Sentiment and the Real Economy
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Good afternoon. Thank you very much for inviting me to speak with you today. Your list of past speakers reads like an economics hall of fame, but I hope I can add something interesting to the conversation.[1] I'd like to start by telling you a little bit about my background and my perspective, and then I'll share some thoughts on the economy and monetary policy. In particular, I'll talk about the role of sentiment in consumer and firm behavior and some implications for conducting monetary policy. Before I say more, I have to note that the views I express are my own and not necessarily those of my colleagues on the Federal Open Market Committee (FOMC) or in the Federal Reserve System.

I joined the Richmond Fed last January after a 30-year career in consulting at McKinsey, where I had roles including chief financial officer, chief risk officer and leading our offices in the Southeast. I've spent my professional life helping firms make decisions about hiring, compensation and prices, and I've made a lot of those decisions myself. So I hope to bring a different perspective to the FOMC. My colleagues on the committee are some of the most talented macroeconomists, bankers, academics and financial regulators in the country. But as the only committee member coming from management, I can approach things as a practitioner rather than a researcher.

That said, I am tremendously grateful for the support of my research team at the Richmond Fed. The insights I'll share with you today stem from my experience in business, but they've been sharpened and refined through long conversations with our economists.

The Current Outlook

At the Fed, we often describe ourselves as data dependent. The data today tell us we had a very strong 2018, with average GDP growth of 3 percent, unemployment below 4 percent and inflation basically right at our 2 percent target. Some numbers looked weaker at the beginning of this year, but the Bureau of Economic Analysis' advance estimate for first quarter GDP growth was 3.2 percent. The labor market also remains strong with unemployment now down to 3.6 percent. Most forecasters anticipate continued growth this year, as do I.

To be sure, inflation so far this year is running a little below our target. That might well be due to transitory factors, as the chairman outlined in his recent press conference. In this context, it makes sense to remain patient. There's not a strong case to push rates higher when inflation is under control; there's not a strong case to move lower when growth remains healthy.

One reason I'm patient is I believe our economy had a short-term "sentiment shock" at the end of last year and the beginning of this year. There was a significant drop in business, consumer and investor confidence fueled by—and overreacting to—international uncertainty, financial market volatility and the government shutdown and its implications for our political health. These events all stoked fears about the real economy at a time when I believe the broader picture had not really changed.

Defining Sentiment

What do I mean by "sentiment"? As a practitioner and as a policymaker I've learned that the economy can move in ways not fully justified by moves in fundamentals. Especially sensitive are variables that depend on expectations about the future, such as spending on consumer durables, investment and, most famously, stock prices. This suggests that something else matters. I'm calling that business and consumer sentiment.

In his seminal 1936 book *The General Theory of Unemployment*, John Maynard Keynes used the phrase "animal spirits" to describe the idea that beliefs and views not only matter for decision-making, but also change in ways that are hard to predict and manage. As a longtime business practitioner, I too think of sentiment in this way. I believe our economy's performance is driven in important ways by the outlook and beliefs of consumers and businesses—*over and above* what the hard data, and past patterns in it, by themselves would imply. In other words, having the incoming data is one thing, but knowing what consumers and companies think about the road ahead is quite another.

Scholars have formalized the notion of sentiment in a variety of ways. Examples include the now large literatures on "news shocks," "sunspot shocks," "uncertainty shocks," "sticky information," "data misperceptions" and the like.[2] Clearly, the definition of sentiment is tricky. But what these notions all have in common is the idea that businesses and consumers have to form views in order to operate successfully in an uncertain world, and that they may at times find it very difficult to do so. This latter point is especially important in my view.

Sentiment is not unrelated to “confidence.” Confidence is a must for businesses to want to invest and for credit and equity markets to be willing to finance that investment. As a practitioner, it’s not surprising to me that the investment is significantly more volatile than GDP. Confidence is also essential for consumers to spend, but, in our economy, most of what we produce is for immediate consumption rather than investment. Spending for immediate consumption isn’t greatly affected by confidence, but, because households bear substantial risks that they cannot easily insure, such as losing a job or falling ill, they are unlikely to spend on big ticket items without at least some assurance of future stability. As a result, a sudden pullback in their expectations could easily affect their expenditures and tip the economy into recession.

Practitioners and policymakers have both, at some general level, long recognized what I’ve described. I view the many policy levers erected around us—the automatic stabilizers of unemployment insurance, safety net programs and deposit insurance, among others—as a response to the idea that fear and optimism should not contribute unduly to the volatility of our economy. Nonetheless, no amount of publicly funded safety can fully remove the role of sentiment and confidence, as I think the great financial crisis taught us all, and New Yorkers especially.

The Impact of Sentiment

I saw clearly the role of sentiment and confidence in my business experience. Every year, I observed companies make budget assumptions that incorporated their assessments of highly uncertain variables, such as the future state of the economy, the actions of their competitors and changes in regulation. The CFO typically started from a place of caution, while the business unit leaders started with optimism. A debate generally ensued, to be settled by the CEO.

When sentiment moved, so did the relative balance of power. Higher confidence led to aggressive assumptions and lower confidence to the opposite. This affected investment levels, hiring levels and discretionary spending. At my old firm, our operating committee debated for hours. Sentiment moved our hiring, pricing and spending targets, as well as the amount of risk we were willing to bear.

In my short Fed experience, I've seen it even more clearly. At the end of 2018, the considerable uncertainty I described a few minutes ago led to large drops in sentiment. Between December 2018 and January 2019, the University of Michigan's consumer sentiment index dropped seven points, the largest one-month decline since 2013. The Conference Board's measure of CEO confidence also fell significantly in the fourth quarter to its lowest level since 2012. We then saw weak numbers in January and February; for example, February retail sales and payroll employment growth were quite low. Perhaps that's also why inflation in the first quarter was so weak. Firms with less confidence have less conviction to push through price increases.

But sentiment runs both ways. By the end of February, international uncertainty had decreased and the shutdown was over. Perhaps our shift to a patient stance on monetary policy helped. The markets rebounded, as did sentiment. Now the data once again look relatively healthy.

I believe we see the importance of sentiment in monetary policy. One interpretation of policies like forward guidance is that they are a recognition of the power of sentiment and the importance of clearly spelling out our intentions to avoid the proliferation of competing views and beliefs about what else we might do. And in my view, sentiment supports the case for quantitative easing should we ever find ourselves again confronting the zero lower bound. There is a great deal of analysis that questions the impact of quantitative easing in response to the Great Recession, but there is no doubt in my mind that chairman Bernanke whipping out another arrow helped the economy at a time when confidence was fragile.

Has Sentiment Become More Important?

I want to make the case that sentiment is up in importance—and that at the same time, it has become more volatile. One indicator might be the increased visibility of this topic in the academic literature over the past 15 years. But more generally, both good and bad news diffuse significantly more quickly and broadly. We surf the news on our phone 10 times per day. The business media is everywhere, even on planes. And the Fed contributes, for example, by having even more press conference and speeches.

Relative to a few decades ago, consumers might be more exposed to the vagaries of sentiment. In 2016, according to the Fed's Survey of Consumer Finances, about 57 percent of middle-aged families were invested in the stock market, compared with 40 percent in 1989.[3] And they're more likely to be invested in index funds that move with the market than with company fundamentals. Households also might still be scarred by the effects of the Great Recession;

recent research by Richmond Fed economists found that even six years after the recession ended, consumers were the most uncertain they'd been since the late 1970s.[4]

In addition, the business reaction function has gotten faster. One reason is that CEO short-termism has increased as activism in the market for corporate control has shifted companies' focus. I also think firms' resilience is down. They start with lower confidence. I hear from business leaders who are still feeling "hungover" from the Great Recession. While economic upturns are more likely to die of a heart attack than of old age, the length of the current upturn makes many people nervous that another recession is right around the corner. All of this may be exacerbated by higher leverage; according to the Fed's Financial Stability Report, which was released just last week, business borrowing relative to GDP is historically high at present. Levered companies have a bias toward taking action on negative news, including cutting costs, reducing staff and pricing for volume. These all lead to an asymmetry in which firms are much more cautious about the downside than they are optimistic about the upside.[5]

Implications for the Economy and Monetary Policy

Let's assume I'm correct that sentiment is both more important and more volatile. What are the implications for the economy and for policy?

One implication, I believe, is that both consumers and businesses have a higher bar for spending decisions, which would tend to reduce consumer spending and lower firms' investment posture. From that perspective, it's possible that some of the tepid recovery from the Great Recession was a self-fulfilling lack of belief in the strength of the economy. And I see it continuing today with a negative tilt or asymmetry, as I discussed before. Firms are frustrated with political polarization and uncertainty about regulation. This limits their pricing courage and caps the upside on their spending and investment decisions.

For these reasons, I don't discount the idea that we could talk ourselves into a recession. Some economists have studied the spread of information from a disease perspective, where the information spreads slowly at first but quickly gains steam. I would argue that in today's media climate, the "disease" spreads faster. (Of course, it's possible that the "disease" could also be good news, but recent research suggests that firms are much more likely to react to negative economic news than positive economic news.[6])

For monetary policymakers, we have to be aware that our communication matters critically. Long gone are the days when we could change rates and then wait for economic actors to discern that change and react. You might have heard the story that for many years people would use the size of Alan Greenspan's briefcase as a clue to the stance of monetary policy; a thick briefcase meant a rate change, and a thin briefcase meant the status quo.[7] Now, in addition to releasing a detailed statement after every FOMC meeting, the chair gives a press conference. The public also gets a lot of information through speeches by other Fed leaders and our Summary of Economic Projections (SEP, also known as the "dot plots").

But it's worth asking if we're helping or just confusing things. There might be ways we can clarify our communications, such as the chair's recent efforts to have more press conferences.

We might also try to simplify communications tools such as the SEP. Such steps are part of the review of our monetary policy framework that is currently being led by Vice Chair Clarida.[8]

It's also the case that monetary policy becomes about more than interest rates per se. In a volatile environment, rate moves can indicate more than stimulation or restriction. They are also taken as signals on the health of the economy. Counterintuitively, then, rate moves can send unintended messages. For example, in March the market reacted to a lower median rate path in the SEP by lowering inflation expectations. Similarly, when the Fed signaled in mid-2013 that it might begin winding down its bond purchases due to a strengthening economy, investors panicked and a global sell-off ensued. And this can happen quickly, both when the Fed is removing or adding accommodation. We need to recognize communication as a monetary policy transmission channel, acknowledging that this channel adds value to nontraditional measures such as quantitative easing.

Beyond the scope of monetary policy, there might be other steps to reduce the asymmetry of sentiment, such as providing incentives for productive investment or, more broadly, more regulatory certainty. Paying closer attention to corporate debt could increase firms' resiliency. If the ground beneath them is solid, firms' memories of the bad times will eventually fade.

Keeping an Ear to the Ground

I started by talking about myself, and that's how I'm going to conclude. Since coming to the Richmond Fed, I've tried to leverage my business background in order to deeply understand sentiment. That's why I prioritize conversations with contacts. My approach to policymaking has been to spend substantial time, each and every FOMC cycle, working to understand and integrate the informal but essential insights of our business and community stakeholders with the statistical analysis and clear reasoning of the economics profession. Examples of this approach include the close eye I keep on business sentiment surveys, production indices like the one produced by the Institute for Supply Management and diffusion indices, including our own at the Richmond Fed. I've also reoriented our research team toward external outreach, and we are beefing up our own survey capabilities to better monitor real-time changes in sentiment.

When I talk to business leaders in the Fifth District, I ask about budget assumptions. Are you planning for strong, solid or moderate growth? I ask about investment plans. Are you going to aggressively grow or cut back? And I ask about discretionary spending. This is the first thing people cut back on when their expectations are shaky. I learned that as a consultant.

In my conversations today, my contacts tell me that the economy is sound but not spectacular. Consumer confidence has rebounded, anchored by a strong labor market, good income prospects, healthy credit markets and high savings. Once the environment settled, consumers were ready and able to resume spending. But business recovery looks to be slower. They don't feel they have much pricing power. They are anxious about the future. They worry about political polarization and its impact on the environment for investment and regulation. They worry about international markets and trade and the implications for the global economy. They tell me they are maintaining their investment programs but are cautious about funding major expansion. They are not cutting back investments or jobs or discretionary spending, at least not yet. As a consequence, I still see an economy that is sound. But confidence—especially business confidence—is fragile. It's our job as policymakers to try to support it.

Thank you, and now I welcome your reactions and questions.

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[1] Thank you to Kartik Athreya, Thomas Lubik, Jessie Romero and Pierre-Daniel Sarte for assistance preparing these remarks.

[2] For example, see Rüdiger Bachmann, Steffen Elstner, and Eric R. Sims, "Uncertainty and Economic Activity: Evidence from Business Survey Data," *American Economic Journal: Macroeconomics*, April 2013, vol. 5, no. 2, pp. 217-249; Christopher D. Carroll, "Macroeconomic Expectations of Households and Professional Forecasters," *Quarterly Journal of Economics*, February 2003, vol. 118, no. 1, pp. 269-298; Ryan Chahrour and Kyle Jurado, "News or Noise? The Missing Link," *American Economic Review*, July 2018, vol. 108, no. 7, pp. 1702-1736; Thomas A. Lubik and Frank Schorfheide, "Testing for Indeterminacy: An Application to U.S. Monetary Policy," *American Economic Review*, March 2004, vol. 94, no. 1, pp. 190-217; Pierre-Daniel Sarte, "When is Sticky Information More Information?" *Journal of Money, Credit, and Banking*, September 2014, vol. 46, no. 7, pp. 1345-1379.

[3] B. Ravikumar, "How Has Stock Ownership Trended in the Past Few Decades?" St. Louis Fed *On the Economy* blog, April 9, 2018.

[4] Santiago Pinto, Robert Sharp, and Pierre-Daniel Sarte. "The Information Content and Statistical Properties of Diffusion Indices," conditionally accepted at the *International Journal of Central Banking*, 2018. Working paper version here.

[5] While firms focus strongly on GDP expectations, research has noted that inflation expectations actually move *less* than one would expect in a world where businesses and consumers are so well-informed. That's because, for most firms, their industry pricing power trumps aggregate statistics in importance. See, for example, Olivier Coibion, Yuriy Gorodnichenko, and Saten Kumar, "How Do Firms Form Their Expectations? New Survey Evidence," *American Economic Review*, September 2018, vol. 108, no. 9, pp. 2671-2713; and Gregory N. Mankiw and Ricardo Reis, "Pervasive Stickiness," *American Economic Review*, May 2006, vol. 96, no. 2, pp. 164-169.

[6] Coibion, Gorodnichenko, and Kumar (2018).

[7] William T. Gavin and Rachel J. Mandal, "Inside the Briefcase: the Art of Predicting the Federal Reserve," Federal Reserve Bank of St. Louis *Regional Economist*, July 2000.

[8] Richard H. Clarida, "The Federal Reserve's Review of Its Monetary Policy Strategy, Tools, and Communication Practices," Speech at the "Fed Listens: Distributional Consequences of the Cycle and Monetary Policy" conference, Federal Reserve Bank of Minneapolis, Minneapolis, Minnesota, April 9, 2019.