

Board of Governors of the Federal Reserve System

Speech

Governor Randall S. Kroszner

To the U.S. Monetary Policy Forum, Washington, D.C.

March 9, 2007

Liquidity and monetary policy

I'm pleased to be here today to participate in this discussion about liquidity and monetary policy. Apparently many others are having a similar discussion--a quick search of LexisNexis turned up 2,795 separate articles in the past six months alone that mentioned the word "liquidity" in the context of its abundance in financial markets. The use of the term liquidity in these articles spans a wide variety of meanings--perhaps 2,795 of them!

Rather than grapple with the definition of the rather slippery concept of liquidity in my short remarks here, I will focus on aspects of *global* financial markets that many analysts associate with liquidity and that are particularly relevant for monetary policy--namely, the relatively low level of long-term interest rates in both real and nominal terms and the resulting relatively flat slope of yield curves around the world.¹ I want to emphasize that, given the openness of capital markets, explanations of these phenomena should have an international component. I will argue that the flatness of the term structure reflects both the global balance of saving and investment, through its effect on real interest rates, and currency competition, through its effect on expected inflation and inflation risk. I should note at the outset that the views I express here are my own and not necessarily those of my colleagues in the Federal Reserve System.

Of course, flat and even inverted yield curves in advanced economies are nothing new. We know that the short end of the yield curve is dominated by monetary policy and cyclical factors. To abstract from the potential effects of cyclical factors on the yield curve, consider the pattern of forward rates many years into the future, at which point the effects of current cyclical shocks would be expected to no longer be important.² Such forward rates reflect not only market expectations of future short-term interest rates but also term premiums to compensate for the risk associated with commitments to extend credit so far in the future, including the risk of future inflation. The short-term forward rate ten years ahead estimated from the yield curve for U.S. Treasury coupon securities has ranged between 4-3/4 percent and 5-3/4 percent over the past year, nearly 175 basis points (that is, about 1-3/4 percent) below its average level since 1990. Far-forward rates in many other advanced economies have also declined on balance over the past decade, and they are currently around the low end of their historical ranges.³

Low far-forward rates have both a real and a nominal component. I believe that relatively low real forward rates are likely driven at least in part by what some have called a global saving glut.⁴ That is, high rates of saving relative to investment in other parts of the world have resulted in a relatively large stock of funds seeking investment outlets around the globe. The resulting strength of demand has kept real long-term interest rates lower than they might otherwise have been in many countries, and particularly in the United States because it is a relatively attractive place to invest. In addition, the lower variability in real macroeconomic variables over the past two decades relative to the previous three decades, often dubbed the "Great Moderation," may well have trimmed real term premiums relative to their past levels.

Let's now consider possible reasons for relatively low nominal far-forward rates and, as a consequence, relatively flat (or in some cases) inverted yield curves. I will emphasize three

significant changes in most countries around the world that point to a reduction in the compensation required by investors for the possible effects of future inflation on the returns to holding long-term bonds: Namely, declines in (1) actual inflation, (2) inflation volatility, and (3) expectations of long-term inflation, both survey based and "market based." These worldwide effects have been particularly pronounced in emerging markets.

What I have elsewhere referred to as "currency competition" may be a driving force behind these changes in inflation outcomes and expectations and may be reflected in low nominal long-term interest rates and the flattening of yield curves.⁵ I'd like to briefly review what I mean by currency competition. A confluence of four factors--deregulation, globalization, financial innovation, and the public's increased understanding of the costs of inflation--has fostered a form of competition among currencies. That competition, in turn, has led to improved central bank performance and thereby contributed to the recent conquest of worldwide inflation.

The factors that drive currency competition are closely related and mutually reinforcing in many respects.

- Prompted in part by the collapse of central planning, many countries have turned increasingly to private markets and trade to deliver growth and progress. The resulting deregulation has led to an opening of capital markets, and hence financial globalization, which has in turn boosted innovation and helped to increase global competition by shrinking barriers of time and distance. Accordingly, trade and financial linkages between countries have soared in recent years to record levels.
- Meanwhile, substantial financial innovations--including advances in electronic payment systems and trading systems, as well as more widespread credit card networks and increased use of mutual funds--have facilitated the movement of wealth around the globe. As a result, deregulation, globalization, and innovation have made it easier for citizens to move their wealth out of nominal assets in their local currency and thereby avoid any inflation tax should their government show signs that it might resort to inflationary tactics to finance spending.⁶
- At the same time, the public's understanding of the costs of inflation has increased, in part because of experiences of high inflation in many countries in the 1980s. Almost everywhere, public opinion eventually turned against allowing inflation to continue. This public pressure has reinforced the trend against inflationary policies.

Increased competition among currencies, driven by the confluence of factors that I just described, has improved central bank performance by changing the ability and the incentives of governments and central banks to pursue high-inflation policies. In effect, currency competition has raised the costs of poor policy and thus promoted central bank incentives to maintain low inflation.

This change has led many governments to be more willing to adopt institutional changes to improve central bank governance that have bolstered central bank credibility for maintaining low inflation. Such changes have included greater central bank independence, which has typically been granted in conjunction with a mandate including the achievement of low and stable inflation as one of the goals of monetary policy. That is, policy is credible because the central bank's objectives are clear to the public and because the central bank can be held accountable for failing to achieve its objectives. When citizens are more aware of the costs of inflation, and when governments are less able to reap benefits from high inflation, institutional reforms that make central banks more credible and independent are more likely to be adopted and sustained.⁷

Let me make it clear that I think that currency competition has been a much larger force in emerging-market economies, in which the costs of poor policies have been demonstrated quite clearly, than in advanced economies. Still, at least some degree of currency competition may be at work in the United States as well: One could argue that competition faced by the dollar, particularly abroad, is likely greater now than before the introduction of the euro because of the scale of euro-denominated financial markets and the financial institutions in the euro area, but I would not want to push that argument too far.

The forces behind currency competition that have bolstered incentives for central banks to maintain low inflation and so have helped anchor inflation expectations are likely to persist and perhaps strengthen. The ease with which funds move across capital markets should continue to ensure that the responses to inflationary central bank policies will be swift and significant. The resulting incentives provided by currency competition should continue to foster relatively low far-forward nominal interest rates in many countries. As long as capital markets remain open and people remain aware of the costs of high inflation policies, I believe that the forces behind the low level of long-term interest rates and hence the general flatness of yield curves around the globe will tend to persist for some time.

Footnotes

1. For more discussion, see Alan Greenspan (2005), "[The Federal Reserve Board's Monetary Policy Report to the Congress](#)," statement before the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, February 16, www.federalreserve.gov/boarddocs/hh/. See also Randall S. Kroszner (2006), "[Why Are Yield Curves So Flat and Long Rates So Low Globally?](#)" speech delivered at a meeting of the Institute of International Bankers, New York, June 16, www.federalreserve.gov/newsevents/speech/2006speech.htm. [Return to text](#)

2. If you could borrow and lend at the same rate as the U.S. Treasury, then you could lock in a three-month loan ten years from now by borrowing for ten years and three months and simultaneously lending the same principal for ten years. The difference between the interest you pay and the interest you earn on the transaction determines the implied forward rate ten years from today. [Return to text](#)

3. Far-forward rates in yen are up almost 2 percentage points from their historic lows in the second quarter of 2003, but they are at a level that is obviously still low in a historical context. [Return to text](#)

4. See Ben S. Bernanke (2005), "[The Global Saving Glut and the U.S. Current Account Deficit](#)," Sandridge Lecture delivered at a meeting of the Virginia Association of Economists, Richmond, Va., March 10, www.federalreserve.gov/newsevents/speech/2005speech.htm. [Return to text](#)

5. See Randall S. Kroszner (2006), "[The Conquest of Worldwide Inflation: Currency Competition and Its Implications for Interest Rates and the Yield Curve](#)," speech delivered at the Cato Institute Monetary Policy Conference, Washington, November 16, www.federalreserve.gov/newsevents/speech/2006speech.htm. [Return to text](#)

6. For emerging-market countries that had experienced high inflations, another aspect of globalization fostering currency competition is the amount of physical dollars now present in these countries that allow citizens to conduct transactions and store liquid wealth without holding the local currency. Over one recent period, the fraction of U.S. currency estimated to be held in foreign countries rose dramatically, from less than 20 percent in 1980 to as much as two-thirds in the late 1990s, and today the total nominal amount is in the neighborhood of \$400 billion. See U.S. Department of the Treasury, Board of Governors of the Federal Reserve System, and U.S. Secret Service (2006), *The Use and Counterfeiting of United States Currency Abroad, Part 3*, report to the Congress (Washington: Department of the Treasury), October 25, www.federalreserve.gov/newsevents/press/other/20061025a.htm. [Return to text](#)

7. In a paper with Douglas Irwin, I documented a similar dynamic at work in the gradual reversal of protectionist policies in the United States in the 1930s and 1940s. See Douglas A. Irwin and Randall S. Kroszner (1999), "Interests, Institutions, and Ideology in Securing Policy Change: The Republican Conversion to Trade Liberalization after Smoot-Hawley," *Journal of Law and Economics*, vol. 42 (October), pp. 643–73. [Return to text](#)

▲ [Return to top](#)