4. Too big to fail?: recasting the financial safety net

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Government safety nets in the United States and abroad focus anachronistically on problems of banks and other financial institutions, largely ignoring financial markets which have become major credit sources for consumers and companies. Besides failing to protect these markets, this narrow focus encourages morally hazardous behavior by large institutions, like AIG and Citigroup, that are 'too big to fail'. This chapter examines how a safety net should be recast to protect financial markets and also explains why that safety net would mitigate moral hazard and help resolve the too-big-to-fail dilemma.

The real economy relies critically on the supply of liquidity in the form of credit. The subprime financial crisis, which has now devolved into a larger global financial crisis (collectively the 'subprime crisis'), '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 and cars and to finance other expensive purchases.

Many think that the story of the credit crunch fundamentally is a banking story. Although there is now a severe lack of confidence in banks, 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.

SECURITIZATION AND CREDIT

The credit crunch started with the breakdown of securitization and other financial markets for debt. 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 US and worldwide capital markets. I will refer, in a broad sense, to capital markets in which securitization and other debt securities are issued and traded as ‘securitization markets’.

Increasingly corporate and consumer financing is originated not from banks per se or from bank deposits but from securitization markets. This shift — known as ‘disintermediation’, removing banks as intermediaries of funds — can be very efficient. By removing the middleman, it removes the middleman’s (that is, the banks’) profit mark-up.

When securitization markets broke down, 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.

This raises two fundamental questions: Why did securitization markets break down, and how should they be protected?

WHY MARKETS BROKE DOWN

Securitization markets broke down 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 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 ironclad 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 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 2008 of the US 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.\(^{12}\)

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.\(^{14}\)

**EXISTING SAFETY NETS FAILED**

Existing governmental safety nets, in the US and abroad, failed to prevent this breakdown because they are structured to protect banks and other financial institutions, not financial markets per se. Indeed, until recently, the media – as well as most economists and other scholars who study systemic breakdowns – likewise have focused almost exclusively 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 US government actions over the past year to address the spreading financial crisis. But the Federal Reserve’s mission is 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. Other governmental central banks have similarly limited missions.\(^{15}\)

Such a narrow focus worked well when banks were the primary source of consumer and company financing. But as the subprime 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 lack of confidence in banks if their mortgage-backed and other investment securities had maintained market value reasonably corresponding to their intrinsic value.\(^{16}\)
How, therefore, can securitization markets be protected? Inherent in this question is the threshold normative question of whether securitization markets should be protected.

PROPERLY UTILIZED, SECURITIZATION IS EFFICIENT

Securitization effectively 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 (indeed, the breakdown of securitization markets led to the recent credit crunch).

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.

Regardless of whether securitization’s benefits outweigh these negatives, there is no question that securitization is an efficient financing tool if these negatives are effectively addressed. And these negatives can be addressed by refocusing on basic securitization 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.

This 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 the subprime crisis. By regenerating credit, however, securitization can also help get us out of it.

PROTECTING SECURITIZATION MARKETS

I return now to the question of how securitization markets can be protected. These markets are already subject to many prescriptive regulatory
protections, and more are likely to be imposed in response to the sub-prime crisis. I have recently argued, for example, that future 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. History, however, has shown that financial markets evolve faster than regulation can adapt. Moreover even market participants themselves cannot always predict how markets may break down.

Prescriptive regulation, even if highly restrictive, therefore cannot always prevent market breakdowns. Markets need a safety net for when prescriptive regulation inevitably fails. Such a safety net can be provided by creating a market liquidity provider of last resort (hereinafter ‘market liquidity provider’) to help 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 subprime 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. Empirical evidence confirms that individuals engage in this type of ‘herd behavior’.

Private investors are also risk averse, and the fact that disclosure has become so complex that investors are uncertain how much securities are worth increases the perception, if not reality, of risk. Private investors also would have greater real risk if—as almost certainly would be the case—the size of their investment is insufficient to ensure market stabilization. They then 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. Furthermore even if they are confident that the intrinsic value of the purchased securities exceeds the amount of their investment, they may not want to risk having to wait until maturity of the securities to profit.

A market liquidity provider with the financial ability to stabilize markets is needed to correct these market failures.
OPERATIONAL MECHANICS

A market liquidity provider should have the capacity to invest (or, as explained below, to hedge) sufficiently large amounts to stabilize markets and also, if necessary, to wait until final maturity of the securities in which it invests. Such an entity would likely have to be governmental, although it may well be able to obtain at least partial funding from the private sector.

There are at least two ways that a market liquidity provider could act. First, it could choose to purchase market securities, at a price deeply discounted from the original market price and also much lower than the estimated intrinsic value of the securities purchased but still high enough to stabilize market prices above the panicked free-fall level. Say, for example, that the intrinsic value of a type of mortgage-backed securities (or 'MBS') is estimated to be in the range of 80 cents on the dollar. If the market price of those securities had fallen significantly below that number, say to 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. To induce a holder of the mortgage-backed securities to sell at that price, the market liquidity provider could, for example, agree to pay a higher 'deferred purchase price' if the securities turn out to be worth more than expected. This is just one (simplified) example of the flexible pricing approaches used in structured financing transactions to buy financial assets of uncertain value which could be adapted to a market liquidity provider's purchases.

Alternatively a market liquidity provider could attempt to stabilize the market by entering into derivatives contracts to strip out risks that the market has the greatest difficulty hedging—in effect, the market's irrationality element—thereby stimulating private investment. By hedging and 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. The Obama Administration in the United States presently appears to be considering this latter type of public-private partnership approach in its revised financial bailout plan.

It is essential, of course, that the market liquidity provider's price-setting and hedging be insulated from inevitable investor lobbying pressure to pay more than the securities are worth. Strict integrity not only would ensure fairness and give taxpayers a chance to profit but also would instill securitization markets with confidence in valuing these types of securities.
COSTS AND BENEFITS

These types of targeted market investments should generate relatively minimal costs, and certainly lower costs than those of a governmental lender of last resort to financial institutions – the traditional role of the US Federal Reserve Bank and other central banks. 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 reckless. 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 minimize the too-big-to-fail dilemma of a lender of last resort to institutions. This is because, by stabilizing financial markets, the market liquidity provider will minimize the likelihood that institutions invested in those markets will ultimately fail, thereby reducing the times when a lender of last resort would be needed. If in the subprime crisis, for example, the securitization markets had not broken down, institutions like Bear Stearns, AIG and Citigroup would not have needed to be bailed out. In economic terms, therefore, any safety-net subsidies created by a market liquidity provider of last resort will be much smaller than those created by a lender of last resort.

FUNDING ILLIQUIDITY

A market liquidity provider also could be used to address temporary problems of funding illiquidity. This might occur, for example, when a market for short-term investments becomes illiquid, threatening to undermine long-term investments that are funded by the short-term investments – such as investments in long-term financial assets, like bonds, funded by short-term asset-backed commercial paper issued by a securitization conduit. In that case, to minimize moral hazard, the market liquidity provider should limit its financing to situations where market participants have reasonably used short-term funding to invest in long-term assets and the subsequent short-term market illiquidity is unexpected.
APPLICATION TO THE SUBPRIME CRISIS

A market liquidity provider could have at least mitigated the severity of the subprime crisis. If such an institution had existed at the outset of the crisis, it could have stepped in at that time to strategically purchase (or hedge) sufficient quantities of mortgage-backed securities to stabilize securitization markets, thereby deflecting the credit meltdown that ultimately impacted the real economy.58

Early in the crisis, for example, the US Treasury Department purchased mortgage-backed securities issued by Fannie Mae and Freddie Mac.59 As a result of these purchases, the ‘national average 30-year fixed mortgage rate [fell] a full percentage point, to just over 5 per cent, setting off a huge refinancing boom’.60 These purchases did not, however, address the much larger – and more fundamental – problem of mortgage-backed securities that are not already effectively government-guaranteed.

The original Troubled Assets Relief Program, or ‘TARP’, under the Emergency Economic Stabilization Act of 2008 also contemplated government purchases of mortgage-backed securities, at least partly for the purpose of stabilizing market prices.61 The intent was for a governmental entity to purchase mortgage-backed securities from banks and other financial institutions at a price above the collapsed ‘market’ price but, hopefully, discounted from what the securities are intrinsically worth. This would effectively recapitalize these institutions with more transparently valuable assets (cash).62

The TARP plan, however, ran into immediate political hurdles based on misunderstanding the distinction between market price and intrinsic value. Because the purchase price paid by the government would have to be above ‘market’ to avoid even further counterparty write-offs, there was a populist perception that the government would be unjustifiably bailing out Wall Street.63 Partly for these reasons, and partly because economists misjudged (in my opinion) the accounting and legal feasibility of purchasing securities directly,64 TARP money was ultimately used mostly 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.65

If the TARP funds had in fact been used to purchase MBS, as originally contemplated, market prices might have stabilized.66 If the government were now to attempt to use any remaining TARP funds to purchase MBS, however, it may be a case of ‘too little, too late’. By ignoring the breakdown of securitization markets for so long, the government may already have gone beyond a tipping point in the ability of market purchases alone to correct the problem. This is because the systemic impact of the credit
crunch is shrinking the real economy and individuals are losing their jobs, making it more likely that obligors on assets backing even prime securities will default. Stabilization is much easier to achieve at the outset of a market panic, before the panic becomes a self-fulfilling prophecy, cutting off credit and cratering the real economy.

This is not to say that even delayed market purchases of securities won’t have some salutary effects. Recently, for example, the Obama White House announced that ‘the Treasury Department will continue to purchase Fannie Mae and Freddie Mac mortgage-backed securities to promote stability and liquidity in the marketplace’. Similarly the Term Asset-Backed Securities Loan Facility, or TALF, also contemplates investing government funds in certain consumer-asset-backed securities to reduce consumer financing costs, although its results are not yet known.

PRACTICAL CONCERNS

The market-liquidity-provider concept raises several practical concerns. One such concern is whether holders of securities in panicked markets would be willing to sell their securities to a market liquidity provider if, as this chapter contemplates, the price offered is much lower than the intrinsic value of the securities but still much higher than prices in the collapsing market. Some holders, for example, may refuse to sell their securities if they have to mark down value on their financial statements. Some holders may even oppose creation of a market liquidity provider because, even if a given holder does not sell, mark-to-market accounting may require it to mark its securities down to market prices set by the market liquidity provider in its other purchases. These concerns could be addressed, however, by applying (as this chapter contemplates) to those purchases of securities the same flexible pricing approaches used in structured financing transactions to purchase financial assets of uncertain value.

Failed governmental efforts to try to control their currency exchange rates might raise another concern: whether a market liquidity provider, even if governmental, would have sufficient spending power to stabilize irrationally panicked securitization markets. Only Hong Kong was able to control its currency exchange rate, and that was because its reserves, which implicitly included all of China’s reserves, were large enough to be credible. There are important distinctions, though, between controlling a currency exchange rate and stabilizing irrationally panicked securitization markets. Controlling a currency exchange rate depends on all of the macroeconomic factors to which the country in question is subject whereas stabilizing panicked securitization markets depends mostly on factors
specific to the securities in question. Also because the market liquidity provider should consider acting only when a panicked market is so irrational that the market value of its securities is significantly below their intrinsic value, the market liquidity provider should be able to stem the information asymmetry leading to this valuation differential by explaining the irrationality and, by buying (or hedging) at an above-market price, putting its money where its mouth is. It effectively would be providing to investors in that market the same type of real credibility and comfort that a country's large reserves provide to currency investors.

A third practical concern is whether purchases by a governmental market liquidity provider could have inflationary effects or expose taxpayers to too much risk. If, for example, a market liquidity provider obtains funds to purchase securities directly or indirectly from the Federal Reserve (or a foreign central bank), the government in effect might be printing money to make the purchases – which could be viewed as a form of 'quantitative easing.' That in turn could spark inflation. Similarly if the securities so purchased turn out to be poor investments, the government, and thus taxpayers, would suffer any consequences.

These concerns turn on the quality of the purchases made by the market liquidity provider. If its purchases are fairly priced – a goal I argue is feasible even if the securities purchased have significant valuation uncertainty – the market liquidity provider, and thus taxpayers, will not lose money on the purchases. In that case the purchases should not have significant inflationary effects because the market liquidity provider ultimately will be able to repay the central bank. The government, in other words, will merely have made a favorable investment.

Yet another practical concern is how effective a market liquidity provider would be in a market for securities that are not actively traded. Even without active trading, however, the market liquidity provider should at least set the floor-price standard. Furthermore even non-actively-traded securities are increasingly traded in virtual markets, such as the ABX.HE indices, which mimic active trading.

Finally there may be concern whether the very existence of a market liquidity provider could inadvertently make falling markets even less stable. For example, parties anticipating market-liquidity-provider stabilization of a falling market might sometimes wait to invest in market securities, even if they believe the securities are undervalued, until they see the price offered by the market liquidity provider. Theoretically this should not occur, but the signal sent by a market liquidity provider might be so strong as to not only set a floor but also a ceiling on the market price. The extent to which this might occur cannot be predicted without empirical data.
INTERNATIONAL DIMENSIONS

This chapter so far has discussed the concept of a national market liquidity provider. Financial markets, however, increasingly cross national borders and are becoming interdependent. That, in turn, has increased the global market’s exposure to systemic risk. There may well be a role for an international market liquidity provider of last resort (hereinafter, ‘international market liquidity provider’).

Because this chapter’s analysis of a national market liquidity provider is not necessarily tied to the United States or to any other country, the views already expressed in this chapter should be generically applicable. In an international context, however, three issues emerge: is a single regulatory approach to market liquidity desirable?; if so, is it feasible?; and who should act as the international market liquidity provider?

Whether a single regulatory approach to market liquidity is desirable has political ramifications beyond the scope of this chapter. I observe, however, that such an approach may be easier to adopt and administer in a global economy than country-specific regulation. It also may lessen the potential for a regulatory race to the bottom. Assuming it is desirable, is it feasible?

Given the diversity of approaches to financial regulation and supervision among nations, some commentators believe that any single regulatory model would be impractical. The optimal regulatory model, they argue, must be customized for each country in accord with the structure and size of the country’s financial system, its specific regulatory and supervisory objectives and its unique historical evolution and political traditions.

These differences do not, however, appear to undermine the concept of an international market liquidity provider. There is nothing inherently country-specific about stabilizing financial market prices. Furthermore political scientists and economists have observed that international cooperation is the natural and most effective response of states that share an interest in averting a common crisis that affects them individually – despite the many historical, cultural and legal differences that distinguish nations. Basel II, for example – whatever its faults – effectively illustrates that a single regulatory scheme for financial risk can be applied, at least in the banking context, across diverse national financial systems. Approximately a hundred countries have signaled they will implement Basel II by 2010.

A single regulatory approach to market liquidity thus appears feasible. Who, then, could act as the international market liquidity provider? There are at least two obvious choices. One is the International Monetary Fund (IMF), which sometimes already takes on this role, albeit with controversy, in extending liquidity to troubled sovereign states. Another choice
would be one or more national central banks, such as the US Federal Reserve Bank or the European Central Bank.

Compare, for example, how the IMF and the Federal Reserve might function in an international-market-liquidity-provider capacity. An international market liquidity provider should ideally be able to advance funds in a widely-used international currency, and the Federal Reserve is a source of US dollars. The IMF, in contrast, has no power to create currency. The Federal Reserve also may have an advantage in that it is arguably less bureaucratic than the IMF and thus capable of making quicker decisions. Thus the Federal Reserve (and, by analogy, the European Central Bank) appears to have a better institutional capacity than the IMF to act as an international market liquidity provider.

On the other hand any national central bank (including the Federal Reserve or European Central Bank) acting as an international market liquidity provider would face possible conflicts of interest between its national and international responsibilities. The IMF, in contrast, is a truly international organization. Furthermore, through its access to member-state capital, the IMF can theoretically spread the burden of responding to international systemic risk. The IMF cannot, however, create currency. It would not need that power if it has access to a potentially unlimited amounts of currency, but such access would require reform of the IMF’s relationship with its member-states.

There, therefore, is no clear choice who should act, as among existing institutions, as the international market liquidity provider.

CONCLUSIONS

With the rise of disintermediation, financial markets have significantly replaced banks as sources of credit. Financial markets, however, can breakdown for unexpected reasons. Prescriptive regulation cannot always deter these breakdowns.

Financial markets need a safety net for when prescriptive regulation inevitably fails. Existing governmental safety nets, in the US and abroad, are insufficient because they are structured to protect banks and other financial institutions, not financial markets per se.

This chapter proposes that a market liquidity provider of last resort could function as a safety net, stabilizing irrationally panicked financial markets to avert a systemic downward price spiral. This function should generate relatively minimal costs, and certainly lower costs than generated by existing safety nets which focus on governmental central banks as lenders of last resort to banks and financial institutions. Existing safety
nets can foster moral hazard and give rise to significant taxpayer losses when institutions are deemed too big to fail.

I do not propose that existing safety nets be discarded. This chapter’s conception of a market liquidity provider of last resort would supplement, not replace, a lender of last resort. The combination, however, would be synergistic: by stabilizing financial markets, a market liquidity provider not only would preserve credit but also would minimize the likelihood that institutions invested in those markets will ultimately fail – thereby reducing the times when a lender of last resort would be needed.

Finally I want to emphasize that this chapter’s market-liquidity-provider concept does not contemplate indiscriminate purchases of illiquid securities. Such purchases not only would foster moral hazard for parties that sell or invest in those securities, it also would waste taxpayer money on poor investments. This chapter only contemplates the market liquidity provider acting when market prices collapse substantially below the intrinsic value of the securities, as in a panic.\(^{97}\) In contrast if prices in the collapsing market accurately reflect intrinsic value, the market should be left to fail. If that failure triggers a panic that happens to cause a more intrinsically sound financial market to collapse or to cause an otherwise-sound financial institution to fail, the market liquidity provider could then decide to protect that sound market, and any applicable lender of last resort could then decide to protect that institution.\(^{98}\)

NOTES


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4. Eric Dash & Vikas Bajaj (2008) (explaining that, because ‘credit is not flowing . . ., [c]rucial parts of the financial system have stopped functioning’).

5. Cf. Jack & Suzy Welch (2009), at 78 (stating that ‘Healthy banks are to economies as healthy hearts are to people: They keep them alive with the ‘lifeblood’ of credit.’).


7. Technically these debt securities are non-recourse debt securities; they are payable primarily from the financial assets backing them.
8. Steven L. Schwarz (2008b), at 200. Investors in securitization markets may include banks, but they are then acting as ultimate investors, not intermediaries.

9. Mortimer B. Zuckerman (2009), at 80 (observing that securitization ‘once accounted for 70 per cent of our credit while conventional bank lending has dropped to 30 per cent. Unless financial firms can securitize debt and, in turn, rely on investors willing to buy [securities representing] the bundled loans, credit will remain extremely tight.’

10. Ibid.

11. The following account is based on Steven L. Schwarz (2009c).

12. Simon Gervais and Steven L. Schwarz, ‘Valuation of Risky Cash Flows’ (discussing how to calculate the intrinsic value of risky cash flows). The expected value of the underlying cash flows could be estimated, as was done in an English High Court of Justice case involving the Orion Funding SIV in which I served as an expert witness, by examining the mortgage loans backing the securities and ascertaining which were subprime, which were prime, and which were delinquent or in default.

13. Cf. International Monetary Fund (2008) (indicating that the market prices of at least some mortgage-backed securities may be significantly below the expected present values of their future cash flows).


15. The mission of the European Central Bank (ECB), for example, is to stabilize the price of the European currency. In ‘exceptional circumstances’, however, the ECB may indemnify national central banks for ‘specific losses arising from monetary policy operations’ taken for the benefit of the central banking system. Protocol on the Statute of the European System of Central Banks and of the European Central Bank Art. 32.4. Jul. 29, 1992, O.J.C. 191. At the national level in France, the Bank of France has an even narrower mission because it is ‘prohibited from authorizing overdrafts or granting any other type of credit to the Treasury or to any other public body or undertaking’, which places an absolute restriction on central bank lending to virtually any entity. Code Monétaire et Financier (C. Monétaire et Fin.), Chap. 1, Art. L141–2 (Fr.). See also Duncan Alford, The Lamfalussy Process and EU Bank Regulation: Another Step on the Road to Pan-European Regulation?, 25 Ann. Rev. Banking & Fin. L. 389, 392 (2006) (‘[national governments or related agencies, such as central banks, typically have lender-of-last-resort responsibility for banks operating within their borders’); Steve H. Hanke, Currency Boards, 579 Annals 87, 90, table 2 (2002) (observing that a typical central bank functions, among other things, as a lender of last resort).

16. Supra notes 13–14 and accompanying text.


18. Ibid.

19. Ibid.

20. Ibid.

21. Ibid.

22. Subprime mortgage securitizations had only one way out: home appreciation.


24. Gary B. Gorton (2008), at 67. Ibid. at 75 (concluding that ‘[s]ecuritization is an efficient, incentive-compatible, response to bankruptcy costs and capital requirements’); Ethan Penner (2008), at A15 (observing that ‘securitization will continue to play an important role – if adapted appropriately’).


26. By prescriptive regulation, I mean regulation that restricts behavior.

27. Steven L. Schwarz (2008a). Running through these causes is a fourth cause, cupidity; but because greed is so ingrained in human nature and so intertwined with the other causes, it adds little insight to view it separately.

28. Because the benefits of exploiting finite capital resources accrue to individual market participants whereas the costs of exploitation, which affect the real economy, are distributed among an even wider class of persons, market participants have insufficient
incentive to internalize their externalities. Therefore, even in a simple financial system with no conflicts and hyper-diligent market participants (that is, a financial system with none of the causes of failure indicated supra note 27 and accompanying text), systemic risk is theoretically possible. Steven L. Schwarz (2009c) For a general analysis of systemic risk see Steven L. Schwarz (2008b).


31. Moreover highly restrictive regulation would create its own inefficiencies. Gerard Caprio, Jr., Ash Demirgüç-Kunt and Edward J. Kane (2008), 5 (observing that ‘a tightly regulated financial system hampers growth’).

32. Cf. Michael D. Bordo, Bruce Misra & Anna Schwartz (1995) 19 (observing that financial panic will not usually become contagious when a lender of last resort provides adequate liquidity); Regulating Complexity in Financial Markets, supra note 30 (discussing how decoupling systems through modularity helps to reduce the chance that a failure in one part of a complex system will trigger a failure in another part); Steven L. Schwarz (2008b), at 204 (explaining the chain of systemic collapse).

33. Cf. Ben Levisohn (2009), ‘How to attack panic’, Bus. Wk., 63 (noting that on February 23, 2009 investors pushed the Dow Jones industrial average down 250.89 points to a 12 year low, only to see it gain 236.16 points the next day).

34. Tyler Cowen (2008), at BU 5 (asking why, in the context of the subprime mortgage crisis, ‘asset prices don’t simply fall enough so that someone buys them and trading picks up again’; and answering: ‘why seek “fire sale” prices when you might lose your job for doing so?’).

35. Cf. Paul M. Healy and Krishna Palepu (2002) (observing that fund manager who estimates a stock is overvalued but does not act on this analysis ‘and simply follows the crowd’ will not be rewarded for foreseeing the problems, ‘but neither will he be blamed for a poor investment decision when the stock ultimately crashes, since his peers made the same mistake’); Stephen M. Bainbridge (2000), 1038 (discussing how herd behavior may have a reputational payoff even if the chosen course of action fails, and arguing that where ‘the action was consistent with approved conventional wisdom, the hit to the manager’s reputation from an adverse outcome is reduced’).


37. If the real economy is impacted, quality and creditworthiness of the financial assets underlying the purchased securities may be reduced, as when a mortgagor loses her job.

38. Supra note 12 and accompanying text (discussing intrinsic value).

39. This risk is exacerbated if the market value of undervalued securities is still falling because investors then would not even break even on near-term resale of the securities.

40. As a governmental entity, a market liquidity provider would bear at least superficial similarity to the US Resolution Trust Corporation (RTC), created in 1989 to clean up the savings and loan (S&L) mess by buying troubled loans. The RTC, however, ‘is not a perfect parallel for today’s needs’ for several reasons, including that it was created to clean up the mess years after it occurred, not necessarily (as this chapter also contemplates for a market liquidity provider) to minimize occurrence of the mess. ‘Beyond Crisis Management: Bold Ideas for Solving America’s Financial Mess’, Economist, 18 September 2008. Nonetheless the RTC is a helpful model insofar as it represents a credible and reasonably efficient model of a governmental entity purchasing troubled financial assets. Sudhir Nanda, James E. Owers, & Ronald C. Rogers (1997), 290 (concluding that mispricing of its purchases were not typical but occurred only in limited cases).

41. Steven L. Schwarz (2008b), at 226–27 (examining how to privatize the role of a market liquidity provider). Cf. infra notes 45–48 and accompanying text (proposing that a governmental market liquidity provider could stimulate private investment by entering into derivatives contracts to strip out risks that the market has the greatest difficulty hedging).

42. Supra notes 12–13 and accompanying text (discussing intrinsic value).
43. Because markets normally can fluctuate widely, a market liquidity provider should be careful to act only when the market price of securities is falling significantly below their intrinsic value.

44. In the subprime crisis, some types of MBS securities had become so complex that investors were uncertain how much they were worth. Steven L. Schwarz (2009b) (symposium issue on the subprime mortgage meltdown).

45. These flexible pricing approaches to buying financial assets of uncertain value include using special-purpose entities. Steven L. Schwarz (2002), § 4:10 (3d ed. 2002 & supplements) (discussing pricing approaches) and ibid. at § 7:3 (discussing the accounting standards governing these pricing approaches, including Financial Accounting Standard (FAS) No. 140). Purchases also could be coupled with taking equity or contingent equity, such as warrants.

46. Cf. Floyd Norris (2009), at A1 (observing that having the government purchase the distressed MBS securities directly would be a 'politically perilous course').

47. Ibid. (reporting that the revised bailout plan would likely depend in part on private investors, such as hedge funds, private-equity funds and perhaps insurance companies, buying distressed MBS, with the US Government guaranteeing a floor value to the securities purchased).


50. See, e.g., Eric Dash, 'Saving Citi May Create More Fear', New York Times, Nov. 25, 2008, at B1 (reporting that although the efforts to stabilize Citigroup may have been necessary, its rescue may have sent the wrong signal to other firms by encouraging additional risk-taking); Carol J. Loomis, 'Revealed: 15 AIG Bailout Counterparties', Fortune, Mar. 7, 2009 (arguing that the Fed's decision to bail out AIG's counterparties by paying full value for contracts although the short-term values had dropped significantly reduced counterparties' incentives to carefully assess risks in the future); David Wessel, 'Has Fed Risked Creating Moral Hazard?', Wall Street Journal, Sept. 20, 2007, at A2 (some consider recent bailouts as socialism for financial industry professionals, capitalism for everyone else); Rajeev Dehejia and Adriana Lleras-Muney, 'Financial development and pathways of growth: state branching and deposit insurance laws in the United States, 1900–1940', 50 J. Law & Econ. 239, 243 (2007) (moral hazard problem exists for all lenders of last resort).

51. The timing of purchases will be critical. The market liquidity provider should try to act at the outset of a market panic, before market prices collapse too far. Cf. infra notes 66–67 and accompanying text (observing that we may already be past a tipping point in the ability of market purchases alone to remedy the problem). On the other hand the market liquidity provider should be careful not to act when price fluctuations are normal. Supra note 43.

52. Supra note 43 and accompanying text. The market liquidity provider, and therefore taxpayers, would profit by buying securities at a much lower price than their intrinsic value.
53. Steven L. Schwarz (2008b), at 229. Investor moral hazard can be further limited if the market liquidity provider adopts a policy of constructive ambiguity, not stating ex ante whether or not it will attempt to stabilize any given market panic and not indicating in advance the purchase price it would offer if it were to attempt to do so. Ibid. at 226–27. Investor moral hazard cannot be eliminated, however, because certain markets may be so important that investors can predict their stabilization with a high degree of certainty.

54. Steven L. Schwarz (2009c). Supra note 13 and accompanying text (explaining that the collapse in market prices meant that banks and other financial institutions holding mortgage-backed securities had to write down their value, causing these institutions to appear more financially risky, in turn triggering concern over counterparty risk and causing the lack of confidence in banks).

55. Cf. Caprio, Demirgüc-Kunt and Kane (2008) (arguing that the goal of financial regulation and supervision is ‘to manage the [regulatory] safety net so that private risk-taking is neither taxed nor subsidized’); ibid. at 6 (arguing that ideally regulated parties should not have opportunities to ‘shift the deep downside of their risk exposures onto the [regulatory] safety net’).


59. How Three Economists View a Financial Rescue Plan (2008), at C4 (describing this as ‘the first serious attempt by government to cure the underlying financial disease and not merely its symptoms’).

60. Dash and Bajaj (2008).

61. Cf. Alan S. Blinder (2008), at BU 4 (arguing that the TARP’s rationales for buying MBS included establishing objective valuations and restarting the markets for these securities, thereby revitalizing mortgage finance).

62. See Edmund L. Andrews & Mark Landler, ‘U.S. May Take Ownership Stake in Banks’, New York Times, Oct. 9, 2008, at A1 (explaining that under the Treasury Department’s plan, the government’s recapitalization plan would ‘inject cash directly into banks that request it’).

63. Mortimer B. Zuckerman (2008), at 79 (arguing that buying the MBS at above-market prices ‘provides a huge, unjustified bailout of Wall Street’ by ‘rescuing the financial industry from the consequences of its own misjudgments, profligacy, and greed’).

64. Nobel prize-winning economist Paul Krugman, for example, has expressed skepticism about the government’s ability to price supposedly undervalued securities when the financial markets cannot do so. Paul Krugman, ‘A $700 Billion Slap in the Face’, New York Times, Sept. 24, 2008. Under the US accounting standards, the present value (also called ‘fair value’) of a troubled asset is determined on the assumption that the asset will be held for a period of time and sold at some future date, so that such value includes future earnings and the asset is expected to generate, less the cost of owning, holding, developing and operating the asset. Financial Accounting Standards Board, FAS 157.

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MBS, ‘wasted a precious resource’, and likening such misuse to ‘another disaster’ like the Iraq war and the response to Hurricane Katrina).

66. Cf. supra note 61 and accompanying text (observing that MBS purchases under TARP were intended primarily for minimizing counterparty risk and only secondarily for stabilizing market prices).

67. Cf. Dash and Bajaj (2008) (observing that ‘[i]n a struggling economy, even a seemingly solid loan can turn bad quickly’).

68. Excerpt from White House announcement of the Homeowner Affordability and Stability Plan (19 February 2009).

69. Supra notes 42–43 and accompanying text.

70. See, e.g., Eric Dash and Gretchen Morgenson, ‘Banks Plan to Help May Itself Need Help’, New York Times, Oct. 19, 2007 (reporting that Japanese banks ‘refused to sell or write off troubled loans’ during the 1990s, and there is concern that banks with troubled assets would take the same approach in the current crisis, ‘refusing to liquidate assets at market levels’); Peter Boone and Simon Johnson, ‘To Save the Banks We Must Stand Up to the Bankers’, Baseline Scenario, Jan. 27, 2009, http://baselinescenario.com/2009/01/27/to-save-the-banks-we-must-stand-up-to-the-bankers/ (arguing that ‘banks refusing to sell assets at market value’ will be a significant impediment to an effective, large-scale recapitalization of banks); Joshua Zumbrun, ‘Geithner’s Bank Plan: Winners and Losers’, Forbes, Mar. 23, 2009 (reporting that ‘Currently, markets for these troubled assets are not working because investors are offering to buy for a price lower than at which the banks are willing to sell’).

71. Testimony of Sean W. McCarthy, President and COO, Financial Security Assurance on behalf of the Ass’n of Fin. Guaranty Insurers, Hearing of the House Committee on Financial Services, Municipal Bond Turmoil: Impact on Cities, Towns, and States, Federal News Service, March 12, 2008 (investment bankers in the past rejected the idea of the market liquidity provider asserting that investment banks can remarket the assets needing liquidity).

72. Supra notes 44–45 and accompanying text.

73. In a more limited context, the U.S. Government has successfully acted as a market liquidity provider during the subprime crisis. Shortly after Lehman Brothers failed, the commercial paper market collapsed. In response, the Federal Reserve created the Commercial Paper Funding Facility (‘CPFF’) to act as a lender of last resort for that market, with the goal of addressing temporary liquidity distortions by purchasing commercial paper from highly rated issues that could not otherwise sell their paper. See Tobias Adrian, Karin Kimbrough and Dina Marchioni, ‘The Federal Reserve’s Commercial paper Funding Facility’, FRBNY Econ. Policy Rev. (forthcoming). These authors conclude that ‘[t]he CPFF indeed had a stabilizing effect on the commercial paper market’, Id. at 11.

74. Supra notes 32 and 43 and accompanying text.

75. Any analogy of the market-liquidity-provider concept to The Bank of Japan’s failed attempt to support the Tokyo Stock Exchange’s Nikkei index would also be inappropriate. The Nikkei is an index of shares of 225 companies selected to be representative of the Tokyo Stock Exchange as a whole and thus the price of those shares turns on a multitude of macroeconomic factors, including Japan’s financial condition.

76. Another practical concern, outside this chapter’s scope, is that a market liquidity provider might become ineffective due to political pressures on what assets to buy and how to manage those assets. Cf. Luc Laeven and Fabian Valencia (2008), at 14 (finding based on empirical evidence that the effectiveness of government-run asset-management firms, in the US and elsewhere ‘has been quite mixed: better where the assets to be disposed have been primarily real estate, less good where loans to large politically-connected ruins dominated’).

77. The term ‘quantitative easing’ is ill defined, but it generally refers to any central bank policy that tries to affect financial markets through approaches other than directly controlling interest rates. Because a form of quantitative easing was first used,
unsuccessfully by the Bank of Japan in 2001 to fight deflation (Mark M. Spiegel (2006), the term sometimes has a negative connotation.

78. Edmund L. Andrews and Jackie Calmes (2008), (reporting that other than controlling the federal funds rate, the Fed’s tools – including those contemplated under TALF – would all ‘involve borrowing . . . by the Fed, which amounts to printing money in vast new quantities’, which could be ‘extremely inflationary’).

79. Supra notes 44–45 and accompanying text.

80. Inflation occurs when the money supply increases compared to the real gross domestic product. Financing market liquidity purchases by printing new money may temporarily increase the money supply. However, subsequent repayment will lower the money supply.

81. Even if the market liquidity provider occasionally makes poor investments, some inflationary effects or loss of taxpayer money are small prices to pay for avoiding larger consequences to the real economy. Steven L. Schwarz (2008b). Cf. ibid at 238 (examining applying a precautionary principle to the cost-benefit balancing).

82. Supra note 52 and accompanying text.

83. A potential investor could decide to invest in securities represented by one of the indices, such as ABS CDO securities and other asset- and mortgage-backed securities, without actually purchasing the underlying securities; the indices themselves simulate the risk and reward of trading in these securities.

84. Jayati Ghosh (2005), (‘Financial liberalization creates exposure to the following kinds of risk: a propensity to financial crises, both external and internal; a deflationary impact on real economic activity and reduced access to funds for small-scale producers, both urban and rural. This in turn has major social effects in terms of loss of employment and more volatile material conditions for most citizens.’); Gerard Caprio, Patrick Honohan and Joseph E. Stigliz (2001), 15–17 (observing that the liberalized financial markets ‘laid bare the previous inefficiencies and failures in credit allocation’ and undermined efforts to valorize the true value of bank capital and the true risk of bank portfolios).


86. Cf. Elene Spanakos (2000), 241–42, 244 (2000) (arguing that without international standards there will be a ‘race to the bottom’ in regulatory schemes).

87. David T. Llewellyn (2006), Institutional Structure of Financial Regulation and Supervision: The Basic Rules, p. 7, Paper presented at a World Bank Seminar 6 and 7 June 2006 (arguing that ‘[i]t is an illusion to believe there is a single, superior model of institutional structure that is applicable to all countries’); James A. Hanson, Patrick Honohan, & Giovanni Majnoni (2003), 273–74.


89. James D. Fearon (1998), at 271 (‘Whether the goal is to control arms racing, reduce the risk of preemptive war, limit global environmental damage, stabilize exchange rates, or reduce protectionism in trade, state leaders . . . coordinate state policies and the actions of the relevant state bureaucracies . . . to gain various benefits of cooperating.’); Richard J. Herring and Robert E. Litan (1994), 120–123 (suggesting systemic risk is analogous to epidemiological risk, in that both can be effectively resolved by international collaboration when ‘countries agree on how to act . . . [and their] cooperation advance[s] to the point of establishing an international agency and jointly financing international action to control and attempt to eradicate the contagion’); Edward J. Kane (1992), 257–58 (analogizing the global financial system to the interconnected subsystems of the human body and implying that just as the central immune system is the most efficient way to regulate the health of the body’s many subsystems, so is a universal regulatory approach the most efficient means of regulating systemic financial risk).


91. Karen Krebsbach (2007), at 25 (‘Already more than 100 countries have stated intentions to implement the Basel Capital Accord, known as Basel II.’); Memorandum from the Cent. Bank of Bah, Basel II Update (First Quarter, 2007) (‘Over 100 countries are committed to the implementation of Basel II, with implementation dates ranging from
2005 to 2010.’). The chairman of Basel II concedes, however, that implementing the accord will be extremely difficult. Peter Norman (2005). Some also argue that Basel II may actually prove counterproductive. Dhumale, Eatwell and Alexander (2006), at 263 (arguing that because the majority of developed nations will adopt some variation of Basel II, the G10 countries are likely to exert at least moderate pressure on developing nations to permit foreign banks to operate in their markets under Basel II, which in turn could have a disproportionate impact on the composition of credit risk in those jurisdictions and place foreign banks at a distinct advantage over local banks).

92. Robert Keleher (1999), (arguing that the Federal Reserve Bank ‘has international reserve or money-creating powers and, accordingly, can act to satisfy increased demands for liquidity [and also] can act to create liquidity quickly via open market operations rather than through the slower, more cumbersome discount window mechanism’, though tying this argument in part to the US dollar being the dominant reserve currency).

93. Ibid at 7 (the IMF ‘cannot create reserves or international money, cannot act quickly enough to serve as an international LOLR, and does not operate in a transparent manner. Further, IMF lending currently (indirectly) serves to bail out insolvent institutions, something wholly inappropriate for an international LOLR.’).

94. Tobias Kredlik (2006) (describing the IMF’s substantial access to capital from more than 20 member states).

95. Ibid at 8 (‘In the case of a global crisis . . . almost unlimited reserves would be necessary’).

96. Ibid at 26 (discussing how the IMF could obtain ‘quantitatively unlimited’ access to member-state funds).

97. Supra note 32 and accompanying text.

98. In order to be able to differentiate between these circumstances – as well as to differentiate normal market fluctuations – a market liquidity provider would monitor and analyze securities markets on an ongoing basis. Its staff therefore should have the requisite expertise and experience to do so.

REFERENCES


Excerpt from White House announcement of the Homeowner Affordability and Stability Plan, 19 February 2009.


