

## **Donald L Kohn: Focusing on bank interest rate risk exposure**

Remarks by Mr Donald L Kohn, Vice Chairman of the Board of Governors of the Federal Reserve System, at the Federal Deposit Insurance Corporation's symposium on interest rate risk management, Arlington, Virginia, 29 January 2010.

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*The views expressed here are my own and not necessarily those of my colleagues on the Board of Governors or the FOMC. Jim Embersit and Egon Zakrajsek of the Board's staff contributed to these remarks.*

I very much appreciate Chairman Bair's invitation to participate in this symposium. Interest rate risk management is an especially important topic in light of current market realities. Following its meeting earlier this week, the Federal Open Market Committee (FOMC) repeated its expectation that rates would remain at exceptionally low levels for an extended period. I will say little about the outlook for interest rates, particularly just a few days after an FOMC meeting, but it is obvious that as the economic recovery gains traction, it will be appropriate at some point for the FOMC to raise rates. One of my messages today is that the response of interest rates across the maturity spectrum to an actual or expected tightening of monetary policy is always hard to predict, but is especially so in current circumstances. The usual uncertainty about changes in policy interest rates is compounded by uncertainties related to the possible special effects of the historically low level of interest rates in the current recession, as well as the unprecedented increases in the size of the Federal Reserve's balance sheet and bank reserves as a result of our credit programs and large-scale asset purchases. This run-up in Federal Reserve assets and bank reserves will also need to be unwound over time, with possible consequences for the structure of interest rates.

Another message I hope to convey today is that many banks, thrifts, and credit unions may be exposed to an eventual increase in short-term interest rates. As the interest rate risk advisory issued by each of the financial regulators earlier this month recognized, interest rate risk is inherent in the business of banking. But it is especially important now for institutions to have in place sound practices to measure, monitor, and control this risk. They must not become distracted from this critical task by their efforts to deal with credit problems, nor can they think that assuming greater interest rate risk is a sound strategy for compensating for the losses they are taking on their loan portfolios. The recent crisis has been a stark reminder that borrowing short and lending long is an inherently risky business strategy. As the financial markets became disrupted, the liquidity risks of this strategy became painfully evident. Intermediaries need to be sure that as the economy recovers, they aren't also hit by the interest rate risk that often accompanies this sort of mismatch in asset and liability maturities.

### **Interest rate movements**

Interest rates are difficult to forecast in the most settled or normal of times, and their path is especially uncertain in the current circumstances. Short-term rates will rise at some point, but when, how quickly, and by how much will depend on the outlook for economic activity and inflation as the Federal Reserve pursues its objectives of maximum employment and stable prices. The historical record shows that short-term rates have moved in a variety of patterns in economic recoveries from recession: Sometimes rates began to rise shortly after the economy turned around; at other times it took a while for policy tightening to begin; and in other instances, rates continued to decline even after the economic recovery took hold, as during the 1991–92 period and, to a much lesser extent, during the 2002–03 period. We are now just beginning to recover from the deepest recession since World War II. Most

economists expect only moderate growth and a slow decline in the unemployment rate over the next few years, importantly because it will take time for banks to rebuild their capital and begin competing more vigorously for loan business again. Clearly, we are in uncharted waters for monetary policy and the financial markets.

When the Federal Reserve begins to raise short-term rates, the yield curve usually flattens – but not always. Longer-term rates can respond in a multitude of ways, with important implications for financial intermediaries. Recall that in 1994, long-term rates actually rose more than short-term rates for a time, steepening the yield curve and imposing substantial capital losses on market participants exposed to rising bond yields. By contrast, in the second half of 2004, long-term rates hardly rose, and in 2005 they actually declined when the Federal Reserve tightened monetary policy. In my view, the decline in long-term rates partly reflected a strong demand for dollar-denominated assets, especially from countries running current account surpluses, which were, in effect, greatly adding to the global pool of savings seeking higher returns. Extremely low interest rate volatility probably also contributed to investors' willingness to extend duration. No one knows what will happen to long-term rates over coming years, but the Group of 20 leaders have focused on emerging from this recession with better-balanced global growth, which suggests that foreign capital could be less plentiful for the United States. And volatilities are unlikely to return to their previous quiescent state. Banks and other investors cannot count on a repeat of the most recent experience – the absence of capital losses when short-term rates rise.

In addition, the behavior of intermediate- and longer-term interest rates over coming years could well be influenced by a number of unusual elements in the current circumstances. Short-term rates have been close to zero for a year and, if the economy follows the trajectory expected by the Federal Reserve, are likely to stay there for an “extended period.” One of the purposes of those very low short-term rates is to induce investors to buy longer-term and riskier assets than they were buying over the past year, thus reducing borrowing costs for households and businesses. How people will react to increases in expected, and then actual, short-term interest rates after such a period is hard to tell. Moreover, to counter the financial forces weighing on the economy, the Federal Reserve purchased large quantities of long-term agency, agency mortgage-backed, and Treasury securities, putting significant downward pressure on longer-term interest rates. We are now winding down those purchases. The effects on rates of the cessation of our purchases are likely to be modest, but that judgment is subject to considerable uncertainty. Moreover, the purchases created a large volume of excess reserves in the banking system. The reserves themselves could begin to affect the pattern of interest rates if depositories try to diversify out of reserves into other assets. When it comes time to absorb those reserves and raise interest rates, the Federal Reserve has a variety of tools at its disposal, ranging from increasing the rate it pays on excess reserves, to absorbing reserves by engaging in reverse repurchase agreements or offering term deposits to depository institutions, to selling the assets on its balance sheet. The possible mix of and sequencing in the use of those tools is under active consideration by the FOMC. We will choose the combination best suited to meeting our macroeconomic objectives, and those choices will influence not only the general level of interest rates, but also the relationships among them.

Finally, intermediate- and longer-term interest rates fluctuate in response to many forces in addition to changes in the stance of monetary policy; yield curves have shifted considerably at times in the past when monetary policy has been relatively inactive. For example, the path of the federal budget deficit is likely to be an important influence over coming years. As you know, under current law, the deficit is on track to remain quite large even as the economy recovers, pushing up the ratio of federal debt to gross domestic product substantially. Unless the trajectory is changed, the competition for savings between the government, on the one hand, and households and businesses, on the other, could be significant as households and businesses begin to borrow and spend in the recovery, putting upward pressure on interest rates. Moreover, a number of institutions have an unusually large amount of debt to roll over

in the next few years as a consequence of the shortening of the maturity of borrowing that naturally occurred under the pressure of financial market turmoil. I'm confident that sound institutions will find credit readily available to them, but the cost could be affected by the increasing competition for funds.

### **Interest rate movements and the performance of financial intermediaries**

In light of the uncertain course of interest rates, financial intermediaries face significant challenges in managing their interest rate exposures. Clearly, the impact of changes in market rates depends on the maturity and re-pricing mismatches embedded in institutions' assets, liabilities, and off-balance-sheet positions. In general, those institutions whose assets are expected to re-price faster than their liabilities – referred to as “asset-sensitive” – would be expected to benefit from a rise in rates, because higher rates, holding everything else constant, should increase their net interest margins. Conversely, the net interest margins of “liability-sensitive” institutions – those whose asset durations are longer than their liability durations – would be expected to be negatively affected by a rise in market interest rates.

Of course, there are more than 15,000 U.S. banks, thrifts, and credit unions, and the interest rate risk exposures faced by individual institutions are much more complex than these simple characterizations might lead us to believe. Each institution has its own unique funding structure and asset-liability re-pricing mismatches, based not only on the structural characteristics of its particular market and product offerings, but also on the impact of the current crisis and government countermeasures on its credit and liquidity risk exposures.

For example, many large banking organizations have publicly disclosed that they have asset-sensitive positions, suggesting an ability to benefit from increases in short-term rates. Such characteristics are no doubt influenced by their significant holdings of excess reserves and other short-term liquid assets taken on during the crisis. Monetary policy tightening will entail draining excess reserves at some point, and as institutions reconsider their liquidity management – subject to new, stronger liquidity requirements from supervisors, to be sure – their current asset-sensitivity might be expected to decline. And the behavior of various types of customers and instruments may be difficult to predict as the economy and financial markets emerge from this highly unusual period. Thus, even larger asset-sensitive institutions may need to deal with more complex and difficult interest rate risk issues than might be thought.

On the liability side of the balance sheet, banks and other depositories may be facing unusual uncertainties about the future behavior of non-interest-bearing and low-interest deposits. As you are well aware, these types of deposits help boost the net interest income of depository institutions. A number of institutions, both large and small, posted increases in such deposits over the past two years as a result of a “flight to quality” by consumers and small businesses from less-sound intermediaries, money market funds, and other short-term investments. Moreover, banks themselves, aided by the expansion of deposit insurance, have competed heavily for such deposits as potentially more stable sources of funds in a crisis environment. Importantly, such newly acquired low-cost “core” deposits may not be as stable or as interest rate insensitive as similar deposits may have been in the past. Without a doubt, consumers and small businesses are eager to raise their returns on short-term deposits, and institutions may have to compete even more strongly for such deposits once short-term rates begin to move higher. Forecasting the behavior of depositors and the business strategies of other intermediaries has always been a challenge for depository institutions and will be even more challenging as we exit from the current policy and interest rate environment.

These challenges would seem even greater for liability-sensitive institutions – and a significant number of community banks appear to fall into that category. As competition for low-cost deposits has increased, many community banks have been forced to increase their

reliance on wholesale funds, including brokered deposits, which are significantly more interest rate sensitive and less stable than traditional core deposits.

At the same time, many community banks – in competition with securitization markets and larger institutions for consumer and small business loans – face challenges in acquiring good-quality short- and intermediate-duration assets to match their shorter-term liabilities. Many community banks have increased their holdings of longer-term mortgage assets, including mortgage securities guaranteed by Ginnie Mae and the government-sponsored enterprises, in an effort to enhance both credit quality and earning asset yields. While such holdings advance public policy interests in reviving the mortgage market, they nevertheless pose the potential for increasing interest rate risk exposures, in part because of the embedded options in residential mortgages.

Additionally, some banks appear to be assuming more-complex exposures to interest rate risk through purchases of structured products. The recent crisis has focused attention on the problems and complexity of structured products in the form of collateralized debt obligations, which carved up the credit risk of underlying assets into various tranches – a product that, it turned out, too few investors understood. But similar lessons were learned with regard to interest rate risk management in the early 1990s when many institutions purchased various types of structured collateralized mortgage obligations (CMOs) with embedded interest-rate options that were not fully understood – and then incurred substantial and unexpected losses when interest rates rose in 1994. Many CMOs turned out to have durations that fluctuated sharply in response to even small changes in market rates, resulting in significant declines in the value of the instruments and in many cases increasing the asset-liability mismatches they were intended to mitigate. Capital losses as longer-term interest rates rise are a risk facing even asset-sensitive banks. As bankers prepare to meet the uncertainties that lie ahead, they must not forget these hard-learned lessons and must make sure they fully understand how the securities they purchase will perform in different economic and financial market environments, including an environment of rising short- and long-term interest rates.

### **Importance of robust interest rate risk management at all banking organizations**

Because of the potential complexity of interest rate risk exposures at individual institutions, supervisors have, for many years, pointed out the need for bankers to use sound practices for managing these exposures. Employing sound practices becomes even more critical in light of the current uncertainties surrounding the timing and impacts of changes in interest rates. It was concern about the risks to banks from interest rate changes that led the supervisors to issue the recent advisory on interest rate risk management. That advisory reminded institutions of guidance dating back to mid-1990s. Other speakers at this symposium will no doubt summarize and expand upon the guidance discussed in that advisory, but the key principles of risk management apply to interest rate risk, as they do to the management of other risks. These principles articulate the need for (1) appropriate corporate governance, including actively engaged boards of directors and senior managers; (2) adequate policies, procedures, and limits to guide the institution's interest rate risk management process; (3) robust interest rate risk measurement and reporting systems that focus heavily on stress testing of both alternative interest rate scenarios and the effect of key behavioral assumptions on the results of such tests; and (4) strong internal controls structured to ensure the integrity of all elements of the interest rate risk management process.

As the recent crisis has emphasized, senior managers must actively engage in the measurement and assessment of risk exposures. Given today's technology, even some small banks are using reasonably sophisticated measurement techniques to assess the impact of different interest rate scenarios on the different types of interest rate risk that these institutions are exposed to. These risks include basic re-pricing mismatches that are most sensitive to changes in the level of rates; exposures to different yield curve shifts, twists, and slopes; basis risks, which arise from re-pricing differences in instruments with similar

maturities; and the risks that both explicit and embedded interest rate options can pose to the performance and safety and soundness of an institution.

Clearly, every financial institution, regardless of size, must understand the risks it is taking, and how to control and mitigate those risks. We have seen too well and too painfully in the past several years, in the largest banks and in the smallest, what happens when systems and management understanding are not commensurate with the risks being taken. The consequences fall not only on bank owners, staff, and customers, but potentially on the entire economy. We cannot allow that experience to be repeated, and this conference is one step in making sure that interest rate risk does not undermine the safety and soundness of our nation's most important lenders – banks, thrifts, and credit unions.