EMBARGOED UNTIL Monday, December 8, 2008
10 A.M. in Geneva / 4 A.M. U.S. Eastern Time, or upon delivery

"Some Principles to Consider in Future Regulatory Reform"

Eric S. Rosengren
President & Chief Executive Officer
Federal Reserve Bank of Boston

ICBI RiskMinds 2008 Conference:
The Global Risk Regulation Summit

December 8, 2008
Geneva, Switzerland

I am very pleased to be with you today, as it is a particularly appropriate time for all of us to be at a conference focused on risk management and risk modeling for financial institutions.[1] As you know, many banks around the world have, of late, found themselves needing equity infusions from governments, or expanded guarantees for their liabilities.

A widespread need for banks' recapitalization has occurred at least twice in the past century, and in many countries has occurred much more frequently than that. Many banks' risk models were supposed to be calibrated for "once-in-a-thousand-years" events; however, these models seriously underestimated risk.

Certainly there is much still to study and understand about the recent financial turmoil that emerged in the summer of 2007. But it seems abundantly clear, and not all that surprising, that risks calibrated from a few years of data from good times can dramatically under-estimate risk exposure for a particular asset, as well as the high correlation of risks across asset classes during periods of significant stress. Furthermore, while capital models were intended to suggest minimum capital requirements that would keep institutions sound during risky times, the models were frequently used to justify expansion of dividends and stock buybacks, because they suggested that banks were overcapitalized during boom times. So this conference occurs at a good time, as we all try to re-evaluate how best to model and manage risk.

And it is not only our risk models that need to be reevaluated. Our regulatory framework clearly needs to be reconsidered, in light of recent events. Both in the U.S. and globally, we had in place a complex set of regulations and supervisory structures intended, in part, to increase the likelihood that financial intermediaries would remain well capitalized without government assistance. Like the risk models, bank regulators did not foresee the dramatic illiquidity that could emerge during a period of acute financial turmoil – nor the changes in the value of assets on balance sheets, or the degree of correlation of those asset values.

While regulatory reform proposals are already beginning to surface, I see value in first evaluating the *principles* that should frame the discussion. Before we begin to work on regulatory details we need to evaluate whether the problem was poor execution of a well-considered regulatory framework, or that important principles were absent from the framework. While in my view the recent experience shows elements of both, I want to focus today on regulatory principles rather than their implementation.

But before discussing regulatory principles, I would like to briefly discuss our current economic situation, in order to put the recent crises in context.

Recent Economic Conditions

Many countries have already experienced two consecutive quarters of negative GDP growth and the NBER has recently declared that the U.S. entered the recession at the end of last year. In the U.S., GDP in the second quarter was positive, helped in part by a fiscal stimulus package. In the third quarter, GDP declined by 0.5 percent, and it looks like in the fourth quarter it will decline somewhat more significantly – since consumer and investment spending appear to be dropping quite precipitously. This is due, in part, to the interplay of developments in asset markets and the real economy. U.S. consumers – and, increasingly, consumers across Europe – have been buffeted by declining housing prices and falling stock prices. The resulting loss of consumer wealth, coupled with a rapidly rising unemployment rate, suggests the holiday buying season will not be robust as was hoped earlier this year.

The likelihood of further weakening of labor markets, and a reluctance of consumers or businesses to increase spending until economic conditions are more certain, together imply a continued difficult environment for banks. There are several conditions necessary for financial markets to resume a more normal state, and I would like to briefly discuss each.

First, we need short-term credit markets to return to normalcy. Conditions in short-term credit markets have improved significantly since the end of September. As shown in Figure 1, rates in the market for high-grade financial commercial paper have resumed a more normal relationship to the Federal Funds rate target, compared to the mid September to mid October timeframe. This improvement in what was a very large spread has been greatly aided by the various short-term credit facilities established by the Federal Reserve to help reduce the stress in short-term credit markets. These facilities have also enhanced the ability of financial firms and issuers of commercial paper to extend the maturities on commercial paper issues (see Figure 2), which at the end of September had become dependent on overnight financing. The facilities have also reduced the risk that financing would not be available over the year end, as many commercial-paper issuers have now financed themselves beyond that point. But despite these improvements, short-term credit markets remain strained. Figure 3 shows that the spread between Libor[2] and the Overnight Index Swap rate has fallen from its late-September peak but

remains well above the level that prevailed prior to the outbreak of financial turmoil in summer of 2007.

Second, we need to see some improvement in the housing market before financial markets will resume a more normal state. In the U.S., residential investment began declining in the first quarter of 2006 and has declined in each quarter since. And as Figure 4 shows, house prices have declined nationally, and in some markets the declines have already exceeded 25 percent. A number of proposals have been floated to help stem foreclosures, but to date there has been relatively modest progress – faced, as we are, by the dual problems of falling housing prices and rising unemployment. Stabilization in house prices and a drop in foreclosures would help the overall economy as well as the banking sector that is exposed to construction loans, residential mortgage loans, and mortgage-backed securities.

Third, officials must take into account – and develop policies and actions that reflect – the degree to which monetary *policy tools are currently deployed.* The stance of U.S. monetary policy reflects our rate reductions, with the Federal Funds rate target currently at 100 basis points. Given that interest rates cannot be negative, further monetary-policy actions are limited by the zero lower bound for interest rates. While other monetary policy tools can be employed, increasingly many observers and commentators are suggesting that *fiscal* stimulus will be an important element of economic recovery.

Principles to Guide the Design of Regulatory Structure

With actions already taken to stabilize short-term credit conditions, and the widely-reported likelihood of further fiscal measures, I would hope that over the next year there can be a broader discussion of lessons learned from our recent problems, and what measures can be taken to reduce the risk of a recurrence. There can sometimes be a tendency to move to *proposals* for regulatory design before building a consensus on the underlying *principles* that should guide the debate. To that end, I would like to use my remaining time to discuss a few key principles that I hope will inform the many proposals that are likely to emerge.

Principle 1:
Financial regulation must be more clearly focused on the key goal of* macroeconomic stability *as well as the safety and soundness of individual institutions.

I lead with this principle, because I believe it has not necessarily received sufficient attention in our current regulatory structures. There is a clear link between the financial regulation of institutions and the stability of markets and the macroeconomy. Some countries have had frequent and severe banking crises, while other countries have been much more successful at weathering periods of international financial turmoil.

On the one hand, too conservative a regime of financial regulation can stymie innovation and creativity, thus preventing borrowers and lenders from interacting in the most efficient ways. On the other hand, inadequate oversight can cause periods of financial turmoil that are quite destructive to the financial infrastructure and the real economy. Future regulatory design must allow for innovation without increasing risks to the financial infrastructure and the real economy.

Principle 2:
Because it is a key determinant of macroeconomic stability,* systemic financial stability *must receive greater focus, with* roles and responsibilities *during a financial crisis more clearly articulated.

Regulatory structures should be designed to minimize the probability of systemic disruption or instability. In the future, the definition of a "systemically important" firm must be clear in advance, and the regulatory structure should be designed to minimize the chance that such firms will take actions that would put systemic stability at risk. In addition, should a crisis arise despite the best efforts of regulators, the conditions and processes to "save" such firms must be well understood in advance.

Importantly, care must be given to the design of rescue options to minimize the incidence of moral hazard, or additional risk-taking by a party that is insured, "saved," or otherwise insulated from the consequences of its activities. Of course, the best way to avoid moral hazard is to avoid crisis situations in which organizations need "saving." The next best way is to have well-defined processes in place in advance, which minimize the effects of moral hazard.[3]

Essential to determining which institutions are systemically important is a comprehensive view of what you might call the "financial entanglements" – interdependencies – among

financial instruments and institutions.[4] In an ideal situation, financial institutions could fail or have their assets transferred to other organizations with little disruption to counterparties or markets. Recent experience indicates that the uncertainty around counterparty risk in non-exchange-traded transactions is significant during periods of market stress. And it is difficult to ascertain the true extent of counterparty risk and whether a failure will result in significant disruptions in markets where the financial institution serves as a key player.

In the U.S., the central bank can provide liquidity to the marketplace, but decisions to take on credit risk that pose substantial risks to taxpayers should ideally be in the hands of the Treasury Department, with oversight by Congress. However, during this period of financial turmoil the Treasury Department did not have the pre-existing authority to intervene expeditiously in such a crisis situation. The result was that the central bank became directly involved in urgent, time-sensitive issues that involved significant credit risk.

To be better prepared for systemic problems, "standing" fiscal and monetary facilities are needed, to provide the ability to react more quickly than was possible of late. Until the passage of the Troubled Assets Relief Program (TARP), the U.S. Treasury Department did not have the ability to react to emerging problems as quickly as it would have liked. Similarly, many of the Federal Reserve facilities required significant accounting, legal, and back-office infrastructure that took some time to put in place.

In addition, as you all know, liquidity has been provided to institutions and markets where previously the central bank had little direct regulatory involvement. For example, facilities that were needed to provide liquidity to investment banks and money-market funds were established despite the absence of direct regulatory oversight by the Federal Reserve at the time the facility was initiated. Also, markets such as those for asset-backed commercial paper and unsecured commercial paper were not markets in which the Federal Reserve was actively engaged prior to the crisis. In the future, it would be ideal to clarify in advance which institutions and markets could require liquidity, and make sure the central bank has sufficient information about these institutions and markets to better serve in its role as lender of last resort.

Principle 3:
Liquidity risk *must receive greater policy focus in determining regulatory structures.*

At the outset of the recent financial turmoil, many observers assumed that liquidity risk was well contained. In the case of investment banks, many of their assets were financed by repurchase agreements – short-term loans that were fully collateralized. Because the repurchase agreements were collateralized, most parties assumed there was a relatively low risk of a "run" because the collateral could always be sold in the event of a default. However, concerns with valuations of assets used for repurchase agreements resulted in many investors refusing to continue to lend even overnight once the counterparty was feared to be at risk of failure.

In addition, money market mutual funds were assumed to have relatively little liquidity risk, because they were constrained by regulations that compel them to hold only investment-grade securities of short duration. However, after one well-known money market mutual fund announced that its investors would not be able to redeem their entire principal ("breaking the buck"), many funds faced a wave of redemption requests they had great difficulty meeting – until action was taken to put in place temporary U.S. Treasury insurance as well as a new Federal Reserve liquidity facility.

The financial turmoil has highlighted the reality that our regulatory structure had not fully anticipated the types of liquidity shocks that have occurred. Going forward, more attention should be focused on ensuring that the causes of liquidity disruptions are better understood, and that we are better equipped to avoid liquidity problems.[5]

Also, we must be cognizant of an issue that has compounded these liquidity problems – the interaction with accounting rules. Regulatory *and* accounting frameworks need to consider how best to address periods of sustained illiquidity.

In order to prevent bank runs, many countries have not only insured bank deposits but have also guaranteed other liabilities. We need to better understand how best to structure liabilities to avoid the need for such debt guarantees in the future. In the recent turmoil, for many institutions it was the unexpected lack of a stable and fluid market for short-term debt to finance their balance sheets that created liquidity problems.[6]

Principle 4:
Careful thought must be given to coordinating the work of* the various domestic and international regulators *in the design of the regulatory structure.

In the United States there exists a patchwork of overlapping regulators. Much of our regulatory design results from reactions to the Great Depression. Given all the changes that have occurred since then, it is probably appropriate to take a fresh look at our regulatory structure – not just the bank-regulatory agencies but also the inter-relationship of their work with that of the Securities and Exchange Commission and the Financial Accounting Standards Board.

Ideally, a new structure would minimize the adverse effects of competing regulatory goals. It will also need to consider how different regulatory bodies can be better coordinated so that information moves more freely between them. Also, international coordination is becoming much more important, as firms have become more global. And as with monetary policy, I believe that to the extent possible, creating independent regulatory agencies with clear mandates is critical to success.

Principle 5:
Responsibility for strengthening* market infrastructure *should receive more attention in regulatory design.

The current crisis has highlighted the need for better transparency. If every transaction is unique, it becomes difficult to determine valuations during periods of illiquidity. To the extent possible, contracts governing securitization should be standardized, with clearly defined steps to resolve competing interests when the underlying assets lose value.

Similarly, contracts between institutions provide less transparency than transactions through exchanges. Exchange-traded assets provide a price that is widely observable – on contracts for assets that are clearly defined. To the extent that more assets move to be exchange-traded, counterparty risk is reduced, and transparency is increased.

I also believe that payment and settlement activities need greater oversight. The back-office difficulties involved in unwinding complex trades that were not exchange-traded highlight the need for more attention to settlement activities.

Conclusion

Of course, these five principles are not the only ones of import. Others may stress other very worthy points taken from the lessons of the recent episode. For example that financial regulation must be grounded in an understanding of institutional relationships – "real world" details, which clearly do matter. Or, as I mentioned when discussing moral hazard, that financial regulation needs to do a better job of recognizing the role of incentives. For example, compensation structures affect actions – as is evident in situations where short-term risk-taking is rewarded very lucratively and losses are not borne by the originators of the risk.

The current crisis provides the opportunity and impetus to reexamine a regulatory framework that originated in the Great Depression. While I believe there is a clear need to redesign the current regulatory structure, it is important that we not lose important features of the current market. It is critical that any regulatory design not stifle the industry's innovation and creativity. However, the regulatory structure needs to be more adaptable to innovations – in order to ensure that *new* safety and soundness, and systemic, concerns are not ignored. And it needs to be aware of the details of the evolving financial-market structure.

Additional regulations do run the risk of moral hazard where the presence of a safety net creates an incentive to take additional risk. While any countercyclical monetary, fiscal, or regulatory policy runs this risk, it should be minimized. Ideally, situations requiring public support should occur only after losses have been borne by equity holders, and existing management and directors have been held responsible for the losses.

To the extent a new regulatory structure reduces counterparty risk, or requires offsets in capital for transactions involving significant counterparty risk, the likelihood of spillover effects from one firm's failure should be significantly reduced. Ideally a new structure will reduce the likelihood of future financial turmoil of the length and severity of current financial problems.

Thank you for having me join you today, and thank you for the opportunity to share my views on principles to guide the redesign of U.S. financial regulation.

NOTES:

[1] Of course, the views I express today are my own, not necessarily those of my colleagues on the Federal Reserve's Board of Governors or the Federal Open Market Committee (the FOMC).

[2] The London Interbank Offered Rate.

[3] In a recent speech Chairman Bernanke, while stressing the importance of market discipline and the problem of moral hazard, said that "the failure of a major financial institution at a time when financial markets are already quite fragile poses too great a threat to financial and economic stability to be ignored. In such cases, intervention is necessary to protect the public interest. The problems of moral hazard and the existence of institutions that are 'too big to fail' must certainly be addressed, but the right way to do this is through regulatory changes, improvements in the financial infrastructure, and other measures that will prevent a situation like this from recurring. Going forward, reforming the system to enhance stability and address the problem of 'too big to fail' should be a top priority for lawmakers and regulators." The Chairman's speech, *Federal Reserve Policies in the Financial Crisis*, is available at http://www.federalreserve.gov/newsevents/speech/bernanke20081201a.htm.

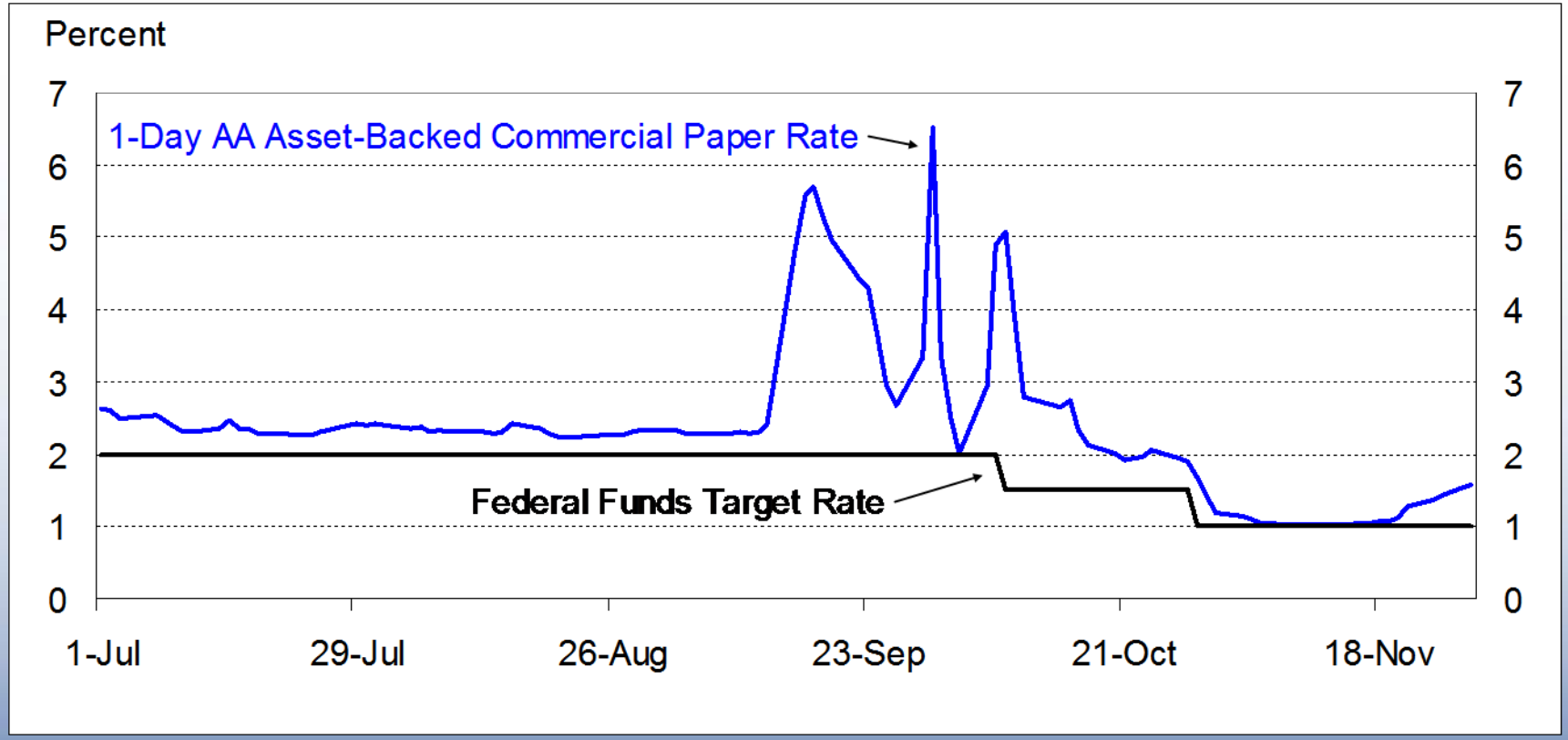
[4] I discussed the benefits that central bank policymakers gain from having supervisory roles and relationships in a speech in Seoul in March. "Bank Supervision and Central Banking: Understanding Credit During a Time of Financial Turmoil" is available on the Boston Fed's website at http://www.bos.frb.org/news/speeches/rosengren/2008/032708.htm

[5] For more on issues of liquidity, liquidity-risk concerns, and systemic risk, see speeches entitled "Liquidity and Systemic Risk" and "The Impact of Financial Institutions and Financial Markets on the Real Economy: Implications of a Liquidity Lock'", available on the Boston Fed's website at http://www.bos.frb.org/news/speeches/rosengren/2008/041808.htm and http://www.bos.frb.org/news/speeches/rosengren/2008/100908.htm, respectively.

[6] Some observe that another lesson of the recent turmoil involves possible over-reliance on short-term debt throughout the financial system.

Figure 1
Asset-Backed Commercial Paper Rate and the Federal Funds Target Rate

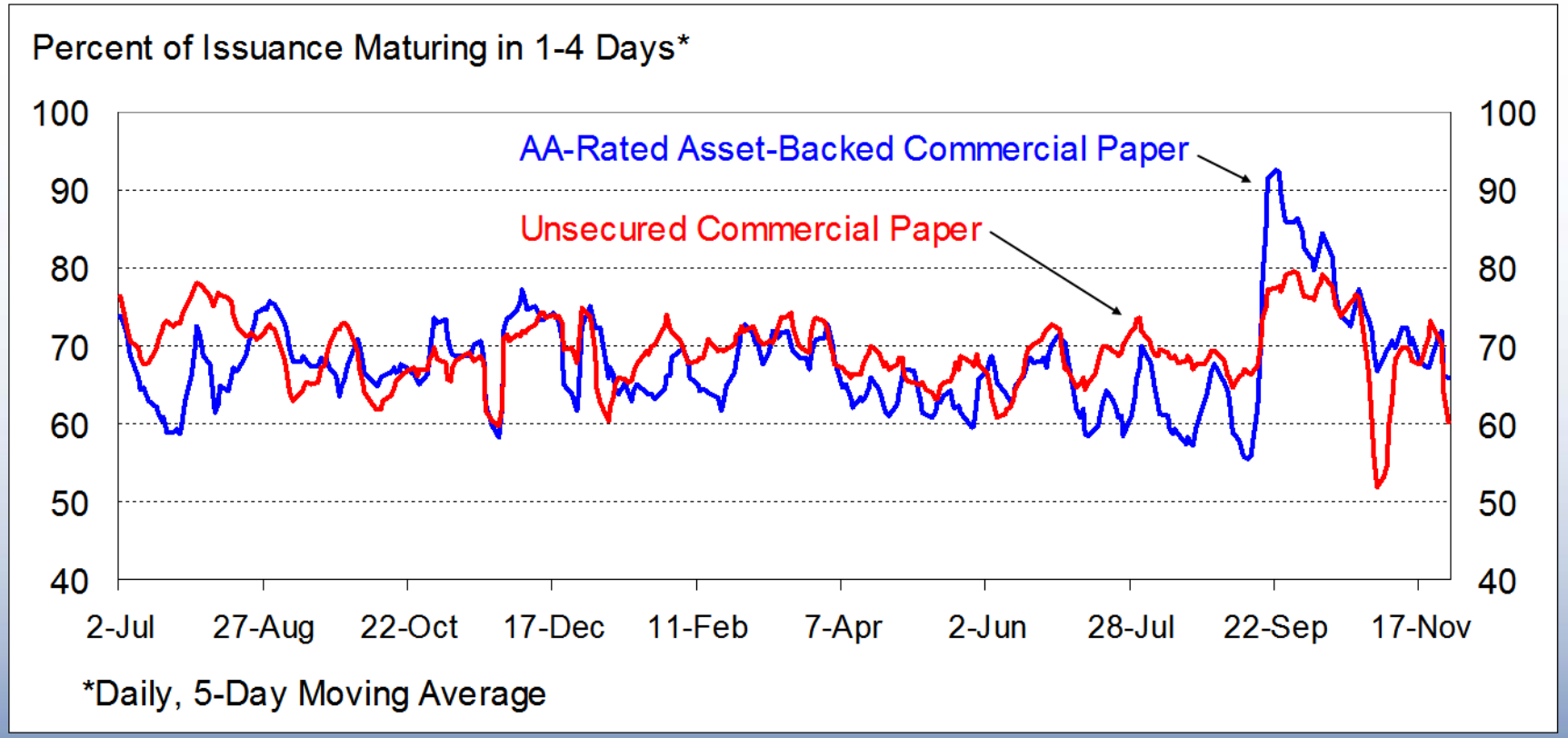
July 1, 2008 - November 28, 2008



Source: Federal Reserve Board / Haver Analytics

Figure 2
Commercial Paper Issuance

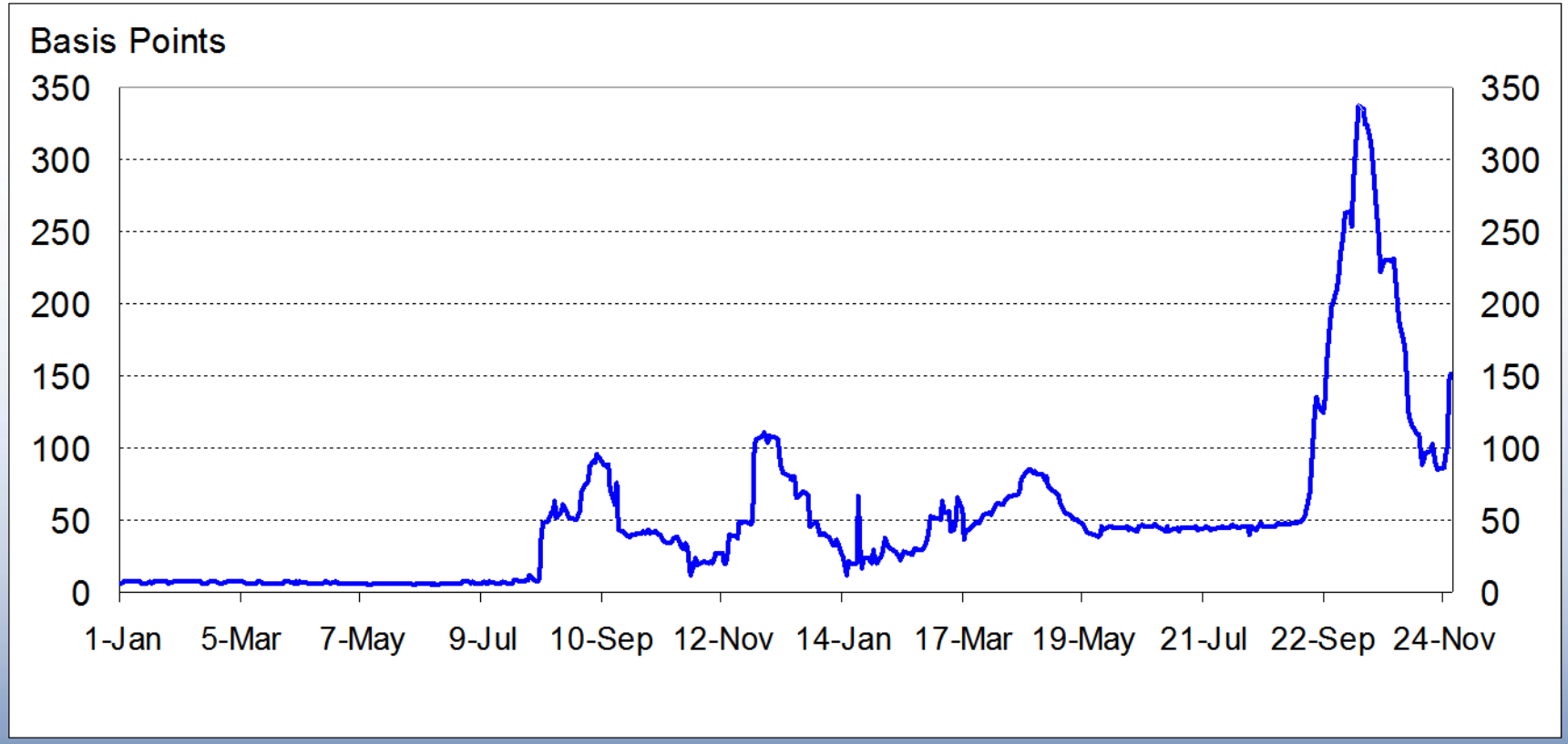
July 2, 2007 – November 28, 2008



Source: Federal Reserve Board / Haver Analytics

Figure 3
Spread: One-Month London Interbank Offered Rate (LIBOR) to Overnight Index Swap (OIS) Rate

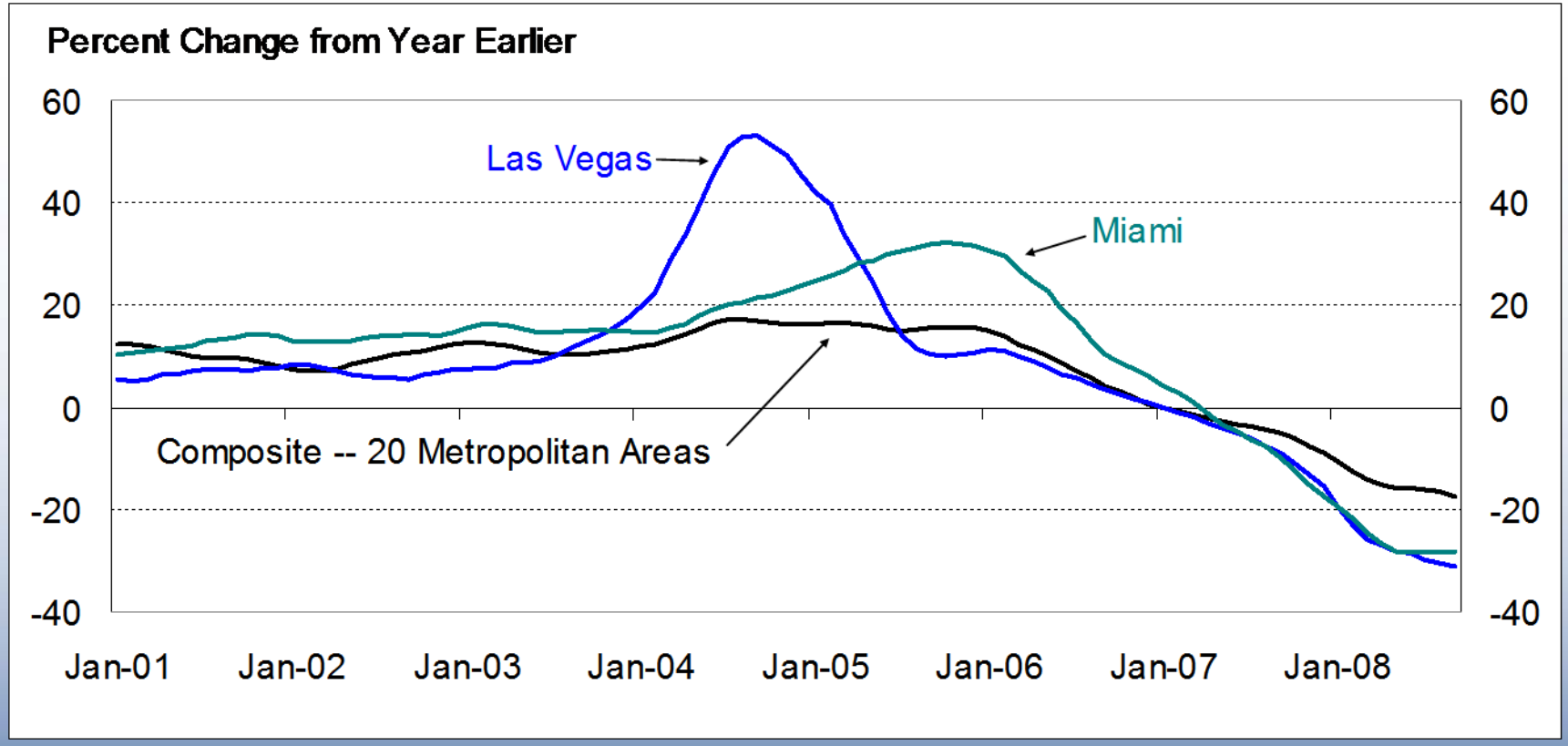
January 1, 2007 - November 28, 2008



Source: Financial Times, Bloomberg / Haver Analytics

Figure 4
S&P/Case-Shiller Home Price Indices: Composite and Selected Metropolitan Areas

January 2001 - September 2008



Source: S&P/Case-Shiller / Haver Analytics

Principle 1

Financial regulation must be more clearly focused on the key goal of macroeconomic stability as well as the safety and soundness of individual institutions.

Principle 2
Because it is a key determinant of macroeconomic stability, systemic financial stability must receive greater focus, with roles and responsibilities during a financial crisis more clearly articulated.

- The definition of “systemically important” firms must be clear ex ante, and the conditions and processes for “saving” such firms must be apparent. Essential to determining which institutions are systemically important is a comprehensive view of financial entanglements among financial instruments and institutions.
- Both fiscal and monetary (liquidity) facilities must be ready to act quickly.
- The central bank needs access to relevant regulatory information in its lender-of-last-resort role.

Principle 3
Liquidity risk must receive greater policy focus in determining regulatory structures.

- The ultimate causes of liquidity disruptions need to be understood and regulatory agencies should be well-equipped to anticipate and avoid them.
- Supervision and regulatory structure must be designed to stabilize systemically important industries that are subject to liquidity disruptions.
- Regulations need to allow for the effects of periods of systemic illiquidity on asset prices, capital, and reserves. For example, the interplay between accounting rules and regulatory structure must be taken into account.

Principle 4
Careful thought must be given to coordinating the work of the various domestic and international regulators in the design of the regulatory structure.

- Regulatory structure should minimize the adverse effects of competing regulatory goals.
- The regulatory structure must ensure that the appropriate agencies have timely access to relevant information.
- Where possible, regulatory institutions should be independent.

Principle 5
Responsibility for strengthening market infrastructure should receive more attention in regulatory design.

- To the extent possible, contracts defining securitized transactions should be standardized.
- To the extent possible, transactions should move to exchanges, to improve transparency and minimize systemic complications arising from counterparty risk.
- Payment and settlement mechanisms require enhanced oversight.
- Still, the regulatory system should foster appropriate financial creativity and innovation, and be able to adapt quickly to the changing financial landscape that will result.