William C Dudley: Remarks at the 2015 US Monetary Policy Forum

Remarks by Mr William C Dudley, President and Chief Executive Officer of the Federal Reserve Bank of New York, at the 2015 US Monetary Policy Forum, New York City, 27 February 2015.

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Jonathan McCarthy, Paolo Pesenti and Joseph Tracy assisted in preparing these remarks.

It is a great pleasure to have the opportunity to comment on this year's Monetary Policy Forum paper, "The Equilibrium Real Federal Funds Rate, Past, Present and Future." Let me preface my remarks with the reminder that what I have to say today reflects my own views and not necessarily those of the Federal Open Market Committee (FOMC) or the Federal Reserve System.

I think this is a timely topic because it is relevant to several questions that are particularly important in the current environment. First, if one were to use a Taylor-type rule as a guide to assess the stance of monetary policy, what equilibrium real federal funds rate would one currently use in the formula? Given the performance of the economy in recent years, I think it would be very hard to justify the typical assumption of a 2 percent rate.

Second, what will this equilibrium real rate be in the future? This is particularly germane right now given that short-term forward interest rates derived from the Treasury yield curve have come down sharply since late 2013. For example, the 1-year forward rate, 9 years ahead has declined sharply over the past year, falling from around 5 percent in December 2013 to just under 3 percent currently. What can explain such a large shift in forward rates at such a long time horizon?

Third, when U.S. monetary policy is normalized, how fast should we raise short-term interest rates? In other words, what is the appropriate path back to the long-run equilibrium real federal funds rate, shallow or steep?

In my view, the paper reaches five major conclusions – conclusions that I find myself broadly in agreement with:

- There are many factors that influence the level of the equilibrium real short-term interest rate. Real potential GDP growth may be one factor, but the real equilibrium rate is also affected by financial conditions, uncertainty and risk aversion, financial market performance (e.g., bubbles and busts) and the degree of restraint exerted by the stringency of banking and financial market regulation.

- There is little evidence supporting the so-called "secular stagnation" view that the equilibrium real short-term rate will persistently remain near or below zero.

- The equilibrium real short-term rate is non-stationary. Thus, it will not necessarily revert back to some long-run average value.

- U.S. and global markets are integrated to a significant degree. As a result, the equilibrium real short-term rates both here and abroad will tend to move together. This seems especially germane in the current environment in which very low long-term government bond yields in Europe and Japan appear to have been an important factor in pulling U.S. long-term yields lower over the past year or so.

- Given the uncertainties about the current and future levels of the equilibrium real short-term rate, an inertial policy rule may lead to better outcomes. As a consequence, the process of normalization of monetary policy should proceed cautiously, with short-term interest rates more likely to rise only gradually toward the equilibrium real short-term rate.

That said, I think the paper leaves some open questions worthy of further exploration. First, although the equilibrium real short-term interest rate, which I will refer to as r*, is only loosely related to real potential GDP growth, could we do better if we were to decompose real potential GDP into its components – such as the growth rates of labor input and productivity – and examine the relationship between r* and each component separately? Second, accepting the principle that an inertial monetary policy rule performs better as uncertainty about the level of the equilibrium real short-term rate increases, what does this imply for monetary policy under current circumstances? Third, in light of the evidence on the volatility of the equilibrium real short-term rate, what are the implications of adopting a Taylor-type rule as a benchmark for monetary policy evaluation? I will argue that in the U.S. context, a Taylor-type rule – even an inertial one – is an incomplete guide for policy because it does not explicitly include financial variables that are important factors in the transmission of monetary policy to the real economy. Finally, I will briefly comment on the issue of secular stagnation and my views on the long-term equilibrium real federal funds rate.

Turning to the first issue of the relationship between real potential GDP growth and the equilibrium real short-term interest rate, the authors find, at best, only a very loose relationship. I would have welcomed some further work here, more closely focused on the components of real potential GDP growth – such as labor input and productivity – and their potential links to the level and dynamics of the equilibrium real short-term rate. First, I would look more closely at the demographic factors that influence the amount of labor input. In my view, it seems plausible that when the labor force is rising rapidly, this might put upward pressure on r* by increasing the demand for capital needed to equip the new army of workers. This might have been particularly relevant during the late 1970s when the labor supply in the U.S. was rising rapidly due to the influx of the baby boom generation into the workforce and the climb in female participation rates. Second, the equilibrium real short-term rate might be influenced by the productivity growth rate. If productivity growth were high, one might expect that the return on capital might also be elevated, putting upward pressure on real rates. The late 1990s surge in productivity growth during the internet technology boom seems to be a good example of this type of phenomenon.

If the growth in labor input and productivity were positively related with the equilibrium real short-term rate, then in the current environment this would be consistent with a relatively low r*. The potential labor force has grown very slowly in recent years (less than a ½ percent annual rate over the past five years), and productivity growth has been subdued – running at only 1 to 1½ percent annual rate on average over the past few years. In sum, by focusing on the components rather than on the overall real potential GDP growth rate, one might find stronger and more persistent relationships with the equilibrium real short-term interest rate.

The second issue that I want to briefly explore concerns the degree of uncertainty about the equilibrium real short-term rate and its implications for monetary policy. The paper argues quite convincingly, I think, that when this uncertainty is high, then an inertial policy rule may be preferable – that is, would lead to higher expected welfare.

While I think this is true, I also think it is important not to overstate the implications of this conclusion in today's environment. Currently, short-term rates in the U.S. are low relative to the standard formulation of the 1999 Taylor Rule. This implies either that U.S. monetary policymakers think that the equilibrium real short-term rate is currently depressed, or that they judge that a monetary policy stance more inertial than the Taylor 1999 standard is more appropriate for the FOMC to achieve its mandated employment and inflation objectives. My own view is that it is a bit of both. Lingering headwinds related to the financial crisis suggest that r* is temporarily depressed. In addition, there are some reasons to be cautious in how early and fast one should raise short-term interest rates. In particular, inflation is projected to stay for some time below the Fed's objective of 2 percent for the PCE deflator and market-based measures of inflation compensation are depressed currently. Also, as I have noted elsewhere, I believe that the risks of lifting the federal funds rate off of the zero lower bound a

bit early are higher than the risks of lifting off a bit late. This argues for a more inertial approach to policy.

That said, it is important not to overemphasize uncertainty to justify a policy of persistently low short-term interest rates. There are also risks from too much policy inertia. An inertial approach works well as long as inflation expectations stay well-anchored. But, if a delay in monetary policy normalization or a very shallow trajectory in normalizing short-term interest rates were to cause inflation expectations to move meaningfully above our 2 percent inflation objective, then an inertial policy would likely become detrimental in achieving the FOMC's objectives.

The third, and related, issue I want to address is the care needed in using rules, such as Taylor 1999, as a guide to policy. As the paper convincingly shows, over time, financial market conditions have become a much more important factor in evaluating the appropriate setting of monetary policy and the level of short-term interest rates. This reflects several factors. First, over the past few decades the U.S. capital markets have grown in size and scope, and our financial system has become much less bank-centric. This has loosened the linkage between the federal funds rate and financial market conditions. Second, the U.S. economy and financial markets have become more interconnected globally. Thus, the impact of U.S. monetary policy has become more diffused, and financial market conditions have come to depend increasingly not only on developments at home, but also on developments abroad. As an example, the current low level of U.S. Treasury bond yields reflects, at least in part, the fact that long-term interest rates in Europe and Japan are much lower.

While simple policy rules provide useful benchmarks for policymakers, their very virtue – their simplicity – is also a significant shortcoming. Policy rules, especially those with fixed values for r*, cannot capture all of the information that is relevant for policymaking. In particular, such rules do not capture the fact that the linkage between the federal funds rate and both financial markets and global conditions can be very loose and shift over time. This is a critical shortcoming because this looseness affects the stability of the relationship between monetary policy and economic outcomes.

If the relationship between monetary policy, financial conditions and the real economy were tight and stable over time, then following a relatively simple and unchanging policy rule would likely generate acceptable results. However, if the transmission of monetary policy to the real economy is more variable and uncertain, as I believe it is, then monetary policy cannot be put on autopilot guided only by a fixed policy rule.

As an example, one significant conundrum in financial markets currently is the recent decline of forward short-term rates at long time horizons to extremely low levels – for example, the 1-year nominal rate, 9 years forward is about 3 percent currently. My staff's analysis attributes this decline almost entirely to lower term premia. In this case, the fact that market participants have set forward rates so low has presumably led to a more accommodative set of financial market conditions, such as the level of bond yields and the equity market's valuation, that are more supportive to economic growth. If such compression in expected forward short-term rates were to persist even after the FOMC begins to raise short-term interest rates, then, all else equal, it would be appropriate to choose a more aggressive path of monetary policy normalization as compared to a scenario in which forward short-term rates rose significantly, pushing bond yields significantly higher.

In closing, I agree with the authors that it is very much premature to accept the hypothesis that we have entered a sustained period of secular stagnation. That said, however, I do think that the real potential GDP growth rate will be lower over the medium term, held down by much slower growth of labor input and an anticipated continuation of lackluster productivity growth performance. If I am correct, this does have implications for the longer-run value of r*. My point estimate is that the longer-run value of the federal funds rate is 3½ percent, well below its long-run historical level of 4¼ percent. At the same time, I also have little confidence about the accuracy of this specific estimate. So you see that I come out in a very

similar place as the authors of this year's Monetary Policy Forum paper. They suggest that the long-run equilibrium real federal funds rate might be in the range of 1 to 2 percent. Add on 2 percent inflation, you end up in just about the same place as my current long-term 3½ percent nominal federal funds rate point estimate.

Thank you for your kind attention.

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