

## Symposium Summary

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World financial markets have experienced tremendous growth in recent years. New financial instruments have been developed, the volume of transactions within individual markets has skyrocketed, and capital flows across countries have risen dramatically. While these developments have made financial markets more efficient, they have also increased the risk that events at one institution or in one market will have immediate and wide-ranging effects on the entire global financial system. In developing policies to respond to these changes, policymakers must balance the need for financial stability with the desire for an innovative and efficient financial system.

To better understand how to design policies to keep a financial system safe, efficient, and stable, and how to respond to financial crises when they occur, the Federal Reserve Bank of Kansas City sponsored a symposium titled "Maintaining Financial Stability in a Global Economy." The symposium, held at Jackson Hole, Wyoming on August 28-30, 1997, brought together a distinguished group of central bankers, academics, and financial market representatives from around the world.

The participants generally agreed that, to maintain financial stability, regulation of financial institutions is important and that financial

regulators should focus on making regulation more consistent with market forces. In addition, financial stability requires a sound macroeconomic environment—particularly price stability and, for most countries, an exchange rate regime that does not attempt to permanently fix exchange rates. Finally, participants agreed that both domestic and international safety nets should be used cautiously in financial crises to avoid the destabilizing effects of moral hazard.

### **Why does financial instability matter?**

Symposium participants agreed that policymakers care about financial instability because a financial sector crisis often causes a severe reduction in real economic activity. Recent examples include banking crises in Scandinavia and Japan, the 1995 peso crisis in Mexico, and the current exchange rate and banking problems in the emerging-market economies of Southeast Asia. While there is little doubt that financial instability can harm an economy, there is less agreement about how a financial crisis is defined and under what circumstances governments or other official bodies should intervene.

#### *How is instability defined?*

In defining financial instability, Andrew Crockett distinguished between instability in institutions and in markets. According to Crockett, institutional instability exists when the failure of one or a few institutions spreads and causes more widespread economic damage. In fact, as Alan Greenspan noted in his opening comments, occasional failures are an important and normal part of the market process because they promote market discipline, provided of course that the failures do not lead to more systemic consequences. Historically, policymakers have focused on commercial banks because their failure can have systemic consequences. Crockett argued that while banks are still “special” in this regard, policymakers also need to be more watchful for problems at nonbank financial institutions because the distinctions among financial institutions have become blurred.

Crockett defined market instability in terms of the wider impact

that volatility in asset prices and flows can have on the economy. By this definition, large changes in asset prices themselves do not necessarily indicate financial instability because they may reflect fundamental changes in the economy, such as changes in expected income flows or in discount factors. Indeed, markets work only if prices are allowed to respond to changes in demand and supply conditions. The difficulty for policymakers, Crockett pointed out, lies in identifying whether a given change in prices is justified by changes in fundamentals.

*When is intervention appropriate?*

Crockett noted that even though financial stability in terms of institutions and markets is important, government intervention to help maintain stability may not be appropriate. In general, government intervention is appropriate if there are market failures or externalities. Crockett argued that in the case of financial institutions—particularly banks—there are external costs and systemic problems associated with runs on individual institutions and the potential contagion effects. As a result, economists generally agree that official intervention is necessary to maintain the stability of financial institutions.

In contrast, Crockett argued that there is general agreement that official intervention should rarely be used to maintain stability in asset prices and flows because there are few market failures or externalities. As a result, the free market generally leads to prices that reflect economic fundamentals. In addition, he maintained that even when prices seem to deviate from fundamentals, it is difficult to “say with confidence that the prices are indeed wrong.” He also noted, however, that government has a role in promoting policies that limit market imperfections, such as policies that promote disclosure and reduce information asymmetries.

In commenting on Crockett’s paper, Stanley Fischer discussed how the International Monetary Fund (IMF) promotes information disclosure in international markets. First, the IMF staff prepares comprehensive analytical and descriptive reports on economic

developments in its member countries for its executive board and for all member governments. Second, the IMF produces regular statistical publications. Third, since the 1995 Mexican peso crisis, the IMF has posted market-relevant data on the Internet through its Special Data Dissemination Standard and its associated Dissemination Standards Bulletin Board.

### **The causes and propagation of financial instability**

The first step in developing policies to maintain financial stability is to determine what causes financial instability. Frederic Mishkin provided a conceptual framework for the causes and the propagation of instability, focusing on the different effects economic shocks have on both emerging-market economies and industrialized countries. Morris Goldstein then discussed an empirical early warning model of financial crises, after which officials from countries that have gone through financial crises described their countries' experiences.

#### *Conceptual framework*

According to Mishkin, a key feature of financial markets that can lead to instability is asymmetric information among market participants. Asymmetric information exists because parties on either side of a transaction have different information and choose to disclose only what suits their strategy best. An important problem caused by asymmetric information is moral hazard. Moral hazard refers to the tendency for individuals to take on extra risks when they do not bear the full cost of their activities. For example, banks may make excessively risky loans if they believe a lender of last resort will bail them out if they are about to fail.

Mishkin identified four types of shocks that can destabilize the financial system by worsening asymmetric information: exogenous increases in real interest rates, increases in uncertainty, asset market effects on balance sheets, and problems in the banking sector. While all four types of shocks can lead to financial instability, Mishkin made a distinction between how the instability propagates in emerging-market economies and in industrialized countries. The

difference, he noted, may not always be clear cut, but some general distinctions can be made.

In emerging-market countries, Mishkin argued that a key factor in the propagation of instability is the country's inflation history. Emerging-market countries often have a record of high and variable inflation, making long-term debt contracts risky. As a result, a large share of government and private debt in emerging-market countries tends to be of short duration and denominated in the currency of a foreign country with a record of relatively low and stable inflation. Suppose an economic shock causes a large depreciation of the currency. In this case, the domestic currency value of interest payments on debt owed in foreign currency will rise sharply. In addition, if the devaluation causes expected inflation to rise, domestic interest rates will rise, which will lead to higher interest payments on short-term debt when it is rolled over. The sudden increase in interest payments makes it more difficult for households and firms to service their debt, leading to a deterioration of loan quality and bank portfolios. Furthermore, banks may become illiquid due to the short-term nature of their liabilities and the long-term nature of their assets. Thus, what started as an exchange rate crisis turns into a banking crisis. In addition, it is difficult for a central bank to defend the currency by raising interest rates because doing so causes bank costs to rise, further weakening the banking system.

The propagation of instability in industrialized countries, Mishkin argued, generally follows a different path. Because industrialized countries typically have a history of relatively stable prices, debt contracts are usually of long duration and denominated in domestic currency. Under these circumstances, a negative shock does not propagate instability through a depreciation of the currency. The shock, however, still causes a decline in economic activity, which diminishes cash flows. As a result, households and firms have difficulty in paying back their debt, asset values diminish, and banks incur losses just as in emerging-market countries. Additional problems arise if the decline of the economy substantially changes the expected path of inflation. The problems arise because the interest rates on long-term debt reflect inflation expectations that turn out to

be substantially wrong. If inflation is lower than expected, real interest rates turn out to be higher than anticipated, which raises the real debt burden of firms. This “debt deflation” hinders the recovery process and further propagates instability.<sup>1</sup> In addition, the sharp decrease in net worth can increase moral hazard because it gives firms an incentive to hide information and to engage in risky transactions in order to boost their value.

After Mishkin’s theoretical discussion, Morris Goldstein presented an empirical model of leading indicators of financial crises. Differentiating between banking and currency crises in twenty-five emerging-market economies and small industrialized countries, Goldstein concluded that there are four leading indicators common to both types of crises and two indicators specific to each type of crisis. The four indicators useful in predicting both types of crises are a real exchange rate appreciation, a stock market decline, a recession, and a decline in exports. Additional indicators for banking crises are a rise in the money multiplier and the real interest rate. For currency crises, the additional indicators are the presence of a banking crisis and a rising ratio of broad money balances to international reserves.

#### *Recent financial crises*

Using Japan’s recent experience, Yoshio Suzuki showed how declining asset values can lead to a financial crisis in industrialized countries. In the late 1980s, interest rates in Japan were kept artificially low to support the U.S. dollar. This resulted in asset price bubbles and an abundance of new loans in the highly protected banking sector. When the asset price bubble burst, collateral values fell and balance sheets deteriorated, which led to large losses at banks and a full-scale banking crisis. The problem was exacerbated by an increase in deposit insurance fees and by government intervention to protect depositors of failed banks at the cost of the efficient financial institutions. Suzuki argued that Japan should change its policies in two ways to solve its financial problems. The first change, which the government has largely adopted, is to remove some of the financial regulations so that Japanese financial institu-

tions are on a more equal footing with their competitors in other countries. Second, the government should promptly resolve the bad loan problem, making sure that the safety net is adequately funded to deal with any fallout from deregulation and from the resolution of the banking system's problem loans.

Urban Bäckström of Sweden discussed how his country dealt with its banking crisis in the early 1990s. Realizing that restoring the banking system's liquidity was the key to avoiding further propagation of the crisis and to restoring financial stability, the government and opposition jointly announced a general guarantee for the whole banking system. This broad political consensus facilitated the prompt handling of problems and made the guarantee more credible. In order to limit moral hazard, tough negotiations were held with the banks that needed support and shareholders were forced to absorb losses before any other group of creditors. In addition, an independent Swedish Bank Support Authority was created to administer the bank guarantee and to manage problem banks. This new banking authority valued the assets of the banks that applied for the guarantee, divided them into categories according to the severity of their problems, *fully* disclosed expected loan losses and asset values to the public, and managed the problem banks. Thanks to the prompt and transparent handling of the banking crisis, confidence was reestablished. Thus, debt deflation, further propagation of the instability, and a collapse of the whole economy were avoided.

Pedro Pou gave insight into moral hazard issues and their consequences by describing Argentina's experience with the propagation of instability in the 1982 banking crisis and the 1989-90 hyperinflation. In 1982, Argentina experienced a banking crisis, propagated to a large extent by moral hazard. The moral hazard stemmed from several aspects of the institutional setup of the banking system: full unlimited deposit insurance, free entry into the market, and weak supervision. With this institutional setup, banks had no incentive to limit the riskiness of their activities, resulting in many bank failures. The subsequent bailout of banks by the government resulted in a large increase in the public debt, which was financed through the banks. In the following years, the debt caused persistent fiscal

problems, and its monetization was a key factor in the 1989-90 hyperinflation. Since the banks' main assets were government debt, the solvency of the banking system was soon questioned, and a run on government debt caused the financial system to collapse. Argentina responded to the crisis through extensive reforms. Market forces were reinforced by the deregulation and privatization of banks. In addition, the credibility of the monetary authority was enhanced by establishing a currency board that tied the Argentinean peso to the U.S. dollar on a one-to-one basis. The currency board arrangement essentially freed the central bank from having to finance government debt.

Barry Eichengreen discussed the financial crisis in Thailand, arguing that the Thai authorities made two critical mistakes.<sup>2</sup> First, they pegged the exchange rate within a narrow band, allowing it to become overvalued. The peg also encouraged domestic banks and firms to borrow funds in foreign currency without consideration of exchange rate risks. Second, management of the financial system was lax. When combined with large capital inflows, the lax management led to excessive lending and ultimately to a significant amount of bad loans. The Thai baht came under pressure, and when it was finally allowed to float, the sharp depreciation of the currency weakened already fragile balance sheets even further. Eichengreen's description of the causes and propagation of the Thai crisis closely paralleled Mishkin's description of a typical financial crisis in an emerging-market economy.

In the luncheon address, Václav Klaus reported on the Czech Republic's transition to a market economy, its struggle to achieve an external equilibrium, and its recent exchange rate problems. According to Klaus, the flood of imports that followed the unprotected opening of the economy led to a current account deficit. Much of the inflow of foreign capital under the fixed exchange rate was not used to finance "productive" investment. Klaus argued that productive investment would have increased international competitiveness and eased the pressures on the current account. Moreover, the banking system was fragile due to bank portfolios of questionable quality and inadequate transparency and disclosure procedures. In addition, regulators in the new environment could not catch up



with the fast growth of the financial system. As problems became apparent, the currency came under attack, forcing an unintended depreciation. Ultimately, policymakers decided to let the currency float. Thus, the Czech instability was partly due to a dependence on foreign funds, an immature regulatory and law enforcement infrastructure, and a weak banking system.

### **International responses to crises**

For many years, the International Monetary Fund and high-income countries have provided aid to countries experiencing financial crises. Symposium participants generally agreed this practice would have to continue. But with the globalization of financial markets and the increased speed with which problems can spread from one country to another, participants also agreed that the support mechanisms have to change. In addition, to minimize the moral hazard problems associated with safety nets, support should be offered on a case-by-case basis and not be automatic.

In a paper written with Richard Portes, Barry Eichengreen argued that changes in the foreign debt of emerging-market countries have made it necessary to change the international mechanism used to provide financial support to countries in financial crisis. A key difference between recent emerging-market crises and earlier crises is the way countries have obtained international financing. In the 1980s, banks were the primary international financiers of emerging-market sovereign debt. While the lending groups generally consisted of several hundred banks, the lending was typically concentrated in a handful of the world's largest banks. Given this lending structure, it was fairly easy for the banks to form an advisory committee to reschedule the debt if a default seemed imminent. In addition, because banks had a strong incentive to refinance to prevent large losses, the IMF could wait with adjustment loans until most of the commercial banks had arranged new financing and restructured their debt.

During the 1995 Mexican crisis, it became apparent that the source of international financing had shifted from a few hundred banks to thousands of investors holding government-issued bonds. This shift

from bank loan to bond financing has two major implications for the way in which the international community must respond to financial crises in emerging markets. First, international officials must be able to respond faster because the shift in financing has increased the speed at which a crisis might develop. The speed has increased because investors holding securities can liquidate their holdings and will do so when they see others selling. As a result, when a country's securitized debt is large and investors decide to run, the government has no choice but to suspend payments. The second implication is that the IMF can no longer wait for countries to restructure their debt or to arrange for alternative private financing before providing adjustment loans. The IMF cannot wait, not only because the Fund must respond faster, but also because restructuring debt or arranging new financing is more difficult and takes longer. Bonded debt is difficult to restructure because it is virtually impossible to achieve the required unanimous consent of the thousands of small bondholders, many of whom are hard to find due to secondary markets. Moreover, the difficulty in restructuring is aggravated since small creditors have an incentive to hold out in the hope that a larger creditor will buy them out at full value. Finally, this climate of uncertainty causes potential lenders of additional liquidity to hold back, making it difficult for the country to fund even productive domestic investments.

Eichengreen described how the international community responded to the need for it to change the way it supports emerging-market countries in crisis. At the 1995 Halifax summit, the Group of Seven governments recommended that the IMF develop a mechanism for providing faster access to IMF credit and larger amounts of money in crisis situations. In response, the IMF established an emergency-financing mechanism through which funds can be disbursed to countries in as little as three weeks, compared with the several months required under normal procedures. In addition, the IMF improved its surveillance of national policies and its data publication and dissemination.

At the Halifax summit, the Group of Seven governments also chartered a Group of Ten committee under the chairmanship of

Jean-Jacques Rey to reassess the crisis response mechanisms. The Rey Committee found that substantial institutional changes, such as the creation of an international bankruptcy court, were not needed. However, they made several recommendations to improve the international community's ability to respond to financial crises. One set of suggestions was aimed at modifying loan contracts to facilitate the orderly restructuring of defaulted sovereign debt. In addition, the report made specific suggestions for providing countries in crisis faster access to IMF funds.

While Eichengreen and Portes applauded the changes to debt contracts proposed by the Rey Committee, they thought it unlikely that the markets would quickly incorporate the provisions into debt contracts. As a result, they argued, "Management of future crises, even more than crises past, will rest with the IMF." In commenting on the Eichengreen and Portes paper, Jeffrey Sachs voiced concern that giving the IMF so much power over countries in financial crisis without appropriate checks and balances and without a place to appeal decisions is an inappropriate and dangerous policy.

Did the new procedures work for Thailand? According to Eichengreen and Portes, there was no immediate danger of default on securitized public debt in Thailand, so the orderly workout procedures were not needed. The IMF's faster emergency-financing mechanism, however, was used to provide Thailand with \$3.9 billion in standby credit over a 34-month period, of which \$1.6 billion was available immediately to support the government's economic program and to mitigate problems and contagion.<sup>3</sup>

There was some discussion about whether the intervention in Thailand was appropriate. Jeffrey Sachs claimed that the government had been warned about the overvaluation of its pegged currency but did not take corrective measures. International support under such circumstances, he implied, fails to teach a lesson and is not necessary. In addition, he questioned whether the devaluation that ultimately took place was a crisis, arguing that it was just a large decline in value over a short time period that created large losses for some market participants. Indeed, he noted, the percentage depreciation

of the baht was about the same as that of many Western European currencies over the past year, but the European depreciations are not considered crises because they occurred more slowly.

Other participants disagreed with Sachs' views that Thailand was not experiencing a crisis and that an intervention was inappropriate. Mishkin argued that the Thai and Western European devaluations were fundamentally different because Thailand is an emerging market with large amounts of short-term debt denominated in dollars. In his view, Thailand's difficulties exemplified how a crisis can result from the combination of a weak banking system, short-term debt contracts denominated in foreign currency, and misaligned exchange rates. Stanley Fischer thought the intervention in Thailand was appropriate because, even though punishing the government might seem tempting, the international community is obliged to mitigate the consequences of sharp adjustments to help the people of the country in crisis and to avoid contagion to other countries.<sup>4</sup>

Finally, in his discussion of Argentina's problems during the 1995 Mexican peso crisis, Pedro Pou had raised the issue of the international community providing a country in crisis with automatic access to liquidity. Pou argued that despite sound economic policy in Argentina, contagion from the Mexican crisis precipitated a run on the Argentinean currency. Because Argentina had a currency board, the currency run automatically caused a severe contraction in monetary policy. Pou argued that the contraction of monetary policy and the associated costs to the economy were unnecessary and could have been avoided if Argentina had automatic access to international liquidity. He suggested that the IMF was one possible lender of last resort, replacing the private international banks that currently provide liquidity to Argentina's central bank.

Most participants did not share Pou's view about an automated lending mechanism or an unconditional line of credit. Fischer and other participants argued that a lender of last resort should be used only in exceptional cases because any automatization would worsen moral hazard. The moral hazard problem was stressed by Jean-Jacques Rey, who argued that a central concern in responding to financial

crises is to avoid moral hazard so that debtors and creditors do not underestimate the risks of their positions or transactions. Thus, while intervention is often ultimately necessary, conditionality of that intervention is also necessary to maintain the correct incentives.

### **Policies for maintaining financial stability**

Policies for maintaining financial stability was the final topic of the symposium. In general, the discussions focused on regulatory policies for maintaining the stability of financial institutions and on how macroeconomic policy—particularly inflation and exchange rate policies—can contribute to maintaining overall financial stability.

#### *Maintaining the stability of depository institutions*

Consistent with Andrew Crockett's discussion of the need for regulation of financial institutions but not asset markets, Robert Litan discussed how the regulation of financial institutions should change to reduce the risk of financial crises. He argued that the regulation of banks and other depository institutions (hereafter collectively referred to as banks) should shift from what he called a *prevention-safety net* paradigm to a more market-oriented *competition-containment* paradigm. The prevention-safety net paradigm, which according to Litan has characterized U.S. bank regulation since the Great Depression, is a regulatory system that attempts to prevent individual banks from failing and, when banks do fail, relies on an extensive safety net to protect depositors from loss. The underlying idea is that if individual institutions do not fail or cause problems for individual depositors, problems at individual banks will not lead to a wider financial crisis.

Litan argued that the prevention-safety net paradigm began to break down in the 1980s, making it necessary to switch to a competition-containment paradigm to maintain the stability of depository institutions. Philosophically, this approach differs from the traditional approach in that policies focus less on protecting individual institutions and more on protecting the overall financial system. Under this approach, competition and market forces would play a

more important role in limiting bank risk taking, while policies would be focused on containment—making sure that when problems at individual institutions do occur, they do not threaten the entire financial system. Litan emphasized that under this approach supervision would not be abandoned. To the contrary, he argued, in order for market forces to contain risk taking by individual institutions, supervision would be necessary to make sure the market had accurate and timely information about individual institutions. In addition, he noted that prevention would not be discarded but aimed at preventing systemic crises instead of preventing failures of individual institutions.

Litan listed three ways market forces could be used to provide individual institutions with incentives for avoiding excessive risks, while ensuring that the effects of failures do not spread to other institutions. First, he welcomed the steps already taken to allow large banks to use their own models for estimating risk. In particular, he liked the Federal Reserve Board's proposed "pre-commitment" approach, which allows banks to use internal models to specify the maximum losses they might accumulate over a specific time period and then pay a penalty if losses exceed that amount. Second, he argued there is a useful role for self-regulation, such as the voluntary risk management guidelines recommended in a recent Group of Thirty report. Litan's third suggestion for harnessing market forces was to require certain banks to back a limited portion of their assets with uninsured, subordinated debt. The purchasers of subordinated debt could not run like depositors, but would have to wait until their debt instruments matured. Since these debt holders would only have downside risk, they would discourage risk taking by requiring riskier banks to pay a higher interest rate on their subordinated debt. Litan also proposed that regulators report overall bank exam ratings to the public to improve the information that debt holders have about banks.

On this last point, however, some participants disagreed, arguing that premature disclosure can sometimes be destabilizing. In the discussion, for example, Gerald Corrigan noted that if such a disclosure policy had been used in the late 1980s and early 1990s, it would have given a false signal to the market and probably would have led

to more serious problems than actually occurred. Earlier in the symposium, Stanley Fischer made a similar point in an international context, arguing that if the IMF discloses information that turns out to be a false signal, it could actually lead to the crisis the Fund is trying to prevent.

In addition to making better use of market forces, another key element of Litan's containment policy is to improve the safety of clearing and settlement systems by moving toward real time gross settlement (RTGS). Introducing real time settlement would lower the risk of one party having insufficient funds at settlement time. Litan noted that moving toward shorter settlement times is important not only for domestic interbank payments, but also for foreign exchange and securities transactions. There was widespread agreement among symposium participants that moving toward shorter settlement times in all markets would make an important contribution to financial stability.

In discussing Litan's paper, Randall Kroszner placed an even greater emphasis on the role of market forces in promoting the stability of global banking and financial markets. Kroszner thought the key lesson for policymakers is that government regulation should not be allowed to "crowd out" private regulation. He argued that the private sector, through innovations in organizational design and governance for financial institutions, has been an efficient regulator when a public regulator was not active. As an example of private strategic responses to concern over financial stability, Kroszner noted the historical importance of "members-only clubs" with high membership standards for institutions that wanted to deal in financial transactions. Examples of such "clubs" are the clearing systems used by the free-banking system in eighteenth- and nineteenth-century Scotland, the Suffolk System in New England in the early 1800s, and the clearinghouse associations of the Chicago Board of Trade and Chicago Mercantile Exchange. While the recent growth in international markets has occurred outside such clubs, the market has responded through the growth of independent rating agencies, covenants in financial contracts, and new organizational forms—such as special purposes vehicles—to isolate risks from the rest of the organization.

Although symposium participants viewed the trend toward a greater emphasis on market forces as moving in the correct direction, most thought that Kroszner's "laissez-faire" approach went too far and that some rules are necessary to make up for market inefficiencies. In the discussion, for example, Donald Brash said he favored greater use of market forces to increase efficiency and reduce risk, especially with the movement toward RTGS systems. Brash argued, however, that because there is a very strong public belief in most countries that depositors will be protected by some type of safety net, some public sector involvement in banking is necessary. He noted that even New Zealand, whose regulatory structure is "very light," has a lender of last resort, abides by the Basle minimum capital ratios, has limits on connected lending, and mandates bank disclosure.

Throughout the symposium, there was an obvious tension in many participants' minds between the benefits and costs of safety nets. Clearly, most felt that some form of a safety net is necessary so that policymakers can step in to stop a contagion problem when necessary. Andrew Crockett also noted that "any ex ante announcement by governments not to support the financial system lacks credibility" because it would be "very hard for elected authorities to refuse assistance to institutions whose depositors have powerful electoral influence." At the same time, participants were clearly uncomfortable with the moral hazard implications of safety nets. Much of the discussion focused on how the moral hazard of safety nets could be reduced. With respect to deposit insurance, several participants noted that, unlike today's FDIC in the United States, deposit insurance must be set up to comprise sharing and appropriate pricing of risks. In his opening remarks, Alan Greenspan argued that central banks have necessarily become the lenders of last resort because of their unlimited power to create money. To reduce the moral hazard problem, however, Greenspan argued that central banks should use these powers only to provide what amounts to "catastrophic financial insurance" and that such public subsidies "should be reserved for only the rarest of disasters." Similarly, Crockett argued for a policy of *constructive ambiguity*—a term made popular by Gerald Corrigan. Constructive ambiguity is a policy in which central banks



intervene to preserve financial stability without giving explicit or implicit assurances to individual institutions.

*Macroeconomic policies for maintaining financial stability*

While none of the symposium presentations focused on macroeconomic policies, several speakers discussed the importance of solid macroeconomic policies for maintaining financial stability. In particular, price stability was viewed as crucially important for financial stability. In addition, the consensus view was that while fixed exchange rates are useful for reducing inflation in some countries, keeping them fixed for too long can ultimately threaten financial stability.

Frederic Mishkin argued that price stability and financial stability are mutually reinforcing goals. In Mishkin's discussion of the propagation of crises in industrialized and emerging-market countries, the differences between the two types of countries hinged on the behavior of inflation. As discussed earlier, nonfinancial firms and banks in countries with high and variable inflation tend to be vulnerable to economic shocks because their debt tends to be of short duration and denominated in foreign currencies. A low, steady rate of inflation, on the other hand, allows countries to avoid these problems because debt tends to be structured with longer durations and denominated in domestic currency. Mishkin also noted that highly variable inflation reduces the credibility of policymakers, making it more difficult for them to promote recovery from a financial crisis. For example, expansionary monetary policy or lender-of-last-resort actions are less effective for shoring up weakened balance sheets because they can lead to increases in expected inflation, which in turn, cause interest rates to rise and balance sheets to weaken further.

Mishkin also argued that price stability means not only that inflation is low, but also that price deflations are avoided. As was noted earlier in the discussion of financial crises in industrialized countries, when debt contracts tend to have a long duration with fixed interest rates, a large unanticipated decline in inflation can prolong a financial crisis by increasing the real burden of indebtedness.

Andrew Crockett took the point a step further by discussing the implications for regulatory structure. Crockett noted distinctions have been made in recent years between the institutions responsible for maintaining price stability and the stability of the financial system. While they are conceptually different, the close linkages among them imply a close collaboration among the institutions responsible for monetary and financial stability. As a result, he concluded, those who desire to separate the functions need to think carefully about the costs of doing so.

In many cases, discussions about price stability could not be separated from discussions about exchange rate regimes. In particular, Mishkin noted that a common method used by smaller countries to reduce inflation and keep it low is to peg their exchange rate to that of a large, low-inflation country. Mishkin argued, however, that while fixed exchange rates may be a successful anti-inflation strategy, it can be a dangerous one, particularly if the banking system is weak, debt has short duration, and substantial amounts of debt are denominated in foreign currency. In this case, a shock that makes it necessary to substantially devalue the currency can precipitate a full-scale financial crisis. Jeffrey Sachs agreed, concluding that strictly pegged exchange rates should only be used in special circumstances.

Finally, Jacob Frenkel emphasized the importance of making fixed exchange rate regimes temporary phenomena, drawing a distinction between the first and subsequent phases of a price stabilization strategy. In the first phase, he argued, it makes sense to fix exchange rates for a while to break the inertia of high inflation. But, he warned, the strategy must include an exit policy to make the transition to a more flexible exchange rate regime.

## **Conclusions**

The conclusions of the symposium were summarized by three overview panelists, Martin Feldstein, Edward George, and Jean-Claude Trichet. The panelists commented on four main issues—the regulation of financial institutions, the role of international support

in times of crisis, intervention in asset markets, and macroeconomic policies for maintaining financial stability.

The majority view of the symposium participants was that regulation of financial institutions is needed but that it must be consistent with market forces. Trichet argued that while market participants should be measuring risks and adjusting to those risks, central bankers must retain the right for setting capital requirements because they are responsible for assessing systemic risks and preventing systemic crises. In addition, he noted that policymakers can mitigate the problems associated with information asymmetries by assuring transparency and full disclosure of information. Feldstein called for deposit insurance reform to provide better incentives to avoid excessive risks, such as by lowering the limit on insured deposits or by allowing high insured deposit limits in combination with copayments (as a percent of insured deposits) if a bank should fail. He also favored basing regulatory capital requirements on the risk of failures and the resulting systemic risk. As a final point on banking supervision, Feldstein thought that supervisors should not be concerned about banks with small problems but instead should focus their attention on banks whose failure could lead to systemic problems.

George and Trichet both commented on the regulatory implications of financial globalization and innovation. First, in light of globalization and the associated surge of financial transactions, they both endorsed Litan's view that moving to quicker settlement of payments is key for reducing the risk of financial instability. In George's words, we need to think about moving toward "real-time gross everything." Trichet added that with the globalization of financial markets, a well-functioning payments and settlement system is needed not only in the United States and the other G-10 countries, but also in the rest of the world. Second, they both agreed that international banking regulators need to coordinate their activities, not just among themselves, but also with securities and insurance regulators. George also called for some form of consolidated or umbrella oversight to make sure that regulators have a continuous view of the overall risks faced by international financial firms. He argued, "The absence of arrangements of this sort in relation to

multinational, multifunctional firms in particular seems to me to be one of the major weaknesses in current international regulatory arrangements.”

As for international responses to financial crises, George believed it is generally accepted that there are situations when official international support is appropriate, particularly when a banking system is in turmoil. He cautioned, however, that to avoid the moral hazard problems typically associated with national lenders of last resort, borrowing countries and creditors should expect that international intervention will be the exception and not the rule. He reiterated that the trick is maintaining an appropriate balance between the potentially conflicting objectives of financial stability and the distorting effects of moral hazard.

Symposium participants agreed that intervention in asset markets generally is not desirable. Feldstein commented that asset prices should be left to the market because it is never clear ahead of time what the “correct” price should be. Jean-Claude Trichet agreed, saying that he did not know who should be the judge for determining when market prices are in line with fundamentals. He noted, however, that while it is difficult to determine if prices are correct, it is “absolutely clear” that a crisis exists and that policymakers must step in when markets are illiquid. Feldstein also cautioned that while asset prices should not be targets for monetary policy, it does not mean monetary authorities should ignore prices such as exchange rates and stock prices. To the contrary, asset prices can be good indicators of future economic activity.

In the area of macroeconomic policies, Feldstein argued that large current account deficits cannot be sustained in the long run. He agreed with other participants that a common denominator of the 1995 Mexican peso crisis and the current problems in Thailand was a large current account deficit, amounting to about 8 percent of GDP in both cases. He concluded that countries that try to have sustained current account deficits and capital inflows, and that base their domestic policies on the assumption that such flows will persist, are putting their exchange rates and their domestic financial markets at risk.

Finally, the three panelists and the symposium participants agreed that price stability is one of the most important ways policymakers can support financial stability. Martin Feldstein argued that the U.S. banking problems in the 1980s show how even relatively moderate rates of inflation can lead to financial problems. More generally, Edward George argued that destabilizing influences, such as weak policy or real shocks, typically flow from the macroeconomy to the financial sector rather than the other way around, and that macroeconomic risks are possibly the major risks affecting the stability of financial intermediaries. Thus, a stable macro situation is necessary for financial stability, and a good way for authorities to prevent financial instability is by providing consistent and transparent macroeconomic policies.

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## Endnotes

<sup>1</sup>“Debt deflation” is the term Irving Fisher used for the propagation of instability due to an unanticipated decline in inflation combined with long-term debt contracts with fixed nominal interest rates in his article, “The Debt- Deflation Theory of the Great Depression,” *Econometrica*, 1933, vol. 1, pp. 337-57.

<sup>2</sup>Eichengreen actually made his comments in his presentation to the symposium.

<sup>3</sup>International Monetary Fund. 1997. Press release no. 97/37 (<http://www.imf.org/external/np/sec/pr/1997/pr9737.htm>), August 20.

<sup>4</sup>Fischer’s comments on Thailand were made in his discussion of Crockett’s paper and in the discussion afterward.