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Narayana Kocherlakota  
President  
Federal Reserve Bank of Minneapolis

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*During the conference, Narayana Kocherlakota participated in a panel that discussed the future of central bank policies. Below is the question he was asked and his response.*

**Question:** What are the key challenges facing central bankers around the world today?

**Narayana Kocherlakota:** Thanks for the question. Before answering, I should point out that my remarks today will reflect only my own views and not necessarily those of anyone else in the Federal Reserve System.

In my view, the biggest challenge for central banks—especially here in the United States—is changes in the nature of asset demand and asset supply since 2007. Those changes are shaping current monetary policy—and are likely to shape policy for some time to come.

Let me elaborate. The demand for safe financial assets has grown greatly since 2007. This increased demand stems from many sources, but I'll mention what I see as the most obvious one. As of 2007, the United States had just gone through nearly 25 years of macroeconomic tranquility. As a consequence, relatively few people in the United States saw a severe macroeconomic shock as possible. However, in the wake of the Great Recession and the Not-So-Great

Recovery, the story is different. Workers and businesses want to hold more safe assets as a way to self-insure against this enhanced macroeconomic risk.

At the same time, the supply of the assets perceived to be safe has shrunk over the past six years. Americans—and many others around the world—thought in 2007 that it was highly unlikely that American residential land, and assets backed by land, could ever fall in value by 30 percent. They no longer think that. Similarly, investors around the world viewed all forms of European sovereign debt as a safe investment. They no longer think that either.

The increase in asset demand, combined with the fall in asset supply, implies that households and firms spend less at any level of the real interest rate—that is, the interest rate net of anticipated inflation. It follows that the Federal Open Market Committee (FOMC) can only meet its congressionally mandated objectives for employment and prices by taking actions that lower the real interest rate relative to its 2007 level. The FOMC has responded to this challenge by providing a historically unprecedented amount of monetary accommodation. But the outlook for prices and employment is that they will remain too low over the next two to three years relative to the FOMC's objectives. Despite its actions, the FOMC has still not lowered the real interest

rate sufficiently in light of the changes in asset demand and asset supply that I've described.

The passage of time will ameliorate these changes in the asset market, but only gradually. Indeed, the low real yields on long-term TIPS bonds suggest to me that these changes are likely to persist over a considerable period of time—possibly the next five to 10 years. If this forecast proves true, the FOMC will only meet its congressionally mandated objectives over that long time frame by taking policy actions that ensure that the real interest rate remains unusually low.

One challenge with this kind of policy environment—and this is closely linked to the overarching theme of this panel—is that low real interest rates are often associated with financial market phenomena that signify instability. There are many examples of such phenomena, but let me focus on a particularly important one: increased asset price volatility. When the real interest rate is unusually low, investors don't discount the future by as much. Hence, an asset's price becomes sensitive to information about dividends or risk premiums in what might usually have seemed like the distant future. These new sources of relevant information can lead to increased volatility, in the form of unusually large upward or downward movements in asset prices.

These kinds of financial market phenomena could pose macroeconomic risks. These potentialities are best addressed, I believe, by using effective supervision and regulation of the financial sector. It is possible, though, that these tools may fail to mitigate the relevant macroeconomic risks. The FOMC could respond to any residual risk by tightening monetary policy. However, it should only do so if the *certain* loss in terms of the associated fall in employment and prices is outweighed by the *possible* benefit of reducing the risk of an even larger fall in employment and prices caused by a financial crisis. Hence, the FOMC's decision about how to react to signs of financial instability—now and in the years to come—will necessarily depend on a delicate probabilistic cost-benefit calculation.

Here's an example of the kind of calculation that I have in mind. Last week, the Survey of Professional Forecasters reported that it saw less than one chance in 200 of the unemployment rate being higher than 9.5 percent in 2014, and an even smaller chance of the unemployment rate being that high in 2015.<sup>1</sup> One possible cause of this kind of a large upward movement in the unemployment

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<sup>1</sup> See the Survey of Professional Forecasters, page 14, at [phil.frb.org/research-and-data/real-time-center/survey-of-professional-forecasters/2013/spfq213.pdf](http://phil.frb.org/research-and-data/real-time-center/survey-of-professional-forecasters/2013/spfq213.pdf).

rate is an untoward financial shock ultimately attributable to low real interest rates. Thus, the gain to tightening monetary policy is that the FOMC may—and I emphasize the word *may*—be able to reduce the already low probabilities of adverse unemployment outcomes.

To me, this kind of analysis suggests that, currently, the gains from tightening related to improving financial stability are both speculative and slight. In contrast, the losses from tightening—in terms of pushing employment and prices even further below the Federal Reserve’s goals—are both tangible and significant. I conclude that financial stability considerations provide little support for reducing accommodation at this time.

Thanks again for the question.