policy works through the IS
(investment–savings) curve – through quantities such as consumption and investment.

Indeed, as we have commented already, the management of expectations is seen by many leading monetary economists of the expectationalist school as the task of monetary policy. For Svensson (2004, p. 1), ‘monetary policy is to a large extent the management of expectations’, or as Woodford (2005, p. 3) has put it, ‘not only do expectations about policy matter, but, at least under current conditions, very little else matters’. The arguments are laid out particularly clearly in a policy speech given by (then Federal Reserve Governor) Ben Bernanke (2004b) entitled, ‘The logic of monetary policy’. Here, Bernanke explores the analogy between driving a car and steering the economy through monetary policy. The economy is a car and the Federal Open Markets Committee (FOMC) is the driver, and monetary policy actions are akin to taps on the accelerator or the brake in order to stimulate or cool the economy as appropriate, based on its current state. Bernanke notes that while this analogy is superficially attractive, the analogy breaks down due to the importance of the expectations of future actions by the central bank. If the economy is like a car, then it is a car whose speed at a particular moment depends not on the pressure on the accelerator at that moment, but rather on the expected average pressure on the accelerator over the rest of the trip.

In addition to the argument that monetary policy is more effective when central banks disclose the path of their future policy rates, there is also an argument that appeals to consistency. Rudebusch and Williams (2006) examine the current practice of some inflation-targeting central banks of arriving at forecasts of inflation and output that are based either on the assumption that the policy rate will remain constant, going forward, or on the path of the policy rate as revealed in market prices of short-term interest rate futures contracts. If the central bank knows that its own forecast diverges from either or both of these paths, then the central bank’s own forecast of inflation and output will build in an inconsistency. Thus, in addition to the reasons arising from policy effectiveness, even from the viewpoint of consistency, the disclosure of future expected policy actions is seen as being desirable.

The Market as a Single Agent

There are, however, a number of issues that may give us cause to pause and reconsider the arguments. Let us begin, first, with the practice of treating the market as a single, coherent agent with beliefs that satisfy the consistency requirements that apply to a rational individual. In referring to movements in market prices, we often employ the shorthand to refer to the ‘market’s expectations’. In simple formal models with a representative agent, there is indeed a representative individual whose beliefs correspond to the ‘market’s expectations’. In practice, however, there is no such thing as the ‘market’s expectations’. The market is not an individual, and market prices do not correspond to the beliefs of a particular individual. Instead, market prices are determined as the result of the interactions of a large number of individuals who may have their own respective windows on the world, and who do their best to infer the information of other individuals in the market.

When traders have differential information and short trading horizons, Allen et al. (2006) show that the prices that emerge from the forward-looking rational expectations equilibrium of an otherwise standard asset-pricing model exhibit the tell-tale features of the excessive influence of public information over private information. One symptom of the overreliance on public information is the fact that the (arithmetic) average of the traders’ expectations concerning the fundamental value of an asset two periods from now need not be equal to the average expectation today of the average expectation tomorrow of the fundamental value. In other words, the ‘law of iterated expectations’ fails for the average expectations of the market as a whole. Such a failure would never occur if the market were a single, coherent agent capable of holding beliefs as a single individual.

Once we break free from the straitjacket of construing the market as a single, coherent individual, some of the anomalies that have been raised as potential obstacles to publishing guidance on future policy actions of the central bank appear to be on stronger ground. As mentioned by Rudebusch and Williams (2006, p. 2), one of the strongest central bank taboos is the prohibition against talking publicly about future interest rates. This taboo is attributed to the belief that financial markets would tend to interpret any central bank statements about the likely future path of policy as commitment to future action, as opposed to conditional projections based on existing information and subject to considerable change. Mervyn King’s argument alluded to above rests on similar misgivings. To the extent that the ‘market’ is not one, single individual with coherent beliefs, such misgivings do not attribute irrationality or bounded rationality to the ‘market’. There is no such attribution of irrationality, since there is no one individual called the ‘market’ that can be the subject of such attribution. To think otherwise would be to commit what philosophers call a ‘category mistake’.

Expectations Theory of the Yield Curve

We have already seen that an important (perhaps the most important) plank in the argument for the desirability of publishing guidance on the future path of central bank policy rates is some version of the expectations
theory of the yield curve. According to this theory, long-term interest rates are determined by the expectations of the future path of short-term rates. It is through this channel that the central bank gains a lever over prices that matter – in particular long-term rates that determine the key interest rates that determine mortgage rates, corporate lending rates and so on. While there is some empirical support for the expectations theory of the yield curve, the evidence is mixed. Gerlach and Smets (1995) find supporting evidence for the expectations theory for a number of European countries, but there is little evidence for it for countries that host the major financial markets.

Indeed, in a paper published 25 years ago, Shiller et al. (1983, pp. 174–5) summarize the state of discussion on the expectations theory in the following unflattering terms.

The simple expectations theory, in combination with the hypothesis of rational expectations, has been rejected many times in careful econometric studies. But the theory seems to reappear perennially in policy discussions as if nothing had happened to it. It is uncanny how resistant superficially appealing theories in economics are to contrary evidence. We are reminded of Tom and Jerry cartoons that precede feature films at movie theatres. The villain, Tom the cat, may be buried under a ton of boulders, blasted through a brick wall (leaving a cat-shaped hole), or flattened by a steamroller. Yet seconds later he is up again plotting his evil deeds.

Their paper was published in the Brookings Papers of 1983, but the force of their argument remains as strong as ever. The bond market crash of 1994, and the fluctuations in the yield curve in the summer of 2003 are two of the more glaring instances of apparent ‘overreaction’ by the market to central bank communication.

When considering the workings of financial markets and the motivation of traders, the failure of the expectations theory of the yield curve is perhaps not a surprise. Although it is very plausible that central bank guidance is the pivotal factor in pricing out one or two years in the yield curve, it seems more of a stretch to believe that longer-term rates are determined by traders’ expectations of central bank actions in the distant future. When hedge funds and fixed-income traders trade ten-year swaps, could we plausibly believe that they are influenced primarily by their beliefs of central bank policy seven, eight or nine years from today? Evidence from the markets tend to undermine such a hypothesis.

Even among those central banks that have begun to publish the forecast of their future policy rates, the markets have not always taken the cue from the central bank’s forecast in setting prices. Goodhart (2007) notes that when the Norges Bank (Norway’s central bank) published its interest rate projections in autumn 2006, very short-term rates fell into line, but the longer ones did not. The expectations theory of the yield curve seems even less secure in the face of such evidence.

Monetary Policy and Informational Efficiency

To the extent that market prices guide real economic decisions, the informational value of market prices ought to be of interest to central banks. Following the recent cooling of the residential housing market in the USA, the excesses of the lending practices of some financial institutions to the ‘sub-prime’ mortgage market has become a subject of topical debate and a cause for concern. Many of the sub-prime loans were extended in the period of unusually low short-term interest rates earlier in the decade, illustrating the long-lasting nature of some investment and financing decisions. As such, informational efficiency should be of concern to central bankers. In contrast to monetary models based on the IS curve that emphasizes flows (such as consumption flows), many important decisions affected by monetary policy are concerned with stocks (such as debt). Stock decisions can sometimes be difficult to reverse.

Irving Fisher in his Theory of Interest (1930) gives the example of three possible uses for a plot of land: forestry, farming or mining. The interest rate used to discount future cash flows largely determines the ranking of the three projects. Long-duration projects such as forestry, where the bulk of the payoffs arrive in the distant future, do best in an environment of low interest rates. When interest rates are high, short-duration projects like strip mining dominate. Since investment decisions are often difficult to reverse, distortions to investment can have a lingering effect long after the initial misallocations.

Central bankers have a large impact on financial markets. Indeed, it could be argued that the central bank’s impact can sometimes be too large. By the nature of the problem, it is difficult to gauge whether the reactions in the financial market are excessive or justified by the fundamentals. Behaviour of financial intermediaries as illustrated above show, however, that it cannot be taken for granted that informational efficiency will be guaranteed. Apparent ‘overreactions’ will be the rule rather than the exception.

CONCLUSION

In the middle of the twentieth century, there was an earlier attempt to use transparent communication to coordinate private-sector expectations to socially efficient outcomes. It was called ‘indicative planning’. The idea was
that missing markets might lead to market failures: in five years' time, if the manufacturing sector made the right investments, there would be an increased demand for steel; if the new steel plants had been built, there would have been supply to meet the demand. The lack of a future steel market meant, however, that the invisible hand would not equate them in an efficient way. If, on the other hand, the planning agency could collect information from the managers of the manufacturing sector and the steel sector and publicly and transparently announce this information, then they might be able to coordinate market expectations to a socially efficient level. A recent book by Barry Eichengreen (2006) gives an overview of the process and the outcomes.

In the event, the plans did not always work as intended. Coordination was evidently more difficult to achieve than this. Some of the problems of indicative planning are orthogonal to the new view of monetary policy (for example, the relevant private-sector entities would be large actors who would have an incentive to misreport their private information). Others might be more relevant (would an 'independent' planning agency insulated from short-term political considerations have performed better?). One of the lessons from the global games literature is that when the costs of miscoordination are large, the inherent strategic uncertainty about others' actions entails some degree of inefficiency in the outcome.

The public policy instrument of 'coordinating expectations' through transparent communication has not always been a success. Nevertheless, the last few years show that it seems to be working well for monetary policy in a number of countries. This raises an interesting question. What is so special about monetary policy that allows coordination failure to be fixed with such apparent ease? One important factor is surely that, while successful communication can reduce the importance of the central bank's direct instruments (such as controlling overnight interest rates), those instruments are still there and 'off the equilibrium path'. In other words, if the communication policy failed to coordinate expectations, these instruments would be used and could have a large, if less predictable, impact than the first-best option of using communication alone.

If coordinating expectations is possible, then it is a powerful force for good, as illustrated by the successes of increased transparency of central bank communication over the last 15 years. This power could – in some circumstances – be damaging, however. In this chapter, we have tried to describe how taking expectations coordination seriously suggests when it could be damaging. In doing so, it offers some insights into what the limits to transparency should be.

NOTES

1. The Wikipedia entry on 'category mistake' gives the following definition: 'Category mistake, or category error is a semantic or ontological error by which a property is ascribed to a thing that could not possibly have that property'.
2. Goodhart (2007, p. 19) quotes the following passage from the speech by Deputy Governor Jarle Bergo: 'It is now almost three months since the previous Inflation Report was published. Since that time forward rates have increased and approached Norges Bank's interest rate path. Forward rates somewhat further out are still lower than our forecast. The reason may be that market participants have a different perception of the interest rate path that is necessary to stabilize inflation at target and to achieve stable developments in output and employment. Alternatively, the market may have the same short-term interest rate expectations as Norges Bank, but because of extraordinary conditions long-term bond prices are being pushed up and, consequently, long-term bond yields are being pushed down'.
3. This lecture was delivered in November 2006.

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6. Central bank transparency: where, why and with what effects?

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INTRODUCTION

Transparency represents the most dramatic difference between central banking today and central banking in earlier periods. In recent years, a number of central banks have moved in the direction of greater transparency about their objectives, procedures, rationales, models and data. The question is whether the trend is widespread and whether it is likely to be transitory or enduring. Below we show that this movement in the direction of greater policy transparency is remarkably general. The answer to the question of whether it is likely to prove durable or to be a passing phase is likely to depend on the consequences; our analysis suggests that so far, there have been broadly favourable impacts on inflation and output variability. If institutional arrangements that produce favourable results retain public support, then this suggests that the trend towards greater monetary policy transparency is here to stay.

While there have been a few studies along these lines, relatively little is known about actual trends in transparency or their correlates and implications. Theory has provided useful insights, as we shall see below, but it has not produced general conclusions. Our goal in this study is therefore to contribute new evidence.

We shall construct an index of central bank transparency, distinguishing its components and dimensions, for a larger range of countries and years than in previous studies. Both the time dimension and the international dimension shed light on recent trends in transparency. They allow us to ask questions such as: in what countries have central banks been growing more transparent, and why? Next, we analyse the impact of transparency on inflation persistence, inflation variability and output variability. An advantage of considering both the determinants and the effects of transparency is that we can use our analysis of the determinants to identify instrumental variables that address the concern that an observed correlation between outcomes and transparency