will involve political trade-offs, as well as technical problems. It is a difficult process, but we were, and remain, in a difficult spot. We are going to be dealing with the financial crisis politically—and our leaders will be dealing with it—for years to come.

III.
KEYNOTE ADDRESS: THE CASE FOR A MARKET LIQUIDITY PROVIDER OF LAST RESORT**

STEVEN L. SCHWARCZ***

A. *Introduction*

The real economy—meaning the way the economy personally affects us all—relies critically on credit. The current financial crisis, it has been observed, began in the credit markets, and eventually will end there. Diminished credit harms the real economy because firms need credit to operate and grow and individuals need credit to buy homes, cars, and other consumer goods.

Many think that the story of the credit crunch fundamentally is a banking story. Yes, there is now a severe lack of confidence in banks; but the credit crunch predated and contributed to this lack of confidence—although the lack of confidence, in turn, is now making the credit crunch worse.

Let me tell the story from the beginning. The credit crunch started with the collapse of the securitization and other debt markets. Securitization is a process whereby consumer financial assets (like mortgage loans, credit card receivables, and automobile loans) and corporate financial assets (like accounts receivable, lease rentals, and licensing fees) are financed through the issuance of debt securities backed by the financial assets. These securities—the most recognizable these days being securities backed by mortgage loans or "mortgage-backed securities"—are sold to institutional investors in both U.S. and worldwide capital markets. I loosely will refer to capital markets in which securitization and other debt securities are issued and traded as securitization markets.

** Copyright © 2009 by Steven L. Schwarcz.

*** Stanley A. Star Professor of Law & Business, Duke University School of Law, and Founding/Co-Academic Director, Duke Global Capital Markets Center. E-mail: schwarcz@law.duke.edu.

Reprinted with the Permission of the New York University Law School

Increasingly, corporate and consumer financing is originated not from banks per se or from bank deposits but from the securitization markets, whose investors may include banks. This shift—known as "disintermediation," removing banks as intermediaries of funds[1]—can be very efficient. By removing the middleman, it removes the middleman's (that is, the bank's) profit mark-up. Think of it like buying wholesale, or even directly from the manufacturer.

When the securitization markets collapsed, however, companies and consumers were deprived of this major source of credit financing. Companies had difficulty borrowing and could not purchase inventory and make capital investments. Consumers had difficulty borrowing and could not purchase homes and automobiles. The lack of credit very directly impacted the real economy.

There are now two fundamental questions: Why did the securitization markets collapse, and how should they be protected?

The answer to the first question is that the securitization markets collapsed due to a systemic cascade of failures initially triggered by the historically unanticipated depth of the fall in housing prices. Mortgage loans to risky borrowers were often made with the expectation of refinancing through home appreciation. When home prices stopped appreciating, these borrowers could not refinance. In many cases, they defaulted.

These "subprime" loan defaults, in turn, caused substantial amounts of low-investment-grade-rated mortgage-backed securities to default and AAA-rated securities to be downgraded. The defaults were especially large for so-called ABS CDO securities—a class of securities backed indirectly by subprime mortgages and other assets—because of the leveraged sensitivity of these securities to underlying mortgage defaults.

That, in turn, spooked investors who believed that "AAA" meant iron-clad safety and that "investment grade" meant relative freedom from default. Investors started losing confidence in ratings and avoiding securitization and other debt securities. Fewer investors meant that the price of these securities started falling. Falling prices meant that firms using these securities as collateral had to mark them to market and put up

1. Although, as indicated, a bank may act as an ultimate investor.

Reprinted with the Permission of the New York University Law School

cash, requiring the sale of more securities, which caused market prices to plummet further downward in a death spiral. This death spiral appears to have been made worse by the high leverage of many firms. Encouraged by the earlier liquidity glut, many firms had borrowed excessively because the cost of funds was so cheap.

The refusal in mid-September of the government to save Lehman Brothers, and Lehman's resulting bankruptcy, added to this cascade. Securitization markets became so spooked that even the highly-conservative asset-backed commercial paper segment virtually shut down. And the market prices of mortgage-backed securities collapsed substantially below the intrinsic value—essentially the present value of the expected value of the underlying cash flows—of the mortgage loans backing those securities.

This collapse in market prices meant that banks and other financial institutions holding mortgage-backed securities had to write down their value. That caused these institutions to appear more financially risky, in turn triggering concern over counterparty risk: afraid these institutions might default on their contractual obligations, many parties stopped dealing with them. This counterparty risk and concern over bank-asset values is what has caused the lack of confidence in banks. *This lack of confidence is thus a consequence,* not the cause, of the collapse in market prices.

The media and many economists and other scholars, though, have focused too narrowly, I think, on banks. History and law help to explain this narrow focus. From an historical perspective, bank runs are the most visible symbol of the Great Depression. From a legal perspective, the Federal Reserve spearheaded U.S. government actions over the past year to address the spreading financial crisis. But the Federal Reserve's mission is historically limited, under Section 13(3) of the Federal Reserve Act, to act as a lender of last resort in "unusual and exigent circumstances" to banks and other financial institutions.

Such a narrow focus worked well when banks were the primary source of consumer and company financing. But as the current financial crisis reveals, disintermediation makes this narrow focus insufficient. Greater attention needs to be paid to the securitization markets. We would not today be facing a

Reprinted with the Permission of the New York University Law School

lack of confidence in banks if their mortgage-backed and other investment securities had maintained market value reasonably corresponding to their intrinsic value.

Let's focus now on the second question: How should these markets be protected? This question has two aspects: First, *should* securitization markets be protected? Second, if they should be protected, how should that occur?

I believe that securitization markets should be protected. In a separate paper, I have argued that securitization efficiently allocates risk with capital. It enables companies to access capital markets directly, in most cases at lower cost than the cost of issuing direct debt (such as bonds or commercial paper). It avoids middleman inefficiencies. It also helps to transform financial assets, such as loans, into cash for new extensions of credit. These positives might be outweighed, however, by securitization's negatives revealed by the subprime crisis. There are several potential negatives: for example, the originate-to-distribute model of securitization might create moral hazard; securitization can create servicing conflicts; and securitization can foster overreliance on mathematical models.

Balancing these benefits and costs, I conclude that, *properly utilized*, securitization is an efficient financial tool. Proper utilization should include, for example, refocusing on basic structures and asset types in order to attract investors; emphasizing cash-flow securitizations in which there are the traditional "two-ways out"; and avoiding highly complex securitization products like ABS CDO transactions which magnify leverage. My view is shared by leading economists, such as Yale's Professor Gary Gorton who concludes:

> There are no such issues [as occurred in the subprime crisis] with securitization generally, or with the use of off-balance sheet vehicles for the securitization of [other than subprime mortgage loan] asset classes. Other securitizations are not so sensitive to the prices of the underlying assets and so they are not so susceptible to bubbles.

The abuse of securitization may have contributed to this financial mess, but, by regenerating credit, securitization can also help to get us out of it.

Let's turn now to the second aspect of the question: How should securitization markets be protected? Securitization

Reprinted with the Permission of the New York University Law School

markets are already subject to many prescriptive regulatory protections, and more are likely to be imposed in the future in response to the current financial crisis. History, however, has shown that financial markets evolve faster than regulation can adapt. I have recently argued, based on lessons of the current crisis, that modern financial regulatory reforms should be focused on three categories of market failures—conflicts, complacency, and complexity—as well as on a possible fourth category: a type of tragedy of the commons that also can give rise to systemic financial market failures. It is, however, impossible to know precisely how future financial crises will arise. Prescriptive regulation, therefore, cannot always prevent these crises. We need a fallback protection for when prescriptive regulation inevitably fails.

I propose a broad fallback protection: a market liquidity provider of last resort. A market liquidity provider can provide protection by helping to stabilize irrationally panicked financial markets—such as securitization markets in which the price of securities is falling significantly below their intrinsic value—thereby averting a downward price spiral that could trigger a systemic cascade.

Ideal markets would not need a market liquidity provider of last resort. If financial securities are underpriced, investors will step in immediately to buy them. Real markets, however, do not always work this way. In a panicked market, for example, private investors may not act rationally—as the current financial crisis has shown. Individuals at investing firms also may not want to jeopardize their reputations (and jobs) by causing their firms to invest at a time when other investors have abandoned the market. Furthermore, private institutional investors usually want to buy and sell securities, not waiting for their maturities. In times of falling prices and market uncertainty, an investor may not want to risk having to wait until maturity of the securities to profit.[2] A market liquidity provider should be designed to be able to wait, if necessary, until maturity.

2. Furthermore, private investors face the risk that a continuing fall in market prices could systemically impact the real economy (such as by shutting down credit markets, as occurred in the subprime crisis), thereby jeopardizing even the intrinsic value of their purchased securities. A market liquidity provider, in contrast, should have the ability to invest sufficiently large amounts to stabilize markets.

Reprinted with the Permission of the New York University Law School

B. *Envisioning How a Market Liquidity Provider Could Work*

A market liquidity provider would likely need to be a governmental entity in order to have access to governmental funding. I contemplate that the market-liquidity-provider function may need to be performed domestically, in the U.S. and other countries, as well as on an international level. I will not in this short time remaining get into possible organizational details.

I am, however, contemplating action by the market liquidity provider *only* when, as might occur in an irrationally panicked market, the market price of securities is falling significantly below their intrinsic value. In the case of asset-backed securities, for example, intrinsic value would be determined by present valuing an estimate of the expected value of cash flows from obligors on the financial assets backing these securities.

In an irrationally panicked market, the market liquidity provider would have at least two options. It could choose to purchase market securities, at a price deeply discounted from the original market price and also lower than the intrinsic value of the securities purchased but still high enough to stabilize market prices above the panicked free-fall level. Alternatively, it could attempt to stabilize the market by entering into derivative contracts to strip out the elements that the market has the greatest difficulty hedging—in effect, the market's irrationality element—thereby stimulating private investment. The Obama Administration presently appears to be considering this latter type of public-private partnership approach in its revised financial bailout plan, which envisions private investors buying distressed mortgage-backed securities, with the government guaranteeing a floor value to the securities purchased. By not actually purchasing securities directly, the market liquidity provider would appear to be taking less investment risk, and thus its function may be seen as more politically acceptable.

These types of targeted market investments should generate relatively minimal costs, and certainly lower costs than those of a lender of last resort to financial institutions—the Federal Reserve Bank's traditional role. By providing a lifeline to financial institutions, a lender of last resort can foster "moral hazard" by encouraging these entities—especially those that believe they are "too big to fail"—to be fiscally reck-

Reprinted with the Permission of the New York University Law School

less. These loans will also not be repaid if the institution eventually fails.

In contrast, a market liquidity provider, *especially if it acts at the outset of a market panic,* can profitably invest in securities at a deep discount from the original market price and still provide a "floor" to how low the market will drop. Buying at a deep discount will mitigate investor moral hazard and also make it likely that the market liquidity provider will be repaid. Furthermore, by focusing on markets, a market liquidity provider can avoid the too-big-to-fail dilemma of a lender of last resort to institutions. In economic terms, therefore, any safety-net subsidies created by a marker liquidity provider of last resort will be much smaller than those created by a lender of last resort.

How might this work in the current financial crisis? Say the intrinsic price of a type of mortgage-backed securities, calculated by taking the present value of the expected value of the cash flows on the mortgage loans backing those securities, is 80 cents on the dollar. If the market price of those securities had fallen to, say, 20 cents on the dollar, the market liquidity provider could purchase these securities at, say, 60 cents on the dollar, thereby stabilizing the market and still making a profit.

There are potential obstacles to these purchases. Again using the current financial crisis as an example, many mortgage-backed securities are held by financial institutions. Many of these institutions will not want to sell their securities if they have to mark down value on their financial statements. Furthermore, even if a given institution does not sell, mark-to-market accounting may require the institution to mark its securities down to market prices set by the market liquidity provider in its other purchases.

I believe, however, that the same flexible pricing approach used in structured financing transactions to purchase financial assets of uncertain value could be used to overcome these obstacles—such as the market liquidity provider agreeing to pay a higher "deferred purchase price" for securities that turn out to be worth more than expected.

Finally, contrast my market-liquidity-provider concept with the approaches over the past year of the Bush and Obama administrations. I had proposed the market-liquidity-provider concept to Congress over a year ago.

Reprinted with the Permission of the New York University Law School

The U.S. Treasury Department's proposal in early Fall 2008 to use government money to purchase mortgage-backed securities issued by Fannie Mae and Freddie Mac was the first attempt by government to stabilize markets by purchasing securities. As a result of these purchases, the national average 30-year fixed mortgage rate fell significantly, setting off a huge refinancing boom. And on Wednesday, February 18, 2009 the Obama White House announced, as part of its Homeowner Affordability and Stability Plan, that "the Treasury Department will continue to purchase Fannie Mae and Freddie Mac mortgage-backed securities to promote stability and liquidity in the marketplace." These purchases, however, do not address the much larger problem of mortgage-backed securities that are not already effectively government-guaranteed.

The original TARP plan also contemplated government purchases of mortgage-backed securities, although primarily for minimizing financial-institution counterparty risk and only secondarily for stabilizing market prices. Unfortunately, Bush administration officials ultimately used the TARP money to purchase priority equity interests in troubled financial institutions. Those purchases did little, however, to stabilize market prices of the securities or to revitalize securitization markets.

The more recent Term Asset-Backed Securities Loan Facility, or TALF, also contemplates investing government funds in certain consumer-asset-backed securities to reduce consumer financing costs. Its results are not yet known.

Also, as I mentioned, the Obama Administration presently appears to be considering a public-private partnership approach with government hedging.

These approaches are good beginnings; but they might be too little, too late. By waiting so long, it has become harder to stabilize markets because of the systemic impact of the credit crunch. The real economy is shrinking and individuals are losing their jobs, making it more likely that obligors on assets backing even prime securities will default. I hope we will make the commitment of funds needed—the extent of which will ultimately be driven by the market response.

Finally, I urge that the concept of a market liquidity provider be institutionalized to backstop any future prescriptive regulatory schemes. Stabilization is much easier to achieve at

Reprinted with the Permission of the New York University Law School

the outset of a market panic, before the panic becomes a self-fulfilling prophecy, cutting off credit and cratering the real economy.

Reprinted with the Permission of the New York University Law School