

Timothy F Geithner: Liquidity and financial markets

Keynote address by Mr Timothy F Geithner, President and Chief Executive Officer of the Federal Reserve Bank of New York, at the 8th Annual Risk Convention and Exhibition, Global Association of Risk Professionals, New York, 28 February 2007.

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We have been in a period that market participants have characterized as one of exceptional liquidity. This is both a reflection of, and has contributed to, the ongoing expansion in the world economy. I want to focus my remarks today on the role of liquidity in markets, and what supervisors and market participants can do to make markets more robust against the shocks that we know will occur from time to time. These remarks are directed to a general phenomenon related to developments in the financial markets in recent years, and not to the specific conditions of the moment.

Liquidity plays a central role in the functioning of financial markets. Structural changes in the financial system that have been underway for some time increase the importance of market liquidity. The allocation of capital increasingly relies on securities markets, where funds for investment in the real economy are raised through the direct issuance of securities to investors. A greater diversity of financial institutions, institutions other than banks, now play a more active role in the provision of credit and liquidity.

Liquidity can mean many different things. One dimension of liquidity is the availability of credit or the ease with which institutions can borrow or take on leverage. This is generally referred to as funding liquidity.

Another dimension of liquidity is the ease with which market participants can transact, or the ability of markets to absorb large purchases or sales without much effect on prices. This is what is generally called market liquidity.

Although these two concepts are distinct, they are closely related and are often mutually reinforcing. Fundamentally this is so because when funding liquidity is abundant traders have the resources with which to finance trading positions that smooth price shocks and make markets liquid.

In practice, this mutually reinforcing behavior is driven by a complex array of factors, including the degree of leverage embedded in the markets at any given time, the difficulty that lenders face in discerning whether a surge in volatility is driven by a transitory shock of some kind or a permanent shock to fundamentals, and risk management practices.

Institutions manage the credit risk in their trading-related exposure by requiring some counterparties to post collateral or margin. Typically, institutions require of hedge fund counterparties both initial margin against potential loss and variation margin, which requires payment to cover any decline in the value of the position. If the position declines in value, the counterparty will have to meet margin calls. If it does not have enough liquidity on hand to meet those calls, it will have to liquidate other positions to raise the requisite cash. The failure to satisfy such a margin call could lead to the liquidation of the position.

This approach to risk management can transform credit risk into liquidity risk. In most circumstances, the impact of this is unexceptional. Other institutions will find the new prices attractive and step in and buy. In exceptional circumstances, however, as creditors and counterparties seek to reduce their exposure to future losses, actions intended to limit individual exposure to risk may instead increase overall risk.

We do not know very much about what makes markets more or less vulnerable to this type of acute shock. This is in part because liquidity itself is not easy to measure.

A broad range of indicators tells us something about funding liquidity, including growth in monetary aggregates, in financial assets and different forms of borrowing or credit. Other measures, such as movements in bid-ask spreads, the level of interest rates, changes in asset prices and risk premia, along with the level of volatility and expectations of future volatility, and turnover volume or other measures of market depth, help us evaluate market liquidity.

Yet none of the measures provides a reliable way of judging how vulnerable markets are to a reversal, or the scale of damage that might accompany a reversal.

These measurement limitations are similar to those that make it difficult to judge when, and by what magnitude, asset prices deviate from fundamental values at any given point in time.

In the case of liquidity, the shortcomings of our analytical tools are magnified by the difficulty of measuring leverage or identifying potential concentrations in the financial system. This has always been challenging, but the growth in the overall size of private pools of capital and the degree of embedded leverage that exists in many derivative instruments makes this more challenging today.

When market liquidity and funding seem abundant, this is likely to be observable in things we can measure, like interest rates and credit spreads. And when liquidity ebbs, the effect is conspicuous in a range of observable market prices and volumes. But we do not have, and probably never will have, a set of indicators that offers the promise of predicting when liquidity conditions will reverse, or when markets are particularly vulnerable to a more acute decline in liquidity.

In this sense, liquidity is like confidence. And, like confidence, liquidity plays a critical role both in establishing the conditions that can lead to a financial shock, and in determining whether that shock becomes acute, threatening broader damage to the functioning of financial and credit markets.

What role can policy play in reducing the vulnerability of markets to this type of dynamic?

Of course, central banks have a range of instruments they can use in the event of a crisis. By injecting liquidity into the system, and thus strengthening confidence, they can reduce the risk that temporary liquidity problems will result in default by otherwise solvent institutions, or damage to the payment system or credit process.

But what can policy makers do *ex ante* to limit the risk of crisis? The most powerful instruments we have are those that affect the strength of the basic, fundamental shock absorbers in the financial system. When capital and liquidity cushions at the major institutions are strong, then markets as a whole are less vulnerable to the adverse spiral of asset price declines, increased volatility, and declining liquidity. And when the operational infrastructure is robust, markets will be able to absorb larger shocks and sharper changes in risk appetite with less risk of broader contagion. These shock absorbers are substantially stronger today than they have been in even in the relatively recent past.

These issues are the principal focus of day-to-day supervision and market oversight in the major financial centers around the world. The Federal Reserve is actively involved in a range of efforts, working closely with the primary supervisors of the major global financial institutions and the critical parts of the financial infrastructure, to encourage further progress.

In this context, we are working to put in place a stronger regulatory capital regime and to strengthen the capacity of firms to absorb losses in stress conditions. We are encouraging more sophisticated and more conservative management of credit exposures in over-the-counter (OTC) derivatives and structured financial products, as well as of exposures to hedge funds. And we are encouraging a range of efforts to modernize the operational infrastructure that underpins the OTC derivatives markets, and to improve the capacity of market participants to manage adversity.

These efforts will all contribute to a more resilient system, one that is better able to withstand the effects of a major decline in asset prices or deterioration in credit.

Are there other tools that policy makers and market participants could use to address this risk?

Some policy makers have argued that public disclosure of information could help reduce the risk of future systemic financial crisis, by preventing the buildup of "excessive" leverage or concentrations of risk.

The principal focus of attention, as in the immediate wake of the failure of Long Term Capital Management, has been on two quite different types of public disclosure.

The first is information that would make it easier to evaluate the overall leverage or risk profile of major hedge funds and their counterparties, and thereby judge their vulnerability to a sharp movement in asset prices. The second is information about the actual positions of individual funds or institutions: information that would make it easier to identify concentrated exposures to specific risk factors, and thereby assess more accurately the potential impact of the failure of a major fund or institutions on the market as a whole.

These pose very different challenges and offer different benefits. There are a number of crude measures of overall risk profile that, if disclosed to the market, would give counterparties information they do not now typically get about the risk of failure of the fund. One example is data on the size of

daily variations in net asset value, VAR, or profit and loss over the previous quarter. This type of information would not reveal proprietary information about trading strategies or otherwise create substantial disincentives to risk taking. Although these would provide some information on the overall risk profile of the fund, they would be lagging indicators, and they would carry the usual risk of providing false comfort in some circumstances and excessive concern in others.

Adopting such measures would give the institutions that provide financing and leverage to hedge funds a somewhat greater capacity to judge their direct risk to those funds. But that is not their principal challenge. The institutions already know the positions they are financing, and they can use the usual range of tools to measure the potential exposure, net of collateral, in those positions. And where they do not feel they have adequate information to evaluate the overall risk profile of the fund, they can manage that risk by taking less exposure, by requiring more margin, or by building a greater cushion of protection against overall risk. So the potential gains from a disclosure regime of this type would be limited, at least as compared with the cost of trying to put such a regime in place on the global scale that would be necessary to make it effective.

By far the greater challenge is to assess the potential impact of the failure of a major hedge fund on the firm's other exposures and other counterparties. This is a question about how correlated the firm's other positions are to the risks the hedge fund is taking. It goes beyond the firm's direct credit exposure to the hedge fund, to the fund's overall risk profile. Large hedge funds typically use multiple prime brokers, and they are, of course, reluctant to disclose to those institutions real time information on their overall positions and trading strategies. So the banks and investment banks do not generally know what their overall exposure to credit and market risks might be in the event that a large fund is forced to liquidate positions.

This knowledge gap has led many to advocate the provision of information on actual positions of the major funds, perhaps aggregated by a third party. According to the proponents, this would help market participants and regulators to identify potential concentrations or crowded trades, and that knowledge would help diffuse them before they became a problem.

This type of transparency has understandable and enduring appeal, but it is unachievable. There is no feasible way to try to capture in real time the rapidly changing exposures of different institutions to different risks in any meaningful fashion. No one with access to that information could make sensible judgments about the level and nature of actual concentrations and whether the risks are excessive.

We continue to explore ways in which the provision of greater information to counterparties and to the markets more generally could help reduce vulnerability to financial crises. For now, though, the practical limitations on achieving greater transparency underscore the importance strengthening the robustness of the shock absorbers in the financial system. We are not likely to ever be in a position where we have the capacity to identify the source and estimate the probability of future financial shocks. And policy makers are unlikely to ever be in a position to diffuse concentrations of risk or crowded trades ahead of a crisis. The most sensible thing we can do is to improve the capacity of the core of the financial system to handle adversity, and this requires continued focus on improving the strength of the capital and liquidity cushions, as well as the market infrastructure.

Let me end with a few quick thoughts on the role of monetary policy in this context. Can monetary policy play a pre-emptive role in reducing the vulnerability of financial markets to the type of dynamic we saw in 1987 and 1998?

Central banks cannot realistically hold out the prospect of using monetary policy to prevent asset price bubbles, conditions of "excess" leverage in parts of the financial system, or other factors in markets that might lead to the types of positive feedback dynamics that were at the heart of some past crises.

And yet many of the observations made about liquidity and market conditions over recent years have potential implications for monetary policy. Changes in risk premia, the level of asset prices, credit spreads, and interest rates, and in realized and expected volatility of asset prices – these can all affect the pace at which overall demand grows, and can therefore potentially affect future inflation.

In discharging their responsibilities for the maintenance of price stability, central bankers need to be eclectic in looking at a range of different ways of measuring the stance of monetary policy, and its effects on the future path of growth and inflation. No indicators of liquidity or overall financial conditions provide a ready guide to judgments about monetary policy. But all these indicators merit careful attention, and they strengthen the argument against narrow or mechanistic approaches to thinking about the monetary and broader economic outlook.

Ultimately, though, ex ante judgments about leverage, concentrations and liquidity risk will continue to prove elusive. Our principal focus should therefore be not in the search for the capacity to preemptively diffuse conditions of excess leverage or liquidity, but in improving the capacity of the core of the financial system to withstand shocks and on mitigating the impact of those shocks. And, as always, central banks need to stand prepared to make appropriate monetary policy adjustments if changes in financial conditions would otherwise threaten the achievement of the goals of price stability and sustainable economic growth.

Thank you.