

Conference Proceedings

10th
ANNUAL
HYMAN P. MINSKY CONFERENCE
ON FINANCIAL STRUCTURE

*The Liberalization
of Financial Markets: National and
International Perspectives*

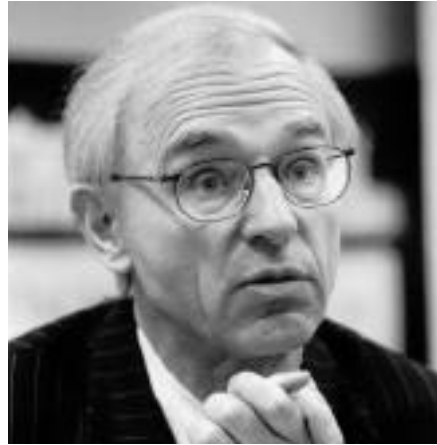
April 27-28, 2000 Annandale-on-Hudson, New York



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*The proceedings consist of edited transcripts of the speakers' remarks and
synopses of session participants' presentations.*



*Top, left to right: Timothy F. Geithner; the Honorable Barney Frank
Center, left to right: Henry Kaufman; H. Onno Ruding
Bottom, left to right: David A. Levy; Wynne Godley*

F o r e w o r d

Hyman P. Minsky was a distinguished scholar at the Levy Institute until his death in 1996. For over 50 years, Minsky's research, writing, and speeches focused on the causes and consequences of the financial vulnerabilities inherent in advanced and complex capitalist economies and on the policy implications emanating from this systemic fragility. He also wrote and spoke extensively about many other economic issues related to central bank policy, fiscal policy, welfare policy, and employment policy.

This conference—the Institute's 10th such gathering—commemorated Minsky by addressing issues related to the need to continuously assess the fragility and structure of the financial sector. The papers and presentations focused on a variety of issues: the liberalization of financial markets both in the United States and worldwide, the financial and regulatory landscape evolving in the wake of the passage of the Gramm-Leach-Bliley legislation addressing the need for U.S. financial modernization, the continued controversy over how to build a global financial architecture, and the dangerous reliance of the New Economy.com on the irrational exuberance that permeated the equities market.

The presentations include both conventional and unconventional interpretations of these critical issues affecting the continued prosperity of the U.S. economy. We hope that the variety of interpretations offered will engender a spirited debate about possible public policy responses and suggest avenues ripe for further theoretical and policy-related research.

Dimitri B. Papadimitriou

President

Program

THURSDAY, APRIL 27

- 9:00–9:30 A.M. BREAKFAST AND REGISTRATION
- 9:30–9:45 A.M. WELCOME AND INTRODUCTION
Dimitri B. Papadimitriou, *President, Levy Institute*
- 9:45–10:45 A.M. SPEAKER
Wynne Godley, *Senior Scholar, Levy Institute*
- 10:45 A.M. – 12:45 P.M. SESSION 1. STOCK MARKET EFFECTS AND THE
MACROECONOMY
MODERATOR: Dimitri B. Papadimitriou, *Levy Institute*
Byron Wien, *Morgan Stanley Dean Witter*
“Will Macro Ever Matter Again?”
Robert Barbera, *Hoening & Co.*
“It’ Just Happened Again”
David A. Levy and Srinivas Thiruvadanthai, *Levy Institute Forecasting
Center*
“The Stock Market Wealth Effect”
Frank A. J. Veneroso, *Veneroso Associates*, and Robert W. Parenteau,
Dresdner RCM Global Investors
“The High-Tech Stock Market Bubble”
- 12:45–2:45 P.M. LUNCHEON
SPEAKER: The Honorable Barney Frank, *Member, U.S. House of
Representatives*
- 2:45–4:30 P.M. SESSION 2. WHAT WOULD MINSKY THINK?
MODERATOR: Jamee K. Moudud, *Levy Institute*
Martin Mayer, *Brookings Institution*
“The Fed in Our Future”
Ronnie J. Phillips, *Colorado State University*
“Dealing with Financial Crises: Lessons from Minsky”
L. Randall Wray, *University of Missouri–Kansas City*
“Implications of Domestic Financial Market Liberalization”

4:30–5:00 P.M. BREAK

5:00–6:00 P.M. SPEAKER
H.Onno Ruding, *Vice Chairman, Citibank*
“The Consolidation of Financial Institutions: On a Global
or National Basis?”

6:00–7:00 P.M. SPEAKER
Timothy F. Geithner, *Undersecretary for International Affairs,*
U.S. Department of the Treasury

7:00 P.M. RECEPTION AND DINNER

FRIDAY, APRIL 28

9:00–10:00 A.M. BREAKFAST

10:00–11:00 A.M. SPEAKER
Henry Kaufman, *President, Henry Kaufman & Co.*

11:00 A.M. – 12:30 P.M. SESSION 3.THE FINANCIAL ARCHITECTURE IN THE
POST–GRAMM-LEACH-BLILEY ERA
MODERATOR: Frances M. Spring, *Levy Institute*
Ernest Patrikis, *American International Group, Inc.*
“The Financial Safety Net in the Post–Gramm Act Era”
Kenneth H. Thomas, *The Wharton School of the University of*
Pennsylvania
“CRA Grade Inflation”
Nancy A. Wentzler, *Office of the Comptroller of the Currency,*
U.S. Department of the Treasury
“Strategic Challenges for the Banking Industry in the Changing
Environment”

12:30–2:00 P.M.

LUNCHEON

SPEAKER: David A. Levy, *Vice Chairman and Director of Forecasting,
Levy Institute*

“Economic Disaster Ahead?”

2:00–4:00 P.M.

SESSION 4.CHANGES IN THE INTERNATIONAL FINANCIAL
STRUCTURE

MODERATOR: Ajit Zacharias, *Levy Institute*

Robert Z. Aliber, *University of Chicago*

“Financial Market Liberalization and the IMF and World Bank”

Philip F. Bartholomew, *Office of the Comptroller of the Currency,
U.S. Department of the Treasury*

“International Financial Institution Reform”

Daniela Klingebiel, *Financial Sector Strategy and Policy Group,
World Bank*

“Globalization, E-Finance, and Changes in Financial Services
Markets: Implications for Developing Countries”

Jan A. Kregel, *United Nations Conference on Trade and Development,
and Levy Institute*

“Can European Banks Survive a Unified Currency in a Nationally
Segmented Capital Market?”

4:00 P.M.

CLOSING REMARKS AND ADJOURNMENT

Speakers

WYNNE GODLEY

Senior Scholar, Levy Institute

The performance indicators of the U.S. economy have been extremely favorable for the last 10 years, and particularly for the last four. Still, I have argued for the last two years that certain features of the economy render it unsustainable. It is like a magnificent building built upon dubious foundations. It is impossible to say at what point fault lines will appear. But I am prepared to state rather positively, and to document my reasons why there cannot be another 10 years like the past 10 years without a major change of policy.

Some features of the U.S. economy of the last 10 years, and more particularly the last five years, are unique. They make the recent period of expansion completely unlike any other period of U.S. postwar expansion. Consider, for one, the general government deficit, which was normally positive. The period of expansion actually began in 1991, but it begins to show up in 1992, and from that time on we see an unprecedented move into surplus, which is only previously matched in 1955 for a brief period.

The Congressional Budget Office in a recent publication produced a new table that shows the standardized or cyclically adjusted public sector deficit. According to that data, less than half of the improvement was the result of the fiscal stance. In other words, the improvement is not just the result of the effect of the expansion on the budget; something approaching half of it is the effect of the budget on the economy. (It is important to mention that one must be careful how to treat inflation. Some of these surpluses and deficits were the result of very high inflation during certain periods.) So, one unusual feature is that the recent expansion has taken place not withstanding a continuous and growing hemorrhage

from the circular income flow into the government surplus.

Another interesting feature regards the balance of payments. Of interest is the fact that the balance of trade in manufacturers tracks almost exactly the deterioration and the movement of the balance of payments as a whole. Manufacturing output measured in terms of value added has fallen to 13 percent of GDP. An important corollary of the deterioration in the balance of trade has been the deterioration in the net asset position of the United States, which has moved to about 22 percent or more (negative) of GDP at the end of 1999. One of the consequences of that is the net flow of property income out of the United States. The flow of property income remained positive for a long time because, for reasons never fully explained, the rate of return on foreign investment by foreigners was much lower than the rate of return on direct investment by Americans abroad. Thus, this flow remained positive long after the net asset position became negative. But it has now moved. The net rate of return on the net assets stock is in excess of the growth rate and is now deteriorating rapidly. The point is that it is strange to have the longest period of expansion in history taking place against a background of a deteriorating rate in balance of payments and improving public sector finances, so that both things are bleeding the national income flow.

Another unusual feature is the ratio of total private expenditure to total private income. Expenditure is rising dramatically faster than income, a condition without which the expansion could not have taken place. In the recent period expenditure actually exceeded income by large and growing amounts. This could only have happened if borrowing also grew. The data show that the record private sector deficit is matched by a record net flow of lending in real terms to the private sector.

This flow of lending is itself unsustainable. The debt-to-income ratio cannot rise forever. There are both institutions and individuals that are vulnerable to a downturn of income or of assets. During this last year, however, the burden on households actually fell slightly. This was due to the cut in interest rates in 1998. Had that not happened, there would have been a continued rise in indebtedness, which by now would have reached a record level.

The Congressional Budget Office projects a continued budget surplus and continued economic growth. But in order for this to happen the private sector deficit has to continue to rise, and net lending has to continue at a higher level than it has reached already. We are already at a record for the level of debt relative to income. Yet, it must go up by at least a third over the next five years if these projections of economic growth and the surplus are to be met. Some say that the rise in stock market and other asset values has been so enormous that even the rise in indebtedness on this scale still leaves the net worth of households looking very high.

In reply to that, it must be noted that the service of debt has to be made out of income. A number of lending firms have recently been criticized, and justifiably, for making loans to people on the basis of the asset value of their homes, without any regard to their ability to pay out of income. The point is, there is a limit to borrowing. It may be set by net asset value, but a more decisive constraint is when income is inadequate to pay for the service of debt.

It is also worth noting that businesses account for half the growth in debt over the last nine to 10 years. There is a link between businesses and households. Households have not only been borrowing on a very large scale, they have also been realizing equity on a very large scale. They have only been able to realize net equity as a sector because firms have been net purchasers of equity, and firms have only been able to be net purchasers of equity by increasing their borrowing.

The economic boom can easily go on for another 18 months. But when the flow of lending or borrowing collapses, what will be required is a total reorientation of macroeconomic policy. It will require a reinvention of fiscal policy on a very large scale. It will require a reversal of the deterioration in the current account balance. In order to reinvent a stable future, there must be a balance between the growth of domestic demand and the growth of net foreign demand. To have sustainable growth in the future, there must be an expansion not only of domestic demand, but also of net export demand.

THE HONORABLE BARNEY FRANK

Member, U.S. House of Representatives

Most economists, and certainly people in the financial community, overwhelmingly support globalization in the economy. Thus, there is a frustration on the part of these people with the unwillingness of Congress, and many Democrats in particular, to be supportive of globalization. As one of those resisters, I would like to explain my position and what it would take to win over myself and others in Congress.

Support for globalization is essentially based on the notion that if capital is free to find the places where it can make the most money, all will eventually be better off. This is the view held by the International Monetary Fund and other institutions that pressure countries to remove restraints on capital. But globalization does two things. First, it does increase wealth. That is, the world as a whole is wealthier. But globalization also exacerbates inequality, particularly within countries. The United States is an example of a country that has experienced increased overall wealth, but that has unequally distributed that wealth.

Some would ask why members of Congress are hung up on inequality. They would argue that so long as everybody is getting wealthier, what difference does it make if some people are getting a lot wealthier, and some people only a little bit wealthier? In reality, things may get better for even most of us, but for some of us they can get much worse.

Those people who argued that the North American Free Trade Agreement would create some winners and no losers could not understand the opposition of some in Congress. Some of these people now acknowledge that globalization creates both winners and losers in the United States. It may be that it does create more winners, and that the total winnings outweigh the losings, but that is of less comfort to the losers than some people in the financial community seem to think.

Alan Greenspan commented in an April 1999 speech that trade created some winners and some losers, and that those in America who are better off are made better off yet. However, the people who are worse off—those with little education and few skills—are much worse off because their jobs are the ones that are going overseas. Greenspan said that he understands that some people are losing their jobs in the industrial sector, but they should understand that what is happening to them is part of the process of creative destruction. Well, those involved in political campaigning do not want to tell a garment worker who has lost her job at the age of 52 that out of the economic wreckage of her life will come new economic activity that will ultimately bring more prosperity. Greenspan concluded in his speech that we must not allow our inability to help the losers hold us back from an embrace of globalization. That is the key policy issue for America. Many in Congress do not believe it is an inability—we believe it is an unwillingness, a lack of political will.

Those of us in Congress who appear to resist globalization are really saying that we are prepared to go along with this as long as it is done in a way that alleviates the negatives. The problem is that America has gone forward with globalization while cutting back on the safety net. A smaller number of people who are employed today have health insurance than did full-time employees in 1993. When people lose their jobs to the processes of globalization they are dropped not only into lower-paying service jobs, they are also dropped from health insurance.

There is also a negative international aspect to globalization. To some extent one can only win the competition for capital by undermining people's efforts to gain equality or to promote the quality of life. A number of people argue that any effort to regulate the movement of capital by government, even the volatile, short-term capital that clearly contributed to the problems in 1998, would be a terrible

mistake. Read the debates on the establishment of the Securities and Exchange Commission in the 1930s. The Securities and Exchange Commission is, after all, government regulation of the core function of capital. And yet, most people would agree that it has worked rather well and that we are better off with a Securities and Exchange Commission than without. When businesses tell governments that they are leaving for another country with lower taxes, fewer regulations and such, then countries will react by taxing capital less and reducing worker protections and environmental regulations.

Those in Congress who appear opposed to globalization simply want protections for those who will lose out, such as universal health care for those who lose jobs with health coverage. There must be policies that promote equality. It is unfair to support globalization so the rich can get richer while those in the lower economic echelons lose out. Conservatives, and a number of economists, have argued that we cannot adopt such policies because they would harm the economy. Well, it was once argued that if unemployment got below six percent, then inflation would result. That has been proved wrong and many similar ideas are also wrong. It was said that raising the minimum wage would harm the economy and put people out of work. It has not happened. And productivity did not decrease when taxes were raised on the rich.

What is needed now is a process that supports globalization and technological change, but that also supports both domestic and international public policies that alleviate the negative effects of globalization.

There is now gridlock in the making of economic policy. From 1945 until the early 1990s there was a center-right consensus in America that was able to support an international economic policy that essentially consisted of removing restraints from capital and opening up financial institutions. The underlying goal of this coalition was to defeat communism through the spread of capitalism. But

the coalition has broken down. The demise of communism has revived isolationism, especially in the Republican Party.

On the left, what has happened is that America is no longer so big that it can ignore the effects of international competition on Americans. Thirty years ago few Americans were worried about the impact of trade. But the economy is now more integrated with the world, and trade has had a significant effect on American manufacturing. It has eroded the manufacturing industry while building up other industries. On balance, the country is better off, but very few people live on balance. Most are either here or there. The “theres” are very unhappy, and mad people are generally more effective politically than happy people. Every politician knows this.

This means that the losers, even though they may be smaller numerically than the winners, have the power to say no, especially since many come to us politicians with the appropriate moral credentials. These are hard-working people who are suddenly hurt economically. In a rich country one cannot tell them that is simply the way it is. This country has resources to help them. What it lacks is the political will. This has led to defections on the left so that there is no longer political support for a kind of international trickle-down policy.

The only way a coalition can be reassembled that fully supports America’s integration into the world economy is through a center-left coalition that would support the mobility of capital, but understand that it comes with negative side effects. What is then needed is the creation of a set of public policies that free capital, help the poor countries, and promote domestic safety net programs and international environmental and labor rights programs.

H. ONNO RUDING

Vice Chairman, Citibank

The Consolidation of Financial Institutions: On a Global or National Basis?

Today I will speak on a topic with which I deal daily in my current capacity, and that I also have dealt with in a different way in previous capacities, namely, the consolidation of financial institutions and, in particular, whether that consolidation will occur on a global or national basis. I will begin.

Motives for Bank Consolidation

There are several valid motives, in both theory and practice, in favor of bank consolidation by way of mergers or acquisitions. (I lump these methods together although they play different roles.) One motive—sometimes a very obvious one—is the need or desirability for a large capital base. Capital is much more relevant to the business of banking than to growing potatoes. A large capital base serves as a buffer to absorb losses and, therefore, provides customers with confidence in the institution, a feeling that for banking is vital. The benefit of a large capital base is clear in the case of Barings, which, leaving other things aside, could not absorb a loss of £1 billion. If such a thing happened to Citibank, operations could continue almost as normal because for us, £1 billion is a small percentage of our capital base.

A second motive for consolidation is customer growth—as customers undertake larger and larger deals, the bank frequently has to offer larger financial commitments in order to stay in the race for those customers. When legal lending limits are in place, they often are related to size and capital stock. Even without legal lending limits, however, a large capital stock can assist in a bank's prudent behavior. The idea behind diversification is that you must not put too many eggs in one basket; a couple of additional eggs means something different when there are hundreds of eggs in total than when there are five.

A third motive for consolidation is perhaps a more recent development, having occurred only during the last eight to 10 years, namely, the growing cost of technology and communication. These investments are necessary and, although they can be delayed, must eventually be undertaken. In relative dollar terms, this factor bears more heavily on mid-sized institutions, because frequently the total size of the investment is the same; a large institution has a broader revenue base to absorb the extra cost.

A fourth motive is the flight to quality, especially in uncertain times. An example is what happened in Japan during the so-called Asian crisis. In Japan, which was *not* the heart of the crisis, there were long lines in front of Citibank's Tokyo branch. These lines were made up of people who wanted to transfer their deposits from the top Japanese banks to Citibank, not because we were more intelligent, but because we were the only non-Japanese institution in town. Rightly or wrongly, these customers no longer trusted their own largest and top banks and came to Citibank. This was a flight to quality that was related, in part, to size, which in the minds of many people equals quality.

The factors influencing consolidation that I have highlighted so far apply not only to banks in the United States, but around the world. At least in the case of the OECD countries, especially in the United States, Europe, and Japan, these factors work against medium-sized financial institutions, and have resulted in a growing number of them either merging with one another—in which case they are still in operation, but no longer medium-sized—or being acquired by larger banks. What remains, almost by definition, are a smaller number of very large institutions, plus a number of small ones—boutiques that have specialized services and to which all of my arguments do not apply: capital is irrelevant, because they are advisors; size is irrelevant, because their business is dependent on a few high-quality individuals; etc. These specialized banks do well if they provide a good service and are not affected by the factors I have

mentioned. But for the group of banks in between, these factors apply. I have seen them apply in Germany, in the United States, and in many other countries. Whether it is good or bad, it is probably unavoidable. On balance it is good.

A fifth motive for consolidation is to overcome weakness. Many mergers and acquisitions are undertaken to increase or maintain strength. Expansion is positive if implemented well, but a large number of mergers and acquisitions are based on what might politely be called defensive motives, that is, motives based on weakness. Some institutions that can no longer independently survive either decide themselves or are forced gently (or less gently)—by the market or by their governments—to look for a bigger and stronger partner.

Bigger in banking or insurance is not always better.¹ There are a number of good arguments that big can be better than medium-sized. There are, however, some disadvantages to being big, such as problems of span of control of management, a problem not limited to the banking sector. Evidence of such problems can be seen in a number of mergers and acquisitions that, if not outright failures, are at least not successful. It cannot be proven that these institutions are better as a result of the merger or acquisition; we must be selective and not automatically say that consolidation is always useful, necessary, and great. Implementation is at least 50 percent of the consolidation process. Strategy—the decision itself—is important, but you can spoil the game later by not having optimal implementation and integration of institutions.

There are enough examples in the United States, Japan, and elsewhere that illustrate this point. In Japan, a substantial number of mergers have been announced among already large institutions in order to make them almost mega-sized. Such an

announcement is good news when it is made, but if, for example, it is combined with a statement that it may take up to three years to fully implement the merger, the consolidation probably will not help the firm much. Such a long period of time means that the firm is effectively paralyzed, creating risk, and resulting in a weakening rather than a strengthening of the firm. Was the idea to merge wrong? No. Rather, the implementation was wrong in that it took too long. If consolidation occurs, it has been my experience over many years and in different countries that it should be done rather quickly.

Cross-Category Consolidation

My second point about consolidation deals with the motives and developments related to the consolidation of financial institutions across types of institution, such as when a bank merges with an insurance company. When such a consolidation takes place, there are two, three, or even four pillars under one roof: commercial banking, insurance, investment banking, and asset management. Such a consolidation results in a financial conglomerate.

Apart from the general motives that I have already mentioned, there are several specific arguments in favor of cross-category consolidations. First is the ability to sell a combination of financial services to one customer or individual. Providing such service is not easy. Many hours of my day are spent on doing so—not locked in a dark room talking with bureaucrats, but in the marketplace. Cross-selling is never 100 percent successful; it takes some time, but, in our case, it is already reaping many hundreds of millions of dollars of extra revenue per year. Granted, Citigroup is a large institution, but even for us that is quite something.

The first motive, then—the ability to combine the products of different kinds of institutions—is an offensive one, a desire to expand. The second motive, equally important, but entirely different from the first, is defensive, namely, the desire for the institution to diversify more fully: diversify its

¹In Japan, Korea, and Scandinavia, as well as OECD countries in which the banking and insurance sectors are similar, many of my remarks apply almost identically to insurance companies.

businesses, activities, and risks, because financial matters are always based on risk. This is not diversification to eliminate risk—that cannot be done because then you are not in business—but for the overall institution, not the individualized units, to become less vulnerable to volatility, shocks, risks, and, maybe, to mistakes on our part. These volatilities frequently are not fully correlated and, therefore, the combination makes the overall institution more stable, more diversified. This might be considered defensive, but it is very important and allows the institution to be less dependent on trading in the stock markets, or less affected by an Asia crisis, and so on.

There are, however, several counterarguments to this kind of consolidation, irrespective of country. When apples and oranges are combined, they may be financial apples and financial oranges, but they still are different from one another, a fact that sometimes causes confusion. After I left politics, I was on the board of the largest Dutch insurance company, which decided to merge with one of the large Dutch banks. By coincidence, I was the only banker on the insurance side. I said, “My friends, be very careful. We all talk about guilders, but one person’s guilder of risk is not another person’s guilder of risk; it is entirely different, although you think it’s the same.” They said, “No, no, no, we are intelligent people. We will learn that.” Years later they told me, “You were right.” They did very well, but, they said, it took them a long time to understand that a guilder of risk in banking is not a guilder of risk in insurance. It sounds simple, but it is not that simple in practice. There is, then, the risk of disregarding differences in risk. Nobody is perfect, nobody can understand and control everything. Management makes wrong decisions and mistakes because they do not always fully understand what they are deciding when it is related to a business that is new to them.

A related risk is associated with perceptions of those who do not like conglomerates, even when they are limited to financial institutions. In this case, there is a risk that consolidation will lead to a lower, rather

than a higher, price-earnings ratio of the shares. Such a case is tragic, because part of the whole fund is gone, and a point I am willing to take into account.

Also related to conglomerates—whether they are a bank-insurance, all financial services under one roof, or one holding company—is overall size. Citigroup is the largest example of that in the world. It is not unique, but it is by far the largest because it has a huge commercial bank, a huge investment bank-broker, Salomon Smith Barney, and a huge insurance company, Travelers. The bank is unique in that it has both a large corporate bank and the only almost-global retail bank. The only aspect in which Citibank is not the largest, and does not want to be the largest, is in the size of our balance sheet, the size of our assets. We leave that to Japanese banks; that is not our aim. Activities should only be undertaken if they are profitable, not simply to be large in the way of assets.

I admit it is too early to say whether the positive arguments, the pro motives, for this kind of cross-category merger, have worked well, although they appear to have done so. It took some time to get the elephants to dance together because, as you know, elephants are not very elegant dancers and it takes some time to train them. For Citibank, both arguments—the offensive motive of cross-selling and the defensive motive of diversification—were vital in bringing this about. The main motive was not to grow bigger, because at Citibank we already could do large transactions; with the merger, we were able to obtain the other advantages.

All-finance institutions have been made possible by the relaxation of restrictions against such mergers and acquisitions. In the United States, such consolidations were heavily limited by the historically mistaken Glass-Steagall Act of the 1930s, and the Bank Holding Company Act, which was not a mistake, but provided a number of limitations.

These laws were still in place when Citibank and Travelers announced their merger, but we were able to complete the merger thanks to the deep insight of U.S. regulators, mainly the Federal Reserve System,

which had undermined existing laws. U.S. regulators made the merger possible by their interpretation of the Bank Holding Company Act and, to a lesser extent, the Glass-Steagall Act. Until now nobody has followed Citigroup's example, but I expect there will be others.

Cross-Border Consolidation

The next chapter of my story is about cross-border mergers, that is, between institutions in two or more countries. This is a more complex means of consolidation. Again, there are general motives, pluses and minuses, for such consolidations, and some very special aspects.

Briefly, some positive or stimulatory aspects. In the European Union, or, to be more specific, in Euroland (only those countries that participate in the common currency, the euro), the creation of the new monetary unit is an enormous stimulus that favors cross-border mergers. From a legal regulatory point of view, such mergers remain extremely complex when different countries and currencies are involved, with all the obvious risks. An institution is no longer "protected" by the shield of its country's currency. Competition grows as a result, which in turn drives consolidation, because many more mediocre, medium-size institutions can no longer survive profitably. European Union practices favor more cross-border mergers of institutions within the EU than between institutions in the EU and other countries.

Other circumstances in which cross-border consolidation is beneficial relate to institutions that are large in their home country; if they want to expand, they can no longer do so at home, either because the antitrust rules do not allow it, or because they do not want to put all of their eggs into one basket. They therefore may then wish to expand across borders.

Another different but equally valid motive is that institutions may have large customers that they wish to serve worldwide. In order not to lose such customers, they must either grow abroad organically,

which is not easy, or make acquisitions, which goes faster.

Sometimes institutions want to expand outside their own country because banking there is more profitable: the market is less overbanked than at home, the margins are better, and competition may be less vehement. This might have been a motive for French banks, German banks, or Swiss banks, as it is not easy to bank in those countries because there are so many competitors.

But despite these valid, positive arguments, in practice there are still enormous handicaps to such consolidations. Even though we constantly talk about globalization, cross-border mergers for banks, insurance companies, and other financial firms are more difficult to achieve than domestic ones. Apart from the language and the culture, there are tax complications (such as in Europe) or legal ones (such as co-determination of workers for firms with employees in Germany). There also may be strict bank regulations and currency complications. All of these factors are still national. They lead to extra barriers, complications, and risks that make cross-border transactions more difficult to achieve than, say, a merger of two identical banks that happen to be in the same country.

A more explicit complication that varies by nation is the case of countries in which approval from national authorities is nonexistent, very reluctant, or conditional. There are sometimes understandable national and sovereignty arguments made, which is the case in many countries around the world.

Things, however, can change. France, for example, allowed a large foreign bank to acquire a rather large, important French bank, CCF, which now will become a British institution. This is a different, that is, more liberal attitude than 10 years ago. In Japan it did not matter whether anybody would have been willing to touch a Japanese bank, as it was not allowed. Now, because of weakness, they are allowing foreign institutions to acquire some Japanese banks, but only those that almost went under and

needed taxpayers' money. The government now is trying to get rid of those institutions. The situation in Korea is almost the same. United States authorities have not always been 100 percent forthcoming to foreign banks either, although, to judge by these banks' acquisition success rate, I think there has been no serious reason to complain. In the 1980s, the British and the Dutch were able to abort the dangerous idea of a fortress Europe—of creating a kind of barrier around the European Union against acquisitions and mergers, particularly in banking.

Sometimes there are quite different obstacles. All things being equal, it is frequently more difficult to finance large, cross-border mergers. When cash is paid, the matter is easy, but when payment is by an exchange of shares the merger frequently does not work because the acquiring bank may be unknown in the new country (because the shares are not listed in New York, for example.).

The best approach to making cross-border mergers possible is a general principle that does not apply or limit itself only to banking, namely the so-called national treatment rule. This is fundamentally different from the reciprocity rule previously used in the financial sector, which does not work sufficiently well in practice. The national treatment rule is fine, provided the rules apply both ways, between, say, the United States and Europe. That is, a bank from Country A that wants to become active in Country B is treated by Country B in the same way that it treats a bank from within country B. Such treatment is fair. A bank cannot expect more, but if a country provided less, then it would be discriminating against cross-border transactions. The national treatment rule is being roughly applied now by the United States and Europe, but not by many other countries.

Cross-border consolidations between banks or financial conglomerates have been very limited, although I expect that they will grow. There are already important, recent examples, such as the Deutsche Bank acquisition of Bankers Trust, HSBC's acquisition of Republic National Bank of New York,

and the examples I mentioned in France, Japan, and Korea. In the Nordic countries there have been quite a number of cross-border mergers. For institutions in the Netherlands and Belgium, consolidations have been easier because of the lack of language barriers; several cross-border mergers or acquisitions have taken place that will work well.

There also are many cases of acquisitions of banks in emerging markets by banks in the OECD. Citibank acquired a majority stake in the largest and healthiest corporate bank in Poland. But in most cases, these are examples of weak domestic banks in what frequently are countries that have been weakened by crisis. A domestic bank, which has been, in many cases, bailed out by the government to avoid its going under, is sold. The host country wishes to give the bank a strong new basis for survival and so may require that it be consolidated by another bank that promises to inject capital and good management. Such an acquiring institution is frequently based in either the United States or Europe.

On balance, I feel that a substantial cross-border consolidation of the financial sector would be desirable. Although the practice proves sometimes the opposite, in most cases the institutions that remain after consolidation are strong, large, and aggressive. They increase competition. In the meantime, many more borders are opening wider. Europe is one good example. NAFTA provides another example of enabling competition from institutions headquartered abroad.

I therefore think that the various potential dangers are, in fact, not a motive to block the drive toward consolidation. For banking and wider financial institutions in general, the world is almost global, although exceptions exist (such as Russia). In most cases, however, consolidations indicate an advance, albeit with some conditions and restrictions. Cross-border consolidations are (a) a good development, and (b) almost unavoidable given that they are an important component of a much wider globalization movement.

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Today I am going to focus my remarks on what we consider the most interesting and compelling policy issues in this debate about the architecture of the international financial system, specifically, those issues most germane to how we deal with the challenge and risk posed by global capital market integration and how best to reduce the risk of future sovereign financial crises.

You are meeting at a time when the world outside the United States is looking much more resilient in the face of crisis than many would have thought possible two or three years ago. Although the risks are still compelling, they are now fundamentally different. Emerging-market economies are recovering on a remarkable trajectory—more rapid than Mexico's in 1995—with positive or even accelerating growth in most places. The financial markets are again willing to finance marginal borrowers, with even the most acute pockets of distress having found some sort of bottom. There has not been the generalized retreat into protection or any broad-based reversal of capital-market integration that many had thought was at risk.

This drama has provoked an interesting, useful debate about whether the sources of vulnerability in the system are fundamentally global/systemic or local, rooted in various weaknesses and policies at the national level in emerging market economies. Despite the positive experiences of the last three years, a politically correct view of the crisis is emerging. It claims that this was a crisis of global capitalism, that virtuous innocent governments were the victims of panics induced by maligned market forces; that the IMF and the Treasury were arsonists pretending to be firemen; that the policy advice imposed gratuitous, avoidable pain on the economies affected by crisis; that an unacceptable degree of moral hazard was introduced into the system, by virtue of the

scale of the official packages we mobilized; and that global economic and financial integration has to be slowed or reversed and markets constrained if we are to save the system.

Our view is a bit different, not in the sense that we think the system is terrific—I think we share the opinion that we need a more resilient, stronger system—but because we see the causes of the crisis as more complex, with more promising solutions in different areas.

The causes of this crisis were both systemic and local. They were local in the sense that national authorities were behind the curve in understanding and had the capacity to address the risks that accompany financial market integration. They were local in the sense that weaknesses in national financial systems, and the perverse incentives used to attract short-term capital, left a large number of systemically significant economies acutely vulnerable to stress. They were local in the sense that large amounts of domestic saving went to finance impressive bubbles in various types of asset markets. And they were local in a sense that everywhere the crisis hit acutely, governments were in the midst of leadership succession, facing elections, or otherwise constrained in their capacity to deliver credible policies.

But the problems in the system were also systemic. They were global in the sense that a combination of secular trends and market and transitory factors induced a substantial flow of mobile capital into these countries—more, in retrospect, than was prudent. They were global in the sense that a combination of technology and a remarkable capacity for leverage in the system combined with the natural herd tendency in markets to allow contagion to happen more quickly, with more force and differentiation than would have been the case in the past. They were global in the sense that the technology of risk management in the private financial institutions had substantially lagged behind the complexity of risks. The risk management systems in place acted at times to magnify shocks and accelerate their transmission.

And they were global in the sense that the institutions at the core of the system, the international financial institutions, were inadequately equipped, at least at the outset, to respond with the necessary speed and force and wisdom.

This proved to be what Secretary Rubin would call “a combustible combination of factors.” When things fell apart, the resulting crises were more acute because of the scale of the imbalances that had built up, the complicated nature of vulnerabilities those had masked, and the speed and force in collateral damage that today’s capital markets can induce. Where national vulnerabilities were material, the deterioration in the external environment in the form of contagion induced obvious panic as domestic and foreign investors rushed to hedge exposure, contributing to downward pressure on exchange rates and putting greater pressure on bank balance sheets, leading to a vicious cycle.

What should be done? Our capacity to reduce the risk of future crises is complicated by several realities. First, we live in a world of sovereign states; we do not have the capacity to compel countries to take action ahead of the curve to reduce the risk of falling off the cliff. Second, markets are inherently vulnerable to shifts in sentiment; we do not have the capacity to eliminate that basic feature of markets unless we want to close countries off to markets or try to pull risk out of financial markets as a whole. Third, our understanding of the sources of financial crises is rather poor and rudimentary—the science is not very good—which leaves us with a limited capacity to predict with any confidence what it is that produces crises, when they will happen, and where.

There are, however, several key areas where policy is particularly relevant and where the focus of reform should be directed. I have chosen to mention five because they are the source of most of the existential debate among policymakers and economists. First is finance money: on what scale and on what terms should we be prepared to finance countries in crisis? Second, what should be the policy framework

we support with finance? Third, what exchange rate arrangements should emerging markets, and small open economies in particular, pursue? Fourth, how best can we induce policies at the national level that will make countries less vulnerable? Finally, what degree of integration with capital markets is appropriate for emerging market economies, and what sensible consensus should shape the scope for capital controls in that context? I will discuss each of these briefly.

First, money. The most interesting debate today is how to deploy financial resources in a crisis. The obvious challenge is how to shape a capacity to respond to financial crises that occur on a much larger scale than in the past while at the same time minimizing the moral hazard risk that is inherent in intervention. We have tried a three-part approach.

The first part was to give the IMF substantially more resources. In the fall of 1998, the IMF received about \$100 billion in addition to their previous-quarter resources. Half of those resources now reside in the emergency lending capacities of the IMF. This can be considered both a meaningful and a trivial amount of money. It is meaningful because it leaves the fund with a balance sheet more akin to that of a small regional bank than a global lender of last resort; this is by design, and we think it is appropriate. This capacity is large enough to make the fund relevant on a broader scale than was possible in the past; it can fight a several-front war, to use the Pentagon metaphor. But the amount of funding is not so large that by its existence it will leave governments or investors with a false hope that official finance will be available to insulate them from the risk of crisis. That is a difficult balance to strike, but we think the current balance is closer to the right one.

The second part was to try to fundamentally change the terms in which these resources are deployed in order to minimize the moral hazard risk inherent in any quasi-insurance scheme. We have done that in two ways. First, by ensuring that when the fund puts large packages on the table, it does so

at a penalty rate substantially above normal borrowing costs and at much shorter maturities; this provides borrowers with an incentive to return to the private markets as quickly as possible. We have also set a graduated threshold for activation on the money, so that the major packages cannot be undertaken without a broad international basis of support. We cannot unilaterally move the fund to do a package on the scale of Korea or Brazil.

The third part was to try to think about more appropriate ways to treat private claims on sovereigns. In Korea and Brazil, as a condition for our assistance, we did a number of things to try to induce a collective response among bank creditors to maintain positions, and in some ways to extend maturities. In the very different cases of Ecuador, Ukraine, and Pakistan, we have made bond restructurings a condition for our support. This has given us a more diverse set of instruments for responding to crises; using the market, where appropriate, also helps to reduce moral hazard.

This approach has left few people satisfied. Some advocate creating something like a global lender of last resort with a greater financial capacity than the IMF has now. There are many who believe we should systematically invoke comprehensive or partial standstills in the context of IMF assistance as a way to ensure that official finance does not simply finance the exit of private investors. We are in a sort of uncomfortable middle, but one that reflects a pragmatic calculation of how best to balance these various risks.

The second area of debate is in the design of policies. If you look at Stiglitz, Krugman, Sachs, Feldstein, Kissinger (not an economist, but a force, in some sense), I think their almost universal view is that the IMF had the wrong balance, gratuitously applied an austerity package, and was expansively, intrusively conditional. We have a different view. We have had little impact on the debate.

The key issues are how to design policies that are best suited to bring about recovering confidence

quickly, particularly in situations where the crisis is rooted not in a classic current account balance, not in a classic fiscal imbalance, and not in a classic stabilization challenge, but in a capital account crisis or a liquidity crisis, unleashed by the forces of investors rushing for the exits as these balance sheet problems come to force. The debate is about the right aspiration for policy changes in crisis, the right mix of macroeconomic policies in that context, the right balance between *ex ante* and *ex post* conditionality in the system as a whole, and the appropriate ambition for the scope of conditionality outside the area of the design of the monetary or fiscal policy framework.

Our view is that there are no pure liquidity cases out there, no purely innocent victims of contagion, and that any significant circumstance of financial distress is necessarily rooted in some national vulnerability that will inevitably require some policy change if confidence is to be restored and a more durable basis for recovery put in place. Consistent with these ideas, our view has been to require that financial assistance be accompanied by a very forceful set of policy conditions tailored to meet the specific circumstances at hand. We have tried to pull the scope of conditionality where appropriate in order to address financial sector restructuring problems where there has been a systemic issue. We have tried to use the opportunity to put in place a broader mix of institutions that helps the financial system and the economy as a whole to function better in the future. We have tried to force the Fund and the World Bank to address up front the design of social programs that support employment, protect the poorest, and support adequate investment in basic needs, even in the time of crisis.

It is very difficult to find the right balance in these cases. Our approach leaves us continually vulnerable to the criticism that our conditionality is either excessive in ambition and scope or fundamentally too weak. I think we have the right level of aspirations, although we have convinced few of that.

Of course, reality is looking pretty good in Asia and Latin America now, but that hasn't cured many of their convictions.

The third area of debate is about exchange rate regimes. For decades, the system among the major currencies—the dollar, yen, euro—was the dominant issue of debate among the G-7, but the current system is likely to endure for some time. We see no alternative regime on the horizon that offers the prospect of any improvement over the present. The real frontier of this debate is emerging market economies, which now face the uncomfortable choice between living with the substantial swings inevitable in a flexible exchange rate system and a world of open capital markets, and accepting the substantial sacrifices and the domestic policy inflexibility inherent in fixed regimes.

There are no universal solutions to this problem. In a world of sovereign states, these countries will decide their own way. What we think is critically important is that countries move from the untenable middle of fixed-but-adjustable regimes, in which there is no subordination of monetary policy to the exchange rate objective, and the impression of fixity in the rate acts as a sort of implicit guarantee that encourages investors to come in and domestic residents to borrow without hedging. Every country in which regimes were at the core of a crisis during the last five years occupied that untenable middle. We see more promise in what are referred to as “corner solutions.” We are not going to live in a world in which people occupy the pure corners of a pure float or a currency board arrangement or monetary union or dollarization, but there is a lot of room at the corners for better, more resilient regimes than the ones that they occupied.

The fourth area of debate is about reducing national vulnerabilities. Ultimately, the only promising ideas are those that try to figure out ways to induce countries to put in place policies and institutional arrangements at the national level that leave them less vulnerable. Nothing that we will be able to

do to the system as a whole will be as powerful as countries themselves building a much greater cushion against adversity.

There are two parts to this challenge. One is technological: how to figure out and design the right policy and institutions. What is the appropriate exchange rate regime? What are the key features of a more resilient financial system? What is the right debt management strategy? How do you build protections against liquidity risk? What type of institutional arrangements are going to make you less vulnerable overall? We have invested a lot of capital to promote the development of a global set of best practices—in banking supervision, corporate governments, insolvency regimes and accounting disclosure, and design of deposit insurance systems—all with the objective of determining a benchmark against which to guide policy and to evaluate the adequacy of policy in these countries.

That is relatively easy. The harder task is to design better incentives to induce countries to move in the right direction far enough, early enough, before they approach the edge of the cliff. We are fundamentally short of *ex ante* leverage and we do not have particularly good answers to this problem. Those we think provide some promise are disclosure, more effective surveillance by the IMF, a more systematic effort to deploy technical assistance to help countries that want to move, and designing conditionality in the Fund and Bank programs that can help support investments in these reforms. Our hope is that, over time, these will make a material difference.

Fifth is the great debate about capital controls and capital market integration. We are viewed as a sort of cowboy, as the great defenders of the hedge funds and the mindless advocates of capital account liberalization. But we are a little more pragmatic than that; we try to shape in the Treasury and the IMF a more responsible consensus that reflects a set of basic premises that are relevant to the “elephant in small ponds” problem—small, open economies in a

hostile world—or the “small boats in the stormy sea of hostile market forces” problem. The first point is the most obvious and simple: capital account liberalization strategies should be designed in a way that measures changes in the strength and pace of improvement in the domestic banking system and supervisory regime.

The second point is that it is fundamental to avoid incentives, such as those that were pervasive in Asia and in Latin America, that attract short-term capital, particularly through the banking system, and that may precipitate a broader collapse in the exchange rate and a rush for the exits. These perverse incentives were in the form of offshore banking facilities, Korea’s restrictions on long-term equity portfolio inflows, and Mexico and Brazil’s creative efforts to reach for dollar-denominated short-term capital in an effort to reduce borrowing costs, but at the cost of increasing the vulnerability of their exchange rates.

Third, we think these emerging market countries need to give greater attention to managing risks to the balance sheet for the country as a whole—not just to the sovereign, but to the corporate sector and the banking sector in the aggregate. This is easier said than done, but there is useful work under way.

Fourth, we think there is quite a good case for a much stronger set of prudential safeguards to limit excessive exposure by the banking system to exchange-rate movements through liquidity buffers, such as those Argentina has in place. These have more promise and will cause fewer distortions than the more popular, but rarely emulated, comprehensive controls on short-term capital inflows that Chile made famous but has now abandoned.

Finally, just to temper this, we still see little promise and quite substantial risk in the variety of proposals for comprehensive or partial standstills and broader controls on capital outflows in crisis as a means of buying time, although I am sure there are circumstances where these may have some value. Our view is that such measures will create a greater

degree of moral hazard in the system at the national level than exists now, and they are likely to complicate significantly the resolution of crisis by inducing a rush for the exits early and making it harder for countries to re-enter the capital markets. I think it’s notable in this context to recognize the fact that, with the exceptions of Malaysia and Russia, all of the economies affected by the crisis are now more open on the capital account and have a more even set of incentives across the capital account, than was true before the crisis.

So this is our agenda along with our biases. It has been shaped by a pragmatic appreciation of what is possible. It is not particularly dramatic or gutsy, but it reflects the recognition that the world we live in is integrated enough for small events in remote places to have dramatic consequences for the system, but not integrated enough for countries to be willing to compromise sovereignty on a significant scale, to cede it to a global central banker or global financial regulator, to renounce their currencies. We are not going to get to that point any time soon. This leaves us in the uncomfortable position of not being able to offer any fundamental reassurance about our capacity to significantly reduce the risk of future crises. But we may have learned enough to mitigate risk a bit and to make the prospects for bringing about a quick recovery much more substantial.

If I learned this lesson right, I think Minsky would say, “Therein lies the problem.” By offering the promise of a bit more durable safety net under the system, we simply created the seeds of a future crisis. But I think you can be a little optimistic. If you look at the composition of flows that are now going into emerging markets you will see that people have learned most of the lessons of the last war, because banking exposure in terms of the classic bank balance sheet exposure is declining and the type of exposure that is going in is more in the form of direct investment, equity, and bonds. But I would not want to leave you too reassured.

HENRY KAUFMAN

President, Henry Kaufman & Co.

I would like to address the current structure of the financial system and the reasons why reform is needed not only in the financial structure, but also in the official institutions that are part of the system. Before one can devise reforms, however, it is important that we first understand what has changed in the financial system that requires reform. There have been a number of changes over the past few decades, both in the United States and abroad, that must be recognized. One of these is the securitization of credit instruments.

Thirty years ago the volume of outstanding marketable obligations, such as stocks, bonds, and money market instruments, was quite modest compared to today. They now dominate the financial market. Such securitization tends to loosen the credit structure by giving greater credit access to many and by diminishing the surveillance over those particular obligations. Had it not been for securitization, the globalization of markets would not have been so rapid. We could not have had this enormous volume of international credit instruments unless the market was globalized through securitization. Securitization allows for rapid transactions across borders. It allows a myriad of obligations to be used for financing in both developed and developing countries. And while it is true that international finance has existed for centuries, in the past it was dominated mostly by bankers who made loans, and bond financing was not as important as it is today.

Globalization has also resulted in the homogenization of markets and of the way that people think about markets. Not long ago there was an American market view, an Asian market view, and a European market view. That has virtually disappeared. Today, financial institutions span the globe and within them are people of many different nationalities. The speed of communication puts everyone in touch with each

other instantaneously. As a result, there is now a one-world view of markets.

Globalization and securitization have also helped spawn contagion in financial markets. Certainly it is true that the impacts of the Great Depression spread from one nation to another, but the impacts are far greater today. What happens in one nation impacts others, both positively and negatively. No country today can ignore what is happening in another. When one has this potential of contagion, then asset allocation and international diversification become more difficult to pursue. If we rally, they rally. If we lower the market price, they lower the market price. An analysis I once did showed that 70 percent of the time when the American bond market drops, other markets also drop. So many have preached the importance of asset allocation, but how does one practice this amid globalization? This is a structural change in the financial markets that must be recognized.

Another important change that must be recognized is the ability one now has to measure the performance of a credit instrument by the week, by the day, by the hour. At any time one can know whether the value of an instrument has gone up or down. And this is true of not only such things as stocks but also of real estate holdings. There is this sense that values can be determined all the time. The result is that portfolio management focuses on the near term. Portfolio performances and achievements are reported every month or every quarter and quickly compared with others. And how dare a portfolio manager underperform in a quarter or half year? If one underperforms in a year, that portfolio may be shifted elsewhere.

And yet, it is an illusion that one can know the value of an obligation all the time. There is an illusion of liquidity—that one can measure the price of an asset and instantly liquidate it to get that price, that everything is transferable at the last price seen. Consider the third quarter of 1998, when very little was transferable at the last price. Even in the U.S.

government market, the most liquid market in the world, there were times when one could not transfer or sell an American obligation of unquestionable credit quality exactly at the last price.

Another change in the financial system is the enlarged role of derivatives. They have existed for a long time. But new variations have come onto the scene and their use has intensified. Derivatives were once considered risk-reducing credit instruments. That halo was removed starting in 1998 with the collapse of Long-Term Capital [Management], an organization that had nearly \$1.4 trillion in derivatives outstanding with a capital base of only two to four billion dollars. Those instruments could never have been used for risk-reducing operations alone. Derivatives are probably here to stay, but they do contribute to volatility in the financial markets, and it is doubtful that they contribute to stability in prices.

Indexation of portfolios also came on the scene in the last 20 years. Institutions, whether dealing with pension funds or other investors, are willing to accept a performance that is equal to that of the general market. One might think that there is nothing wrong with that, but it creates an unusual and interesting development. As more and more portfolios are indexed, those who do not follow and pursue indexation have a far greater impact on the market than do the indexers, because they have a greater impact on what is called the price.

Another change in financial markets is the entrance into the markets of new risk-takers. One of these is the household sector, whose involvement first took place in the post-World War II period. It became involved in the market by saving through the pension system, through life insurance companies, by having accounts in deposit institutions, by investing in a home. Some of these traditional activities continue. But the individual household is now a participant in mutual funds and a direct investor in equities.

The involvement of this sector has led to a democratization of risk taking and a broader sharing of risks. But this raises some serious questions

regarding the extent to which households and others should share that risk and what the problems will be if they do. In the United States, risk is being pushed more onto the saver and away from the financial intermediary. Years ago, the capital of the bank was at risk; when there was a financial problem, the depositor was protected. But now risk has shifted to a broader base, which has economic, financial, perhaps even political consequences. Indeed, one might argue that because so many households are now involved in the stock market, that market may be too big to fail. These household investors might force government to act to save it.

Also new is the quantification of risk. In the past there were not many prices for risk; today we have many—every day, every hour. And we have enormous computer power that is now used to model risk and estimate the probability of loss or gain. Nearly every institution models risk, but these models are based on historical data, which is helpful, but does not tell it all. Consider the case of Asia in 1998. Many institutions modeled the risks, but those models did not see the extent of the risk; and because computers give out probabilities up to five numbers after the decimal point, they give an impression of great accuracy. The accuracy of a number should not necessarily be taken for granted. When one is in a competitive financial market, one wants to do a lot of business. The more liberal is the interpretation of value at risk, the more business one does. The result is a tendency to fudge the numbers plugged into the model, and greater risks are taken.

Other dimensions of financial markets today need to be recognized. One is that the key decision-makers in finance are no longer in senior but middle management. Years ago, in the traditional institution, if a very large loan was requested by a corporation or a foreign government, the decision was made at the senior level, and often involved the president or the CEO. Today, a myriad of important decisions affecting such things as financial conditions, liability structure, and risk structure are not made by senior

management. These decisions are made by middle managers who do the trading in the stocks and bonds and in the derivatives business, who do the positioning, who do the underwriting. At best, senior management only oversees this.

Another important change that has tremendous repercussions is the massive consolidation of financial institutions. These control a myriad of diversified financial activities and have a larger proportion of the market share than they did years ago. This is not an American phenomenon. It is also occurring in Japan and in Europe at a rapid pace. Why this consolidation? One argument is that it reduces costs and allows institutions to become more profitable. That is understandable. A number of institutions did this in the early 1990s and radically reduced costs. But as we move through this decade and into the next, these consolidated institutions are likely to grow and the number of "independent" institutions will diminish. This is a phenomenon not only of financial institutions, but also of business corporations.

The creation of such institutions raises several questions. What is it that one wants out of a massive concentration in a market? In the long term it is price control. After all, why would one want to have a large entity if one cannot have an influence over price and therefore over profitability? This certainly creates problems for the role of government and for the impact on society. Can we continue to have an economic democracy in the United States, or globally, or is our vision of an economic democracy, which we have more or less had in this country, beginning to be blurred and defeated by this massive consolidation?

Consolidation also creates serious problems for monetary policy. As institutions consolidate and grow, they will become too big to fail. And whether the Federal Reserve says so explicitly, or suggests it implicitly, an umbrella of protection will be placed over these institutions. Only the smaller institutions will be outside of this protection and will be allowed to fail, which will put greater pressure on them and

lead to even more consolidation. Can monetary policy really operate well under this scenario?

Finally, there is another change that presents some interesting issues to the economy, to financial markets, and to the financial structure. In recent years the United States has witnessed a significant slowdown in the growth of government debt, while Canada is close to doing the same. And in Europe, there are constraints on deficit financing. There are several implications of this from a financial market viewpoint. A reduction in government debt, such as that in the United States, frees other participants in the private sector to become more effective demanders of credit. The result is that the overall growth of debt is not reduced; rather, it shifts to those who have access to debt. Statistics on the flow of funds show private debt going up dramatically, while U.S. government debt is going down. In the early 1990s, it was the reverse. There are several issues here worth considering.

Private sector debt is heterogeneous in credit quality and in maturity. Some of that debt has AAA credit ratings, some A, even more BBB, and quite a few now have access to the market but are below investment grade. This heterogeneity requires financial institutions that are very effective in credit analysis and in the allocation of credit to the private sector. We do not know how effective financial institutions are in such analysis because we have not yet gone through a full business cycle that would allow us to make a judgment. Only when we enter an economic slowdown and go into a recession will we really know how effective our institutions have been in allocating credit to private borrowers. It is not a problem when credit is allocated to the federal government. The debt is marketable and rated AAA.

This shift in debt from public to private is also an issue for the central bank when it has to make decisions on how to proceed with monetary policy. We are moving toward a more complex financial market, and the private sector is trying to quantify this. Meanwhile, monetary policy is moving away

from this quantification because targeting of anything has been lowered significantly. The central bank really does not pay attention any more to M1, M2, or credit growth and so on. It gives lip service to this, but that is all it is.

The dilemma today is that we do not have a cohesive approach to markets and to the economy. We do not have the great broad thinkers who are capable of synthesizing all of this into a broader theory that considers how it affects policy and how policy should then be implemented. This is somewhat understandable because we have gone through a long period of economic expansion, and because we have all become somewhat near-term oriented and specialists in a variety of fields. No one wants to be a generalist. It doesn't pay enough. The pay of a traditional economist is not rising. The pay of a traditional economist relative to a financial analyst is diverging significantly. The generalist who is a doctor, an M.D., does not get paid as much as a specialist.

Despite these many changes and the potential problems they present, no one really seems to want to modify the financial structure or the oversight of financial institutions very significantly. The bureaucrat in Washington defends the structure because it serves him well politically. The participants in the economy do not want to make waves when the economy has been performing this well. If one looks at the oversight of financial institutions, both domestically and internationally, there is no cohesive approach. There have been some efforts at cooperation, but they have been modest.

There is a great need to preserve the American system. It is the only one in the world that comes close to being an economic democracy—not a social democracy, an economic democracy. And the main objective of U.S. policy should be to preserve it, to nurture it, to move it along. We are in a period of transition where this is going to become more difficult. Yes, it is a role of financial institutions and financial markets to be entrepreneurial, but at the same time they must balance this with their great

fiduciary responsibility. Often, they do that quite well. The purist says, "Let the market do it." But we really haven't let the market do it before. We didn't in 1998. We didn't let the market do it during the Mexican financial crisis. We didn't even let the market do it in 1987. Government does play a subtle role in society. Without being completely intrusive, it should have a hand in maintaining this economic democracy.

DAVID A. LEVY

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Economic Disaster Ahead?

Along with a number of people who have been skeptical about a stock market bubble, I have fretted and wondered and fretted some more about when the bubble is going to burst. As I look back over my career, the worst forecasting errors I have made have resulted from either underestimating asset bubbles or underestimating their “wealth” effects on consumption. We now pay a great deal of attention to wealth effects and take nothing about the stock market for granted.

As many of you know, one of the worst things about being an economist is that when you attend various lectures and hear numerous speakers addressing an audience of economists for the first time, the same old economist jokes are told again and again. The one that drives me crazy is the one in which Harry Truman becomes frustrated with economists who keep saying “on the one hand . . . but on the other hand . . .” so he asks for a one-handed economist. As sick as I am of that joke, I could not help thinking about it.

In the context of today’s popular economic thinking, Harry Truman would be gratified to know that there are a lot of one-handed economists who are absolutely certain about everything that is happening in the economy. Not only are they one-handed, but they seem to be one-eyed—they see in only one dimension. They also seem to sport rose-colored monocles. These economists have played a major role in assisting what I will call the “stock market boom industry,” which includes brokerage firms, mutual fund managers, small investors, and the hosts of financial television programs. All describe the economy in the one dimension of technology and productivity. The basic message is “Welcome to the new economy, where breakneck

technological progress begets accelerating productivity, which begets faster growth, low inflation, full employment, soaring profits, spectacular equity appreciation, peace on earth, social justice, and the end of tooth decay.” There is nothing that will not be solved by rising productivity.

Those who complain about market volatility are told that they need to understand that this is the information age—things move fast, and if the heat is too much, stay out of the kitchen. “Don’t worry about interest rates rising because the all-knowing Fed will take care of everything. Rising interest rates are seen as a neutron bomb that can wipe out inflation while leaving stock market booms intact. Don’t worry about the exploding current account deficit—it is only the result of our economy being so wonderful that foreigners cannot get enough U.S. dollars and assets. If you think equity values are insane, it is just because you are either too simple-minded, too antiquated, or too unimaginative to understand the new economy.”

This pretty much sums up the one-eyed argument as I understand it. It is a seductively uncomplicated and appealing vision, but, of course, appallingly simplistic. It contrasts sharply with the vision of the man we honor with these conferences, who probably had the most complicated view of the economy—or saw the economy as being more complicated—than anybody I can think of. In my view, his vision is the most realistic way of looking at the economy.

It was Minsky’s insistence on remaining true to the evolving multidimensional, chaotic nature of human economic systems that prevented him from describing it as a simple set of mathematical equation, in the manner that is popular in our age. This alleged flaw brought him a great deal of criticism for being not rigorous enough in his analyses. Yet while leaving a great deal unspecified in his model, he allowed many aspects of our economy to behave or misbehave. In doing so he gave us a treasure trove of observations, insights, and conclusions about how

this unruly, changing organism we call the economy could behave.

The good news on productivity—partly legitimate, partly exaggerated—is important, but woefully inadequate for understanding our current situation and the dangers we face. Indeed, Minsky gave us tools for observing that our economy has become, over a long period of time, fundamentally much less stable. Furthermore, reversing the processes that got us to this point will almost inevitably be economically painful.

Specifically, today I address the following points: productivity in the new economy; the financial imbalances that evolved over the postwar period to make this economy financially fragile; why developing these imbalances was a boon for profits; how reversing the process will be destructive to profits; and finally, a comment about the global situation.

Productivity Growth

Is there a productivity boom in the new economy? The long-term potential for technology to increase economic output per worker is enormous. The technologies that we see unfolding before us—computer software, communications, robotics, bioengineering, medicine—each has an enormous, largely unpredictable potential of its own. For any of us to think that we can predict the combinations of possible applications of developments in these fields or how they may affect our lives over the next generation would be foolhardy. To forecast limits to technological progress and productivity growth in the face of these developments would be to join a very long tradition of folly, albeit one that has been maintained by a rather distinguished collection of people. For example, let me read you a few quotes:

This telephone has too many shortcomings to be seriously considered as a means of communication. The device is inherently of no value to us. (From an internal Western Union memo, 1876)

The wireless music box has no imaginable commercial value. Who would pay for a message sent to nobody in particular? (Attributed to associates of David Sarnoff, founder of the National Broadcasting Company, in response to his urging to invest in radio in the 1920s)

Who the hell wants to hear actors talk? (H.M. Warner of Warner Brothers, 1927)

There is no reason anyone would want a computer in their home. (Ken Olsen, founder of Digital Equipment, 1977)

Everything that can be invented has been invented. (Charles Duell, commissioner of the U.S. Patent Office, 1899)

Although I believe that the long-term outlook for productivity and technology is grand, what is happening right now? The productivity figures, taken at face value, indicate an acceleration in productivity since the 1980s, but there is nothing revolutionary or unprecedented in these gains. That is, the 10-year averages are better, but well below the gains of the 1950s and 1960s. Even the booming figure for the fourth quarter of 1999, which is over six percent, was almost routinely exceeded during the first quarter-century of the post-World War II boom and was exceeded quite a few times in the 1970s and even 1980s.

However, the productivity figures should not be taken at face value. There are many problems of understatement and some of overstatement. There is no practical or conceptual way that productivity gains can be measured when a significant proportion of output comprises products that are inherently different, on a year-to-year basis, than those that preceded them. For example, we cannot say how much more inflation-adjusted output is represented by a 2000 Dell 700-megahertz Pentium III with DVD, Zip drive, 30-gig hard drive and high-performance video

cards relative to a 1980 Apple II-E with a floppy drive. The Bureau of Labor Statistics has to come up with a measure, so some kind of a deflator exists, but this is comparing apples to oranges evolving into watermelons.

Is there a new economy? Yes, but the economy is always new because it is constantly changing, evolving, and entering new phases. Productivity is not growing in a manner that is so unusual as to suggest that we can reject the economic lessons of the past.

My final point on productivity is that while output per hour is indeed the critical determinant of the standard of living and a major influence on such important issues as worker satisfaction and price stability, it is hardly the only economic issue. To see our economic situation, we need to open that other eye and look at the financial side of the economy.

Many economists focus too narrowly on productivity because they are trained to look at real output, real income, real wages, and so forth. The idea is to remove the distortion caused by inflation. But as Minsky emphasized, the real world is a financial world in which balance sheets matter, the ability to meet financial obligations matters, and the condition and functionality of the financial system matters. And nothing matters more than profits. It is a firm's profits, not its inflation-adjusted output, that drives its behavior, determines its success, and enables it to divide and expand. For example, in inflation-adjusted terms, between 1985 and 2000 Compaq's computer sales may have increased umpteen zillion times. But management does not care about that figure. Shareholders do not care. No one would even know how to make this calculation. What they do care about are nominal dollar sales and how they compare to nominal dollar expenses. Profits are a current dollar phenomenon, a financial phenomenon, not some sort of "real" phenomenon.

Some people question whether the wonderful technological developments that took place during the financial boom of the 1990s somehow signal great financial strength along with productivity

gains. The simplest answer to this query is to think about another real-life situation. I refer you to an economy in which productivity was growing rapidly; technological progress was dazzling; new methods of communication were sweeping the country, revolutionizing information use, giving instantaneous access to information that people had never had before. Technology was changing the way people lived, even where they could live, affecting industry, coming into homes, providing new products with new benefits that looked like they were going to spread throughout the country. At the same time, inflation was low, profits were strong, stock prices were soaring, confidence was high, and net wealth was ballooning. Experts pointed to one industry after another and said, "This is going to grow spectacularly in coming decades. It's going to change the way we live. We're going to have a new standard of living previously unimagined." Those experts were absolutely right . . . eventually. The economy I refer to is our own, and the time was the beginning of 1929. What few people recognized was the severity of the financial imbalances in the economy. Economic historians argue about what caused the Great Depression: Was it a failure of capitalism? Was it an international event? Was it a blunder by the Federal Reserve? In fact, the economy had reached a state of inherent instability that made a severe adjustment almost inevitable. The only questions were what the catalyst would be, how bad it would get, and how well the damage would be contained.

Financial Imbalances

Over the past 15 years there has been much discussion about certain types of assets, such as real estate and stocks, and certain kinds of debt. But a few critical points about the evolution of the economy's balance sheet during the past half century have been either overshadowed or overlooked. First, total assets have grown faster than total income; second, debt has grown faster still; and third, equity assets have grown faster than total assets.

Why has the total value of assets risen faster than the economy has grown? One reason is that the stock of fixed assets grew faster than output during a good part of the era. In 1946, following 15 years of depression and war, private fixed capital was very low. Then came the long postwar investment boom, during which capacity went from inadequate—composed of dilapidated, obsolete, and aging facilities—to modern and ample facilities, and then to overcapacity as we entered the 1980s.

There is another reason why the value of total assets outstripped GDP, especially in the years since 1980: as the economy moved from the shadow of the Great Depression and World War II through a half-century of prosperity with no catastrophes, earnings expectations rose and risk adjustments shrank. Thus asset prices rose faster than goods and services prices. Moreover, investors, often sensing the potential for capital gain in various markets, in some cases added a price premium because of it.

An even more striking development than the rise in the total value of assets relative to income or GDP was the rise in the debt-to-income ratio. To some extent, this mirrored the rise in assets, as investment in assets is generally financed largely with debt. But the rise in debt relative to the size of the economy also reflects evolving perceptions of risk and changing attitudes about debt.

After the relatively free-flowing credit of the 1920s and the string of disastrous defaults in the 1930s, Americans emerged from World War II with very conservative attitudes about debt, lending, and borrowing. As late as the early 1950s, many people still considered taking out a home mortgage loan to be a risky and undesirable action. Mortgage lenders, too, were not very enthusiastic and had high qualification standards. Now, however, one in four home mortgage loans has a loan-to-price ratio of over 90 percent, and some of them are well over 100 percent. There were no credit cards right after the war; obtaining a personal loan was not a trivial matter, and it involved close scrutiny by the lender. By

contrast, last year my nephew was preapproved for a MasterCard, and he was only four years old. A few decades ago, personal bankruptcy was a humiliating failure to be avoided at any cost; today it is a smart financial tactic for many people. In fact, in each of the last three years there were more than four times as many non-business bankruptcies as in 1982, the year of the highest unemployment rate of the post-World War II era.

Changing attitudes about debt and increasing asset creation are two of the reasons for debt growing faster than income; speculation is another. When asset markets rise, recurring capital gains encourage leveraging. From stock speculators in the 1920s buying on a 10 percent margin to southern Californians in the late 1980s taking out home equity loans to use as down payments to buy second homes, to today's consumers who have run up consumer and mortgage debt so they can place more money in tech mutual funds, bull markets tend to encourage leverage.

The growth in debt can be quantified by a few different debt-to-income ratios for the U.S. economy. In 1946, household sector debt was equal to 22 cents for each dollar of after-tax income; in 1999, it was \$1.03. Non-farm, non-financial corporate debt relative to non-financial, corporate domestic product (there is a small mismatch in definitions) rose from 80 percent in 1946 to almost twice that, 159 percent, last year. There is an enormous amount of debt in the financial sector, although I do not know how it should be measured. Based on Federal Reserve figures, the debt of financial corporations grew from 3 percent as large as total GDP in 1953 to 82 percent last year. For the entire economy, the ratio of total debt (including government debt) to total income rose from 1.3 in 1953 to 3.0—more than doubling during the time period. Any way you look at it, there has been a large increase in debt, and in certain sectors it has been quite dramatic. This does not take into account the leverage represented by derivatives or other accounting issues, but there is

little question that there has been a large increase in leverage, from very low levels after the war to very high ones today.

Since debt has been growing for a long time, you may wonder what is so important about this trend. First, growth in assets and liabilities relative to GDP over a long period of time makes the economy more fragile. Second, these trends cannot continue indefinitely. Third, these trends have contributed enormously, in a way that is not understood by most people, to the generation of aggregate profits in our economy. If these trends do not continue, profits will be in serious trouble.

A rising asset-to-GDP ratio increases the tendency toward financial instability because the larger the total value of assets compared to total income, the greater the influence a change in asset prices has on demand. A simple, albeit extreme example makes the point. Suppose you have \$100,000 income and \$5,000 in stocks. If your portfolio rises 40 percent, or by \$2,000, you will gain the equivalent of one week's salary. Will this gain greatly change your consumption pattern? Probably not. But suppose you have \$100,000 income and \$500,000 in stocks. If your portfolio rises by 40 percent, you will gain the equivalent of two years' salary. Will this greatly change your consumption pattern? The empirical evidence strongly suggests that you will make additional purchases.

Moreover, the greater the share of total assets that are held in the form of liquid assets with potentially volatile prices, the greater the potential for demand to be destabilized by changes in asset prices. In other words, stock prices can fall a lot faster than real estate prices, and a lot farther than high-grade bond prices. Presently the ratio of equity wealth to total assets is much higher than at any time since World War II. Profits are therefore vulnerable to negative wealth effects generated by a falling stock market. The effect of a bear market on personal saving alone would be great—sufficient to cause a recession.

The oversized wealth effect is just one aspect of the economy's increasing fragility. A jolt to demand through a change in asset prices effects the income from which debt service is paid. The rise in debt relative to income represents a movement that Minsky referred to as one from hedge finance to speculative finance to Ponzi finance: financial cushions become smaller and the potential for systemic financial problems gradually becomes larger.

Yet another disturbing aspect of high debt-to-income ratios arises from the fact that leverage increases volatility in asset markets. Unusual volatility, such as has occurred in equity markets this month, is a sign of excessive leverage. Leverage necessarily makes participants less patient and more sensitive to sudden price movements, which amplifies abrupt disturbances with waves of short covering or bailing out of long positions.

Leverage also makes the market more vulnerable to volatility, as exemplified by the case of Long Term Capital Management in 1998. Massive or unusual market swings can bankrupt speculators. In the most extreme cases, such swings can cause problems for speculators' creditors and interfere with the normal liquidity necessary for the market to operate. I may be old-fashioned, but it does not seem healthy for a major U.S. stock market to gyrate 14 percent in a few hours. Even if the Nasdaq rallies for a period of time, it has demonstrated to me that it is inherently unstable.

Some of you may recall the yen's explosive move against the dollar during the financial crisis in 1998. From Monday, October 5th, to Thursday, October 8th, the dollar fell more than 18 percent against the Japanese currency to ¥112. This represents an enormous realignment of two major currencies over only two and a half days. What was even more striking was what happened on October 8th. When the dollar hit ¥112, the Federal Reserve started calling in to check prices, which had the effect of saber rattling as it signaled the possibility of immediate intervention. The dollar instantaneously rose to ¥113, then ¥114,

and then ¥116. It closed that day at ¥119. What was interesting was that initial move of four points. Amazed traders told me that it happened in a fraction of a minute, a move that would have been huge if it had happened during a very active week, and extraordinary if it had happened in one day. Yet it occurred in moments.

Financial market speculation is not the only aspect of leverage about which I am concerned. In the non-financial corporate sector, cash flow has not grown fast enough to both keep up with dividend payments and expand capital spending. Yet companies have been buying back their own stock in that sector at a rate averaging \$120 billion per year during the last three years. The resulting record debt-to-sales ratios represent more firms becoming more financially fragile. Think about what will happen in the junk bond market, for example, if there is a downturn. Another type of debt that has experienced a run-up is subprime household sector debt (loans to people who used to be considered poor credit risks). The volume of subprime debt, conservatively estimated, totals hundreds of billions of dollars, maybe as much as \$1 trillion. The next recession is going to trigger serious problems in this area.

Destruction of Profits

Some people more knowledgeable than I about the technical condition of lending institutions do not see the danger. They acknowledge that the market may be due for a correction, but argue that there are no signs of economic weakness that would lead to a major downturn or recession. Nor do they see financial imbalances on institutional balance sheets. However, these observers miss the critical macroeconomic linkages between the asset market and profits. These links, which were central to Minsky's theories, are not fully appreciated by most of his admirers.

It is a matter of basic computation that the stock market bubble cannot burst without sharply reducing corporate profits. For enlightenment we turn to the macroeconomic profits equation, which basically

states that profits are equal to net investment less saving by all the sectors besides business. In short, the wealth that the corporate sector obtains is equal to the wealth created, which economists call investment, less the claims against that wealth obtained by other sectors. Rising investment increases profits, while rising saving by households or government or the rest of the world decreases profits. This identity, this profits equation, cannot lie; unless the data are bad, it cannot be wrong.

Looking at our current situation, I acknowledge that the fate of the stock market is uncertain. But let us consider the case of a major bear market. It is a matter of straightforward math, accounting, and fairly simple analysis to see that a bear market reverses wealth effects and rapidly takes a large bite out of corporate profits—enough of a bite to cause a recession. Even making conservative assumptions, it becomes almost impossible to create a scenario that does not involve a vicious cycle of falling economic and financial contraction. Maybe a market plunge could be quickly reversed by aggressive interest rate cuts by the Fed, resulting in a “soft landing.” But given the fundamentals of the economy, if the market goes down and stays down, the economy will be driven into recession. Although the balance sheets of banks and other financial institutions might be healthy during a boom, it will be a different story when personal income, corporate cash flow, and asset prices fall.

To understand the economy's fragility, it is important to recognize that the boom has been comprised of many interconnected positive feedback loops—in other words, the boom has been a great virtuous cycle, which, if reversed, will become a great vicious cycle. During the economic boom of the late 1990s, the soaring stock market and many of the sources of profits—rising residential investment and nonresidential construction, surging equipment investment, plunging personal saving—have been mutually reinforcing. Moreover, the boom is like a shark. It must keep swimming or die. Economic

growth cannot simply slow down and continue at a moderate, steady pace because the very slowing of growth, along with stock gains and credit expansion, will cause several profit sources to erode. Falling profits will turn a modest deceleration into a rapid one.

Is there a way to repair the economy's fragile condition before a major crisis occurs? Probably not. Logically, there are two ways to reduce the ratios of assets to income and debt to income. One way is for assets and liabilities to grow slowly and income to grow quickly. But how can this happen? Booming income encourages asset prices to rise, along with borrowing and lending. In fact, the income surge can occur only if profits are strong, and profits will be strong only in an environment of rising asset prices and rapid debt growth.

The second way is to lower assets and liabilities. If the value of total assets plunges, there will be severe consequences, but asset and debt ratios will be lowered. The debt will linger but gradually decline as it is written off, paid off, and not replaced. This clearly is not a desirable scenario, because it represents a depression or something close to it. Can an asset and debt contraction occur slowly and tranquilly? I do not think so, because falling asset prices both discourage investment and induce negative wealth effects, which raise nonbusiness saving. The impact on profits is negative, and the likely result is a more violent adjustment. In summary, there is no easy way out of our financial predicament.

The Global Economy

The so-called Asian crisis was the beginning of a global crisis related to overbuilding, overextension of credit, and overblown asset prices—situations that developed around the world over a long period of time. As might be expected, this crisis began in an especially vulnerable region and then spread to the overextended countries of the global economy. As the initial Asian situation got worse, it caused damage to both global goods and services markets and international financial markets, and the crisis expanded. The

surprises were that the authorities were as successful as they were in nipping the crisis in the bud and that stock markets rallied as much as they did, brushing off the near disaster.

Today, however, global overcapacity is still present. Commodity prices, although rising, are generally well below their 1997 levels (before the global economy started to weaken), with the notable exception of petroleum. In the countries that had been booming, including some of the Asian countries, which had been building the tallest, longest, or widest buildings in the world, the boom is over. The pre-1998 soaring domestic investment in facilities and real estate that helped to power their expansions has not been replaced by new domestic stimulus. Except for a few countries in which there has been increased fiscal stimulus, these countries have recovered based on improvements to their trade balances. Which country has been largely responsible for this improvement? The United States.

How did Russia move out of default? The Russians did not fix anything; rather, commodity prices rose. Since Russia's exports include oil, platinum, and other raw materials, they moved to a trade surplus and, for the time being, are able to service their external debt.

Brazil's crisis has been held in abeyance and interest rates have come down, but there is still a trade deficit and a large investment income deficit. The real has stabilized because of strong direct foreign investment, mostly from the United States. However, these direct foreign investment flows are tied to the performance of the U.S. stock market.

Although the international financial system is indeed in better shape than it was 15 to 18 months ago, when by many accounts we were close to having the worst global banking crisis in 50 years, it has not improved much relative to where it was at the beginning of 1997. One could argue that in some ways it is more vulnerable. Look at the damage done as the result of a few small economies getting into trouble in 1997 and think what would happen if the world's

largest economy, which has been booming and providing a growing stimulus to the rest of the global economy, were to do an about-face. There is no question that the result would be serious international economic instability. Since the overbuilt, overindebted, financially fragile global economy is dependent on soaring demand and financial stability in the United States, and since the financial and economic health of the United States is directly tied to our stock market, and since the U.S. stock market is experiencing one of the greatest market bubbles in history, we have to view the global economic situation as a bubble.

Minsky's financial fragility hypothesis is a story of capitalists' success leading to rising expectations, evolving balance sheets, increasing risk, and a rising probability of serious financial trauma. The increased size of wealth relative to income in our economy today makes demand, profits, and cash flow unusually sensitive to asset prices. Meanwhile increased debt ratios imply that weakening demand and profits would result in unusual stress on debtors and creditors in the financial system. Therefore, while timing may be a question, I think the economy is headed for some kind of trouble, possibly serious. Fortunately, I also believe that Minsky was right about economic stabilizers: A big government fiscal flywheel on the economy and a strong government lender of last resort will prevent another Great Depression in the United States. But I cannot express the same confidence for every economy around the world.

Sessions

SESSION 1

Stock Market Effects and the Macroeconomy

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Will Macro Ever Matter Again?

Stock market performance in the last decade has exceeded all expectations. This stellar performance was accompanied by a dramatic shift in the composition of the market toward technology stocks, driven by business opportunities generated by innovations in information technology. However, many technology stocks are now dangerously overvalued, and, as a result, the normal operations of the overall stock market have been subverted to some extent.

The simple dividend discount model, often used to value stocks, is based on the idea that fair value for common stocks is the discounted present value of all future earnings of those stocks. A key assumption of the model is that stocks are riskier than bonds. While some analysts have challenged this assumption, it is hard to dismiss entirely the underlying rationale, based on the practical observation that a stock does not promise its holder a certain sum of money at the end of some finite period and that if a company is liquidated, the shareholders get last call on its assets. Therefore, stocks should have a risk premium and the dividend yield has to be greater than the coupon return on bonds. The model suggests that whenever the dividend yield dips below the coupon return on bonds, the stock market is overvalued. Estimates based on a variant of the dividend discount model indicate that the S&P 500 is about 40 percent overvalued and, therefore, in a dangerous state.

The overvaluation of technology stocks and the stock market boom driven by it are the result of a combination of factors. The change in credit markets and economic fundamentals is reflected in the increase in margin debt, the remarkable rise in personal income, and, although at a diminishing rate, the enormous expansion in money supply encouraged by the Federal Reserve. Equally dramatic changes in investor expectations encouraged a speculative boom. Some investors hold wild and unrealistic expectations of riches to be gained from innovations in information technology, especially the Internet. Yet another factor is that every dip in the market since 1987 has been a buying opportunity, which has become an expectation of both individual investors and investment firms. The best example of this is April 14, 2000. This was a truly discouraging day for any seasoned investor, yet in the week ending April 14, the public put \$7.1 billion into equity mutual funds. Ordinarily that would have been a week of net withdrawals; instead, the public saw it as another buying opportunity.

An interesting phenomenon in recent times is the narrowness of the market, with a very small group of stocks accounting for its strong performance. Historically, a market as narrow as the current one has always led to a substantial correction. While all indications point to a stock market downturn, it is unlikely that a prolonged bear market is at hand, because there are no prospects for a recession. Stocks that survive the downturn will be those that have earnings at a reasonable price or the prospect of earnings at a reasonable multiple.

ROBERT J. BARBERA

"It" Just Happened Again

The current U.S. equity market constitutes a substantial bubble that is likely to burst this year, with

negative consequences for the U.S. economy. The tightening of monetary policy by the Federal Reserve in a bid to stem inflationary pressures can speed up the bursting of the bubble. While some analysts believe that technology companies will be less affected, in fact, they will be in the vanguard of deterioration that those changes in the financial markets precipitate.

Today's stock market valuation implies profit expectations—an annual growth rate of roughly 16 percent—that are simply unattainable. This point is best seen by considering the macroeconomic scenario required to realize the expected growth rate of profits in the next 10 years. One route to such growth in profits would be maintaining the nominal GDP growth of the past nine months. However, at that rate of growth, the current account deficit would rise to 18 percent of GDP and unemployment rate would fall to -1 percent. Such a scenario is unlikely.

Another route to attaining 16 percent annual growth in profits is to assume that profit margins—the share of profits in national income—will rise substantially. Using reasonable assumptions about GDP growth and inflation, it can be shown that to achieve the anticipated profits growth, the share of profits in national income has to rise from 12 percent, its current level, to 31 percent. While investment may increase as a result, personal consumption is bound to fall and personal saving rate to become sharply and implausibly negative. The required increase in profit share also implies that none of the productivity gains accrue to employees, a rather unlikely scenario.

Prospects for the stock market appear troublesome when the implications of monetary tightening by the Federal Reserve are taken into account. If the nominal GDP growth slows to about 5 percent, as policymakers now appear to desire, there will be a substantial slowdown in profit growth, which is bound to result in a stock market decline. The shift in the Federal Reserve's policy may itself have been

prompted, at least in part, by the dramatic growth in margin debt.

The last five quarters have seen \$100 billion worth of initial public offerings and \$55 billion worth of venture capital investment. In the first quarter of this year [2000] alone, 108 high-tech companies were created. A significant number of these investments are purely speculative. With the tightening of monetary policy, the system's liquidity is on the decline and many technology stocks are under pressure.

There are historical parallels to the current situation. In the 1950s, considerable amounts of money went into savings and loan companies. The result was a housing boom. When monetary policy was tightened, the housing market collapsed temporarily. In the 1970s, banks and commercial paper were objects of speculative excesses, and once again suffered following a tightening of monetary policy. At present, there is an equity market-financed technology boom, which is also perhaps on the verge of collapse. The consequences of such a collapse would be especially severe for the technology companies.

DAVID A. LEVY AND
SRINIVASTHIRUVADANTHAI

The Stock Market Wealth Effect

A few years ago, the debate was whether stock market wealth effect—the idea that the rise in stock market values was contributing to an increase in personal consumption expenditure—was significant. By now, the debate has shifted to whether the stock market boom is pushing GDP growth rate up a little bit or quite substantially. A close analysis of recent macroeconomic performance using the Levy-Kalecki profits identity and an econometric model suggests that the stock market boom has

been vital in sustaining the current exceptional economic growth; furthermore, a stock market decline may slow down growth significantly.

The decline in the personal saving rate in the late 1990s has been remarkable and unprecedented. It has been accompanied by a sustained increase in personal consumption expenditure that has contributed to increasing business profits. The most conservative estimate suggests that the decline in saving accounts for about 25 percent of today's profits.

There are other indications of the growing dependence of overall macroeconomic performance on stock market fluctuations. The consumer confidence index has been moving, on a very short-term basis, in tandem with stock market indices in an unprecedented manner. Similarly, recent data on retail sales (excluding automobiles) show that changes in retail sales are closely correlated with changes in stock market indices. Apart from its positive effects on personal consumption expenditures, the stock market boom seems to have contributed substantially to investment expenditure by boosting purchases of new homes.

Estimates from an econometric model also suggest the importance of the wealth effect. The model took into account common trends in consumption, wealth, and income, and separated the short-run from the long-run effects. Three findings emerge from the model. First, stock market wealth effect is much larger in the 1990s than in any other period in recent history. Second, the effect of stock market wealth on personal saving operates with a much shorter lag (four quarters) than is commonly believed. Finally, the wealth effect is asymmetric; that is, the negative impact from a decline in stock market wealth is greater than the positive impact from an increase. One reason for the stronger wealth effect in the 1990s may be that the duration of the current stock market boom has encouraged a belief that the gain in stock market wealth is permanent. Another may be, directly or indirectly, the higher ownership of stocks.

Other aspects of the stock market boom need consideration in terms of its impact on economic performance. In a plethora of cases, firms have not reported their earnings honestly in order to maintain unjustifiable values for their stocks. The common practice of granting stock options to employees can also inflate earnings, because these do not count as employee compensation. The explosion of the U.S. trade deficit during the last few years, if viewed in the context of profits identity, represents an exporting of profits to the rest of the world. While reliable figures for the rest of the world's profits are not available, rough estimates suggest that the U.S. trade deficit may currently account for roughly 10 percent.

FRANK A. J. VENEROSO
AND ROBERT W. PARENTEAU

The High-Tech Stock Market Bubble

The current U.S. equity market is one of the most highly overvalued in the history of advanced industrialized economies. An explanation of how such a market emerged can be developed by extending Hyman Minsky's idea that financial markets generate instability endogenously, even in the absence of policy mistakes or exogenous shocks. The equity market may be thought of as consisting of three types of investors, all investing on the basis of adaptive expectations (that the future will be the same as the immediate past). *Individual investors* are trend followers, whose goal is to merely keep up with the market. *Hedge funds* have an absolute performance criterion because they are expected to deliver higher-than-average returns to their clients, and therefore exert a destabilizing influence on the market. The final type is the *institutional investor*, whose performance goal is to beat a benchmark portfolio such as the S&P 500.

The three groups of investors interact dynamically to generate persistent movements in the markets. Suppose there is good news about the economic fundamentals of a stock or group of stocks and this drives prices higher. The destabilizing hedge fund is going to bid the stock price higher than is justified by the fundamentals, because it knows that the trend-following individual investors, upon seeing rising prices, will enter the market and bid it even higher. The rise in prices will increase the weight of these stocks in a typical benchmark portfolio, thus forcing institutional investors to increase their holdings. In sum, the behavior of each type of investor reinforces the behavior of the others, thus eventually generating an asset market bubble.

Some analysts have argued that the current equity market is not overvalued because current valuations are justified for new businesses, especially Internet firms, that have arisen in response to the "new economy." It is argued that Internet firms face increasing returns to scale and network effects, and that markets for their products are characterized by significant first-mover advantages. As a result of these characteristics, the successful firm, although it may not earn profits now, will eventually be in a position to amass monopoly rents.

This argument has several weaknesses. There are no Ricardian rents in cyberspace, because Internet firms' products, such as software, can, once built, be reproduced easily—unlike agricultural products that will have to use increasingly scarce land. Internet service providers such as America Online are assumed to enjoy network externalities, but in fact, are similar to a public utility that faces declining marginal costs. Their revenue prospects are dim because market for Internet service has begun to saturate, thus encouraging price competition on an extended scale. The fact that Internet companies' losses tripled while their sales revenue doubled during the last year casts doubt on whether there are any increasing returns to scale. In sum, the current valuation of Internet stocks cannot be justified on the

grounds that these companies will reap massive profits in the future. This assessment gains more strength once it is recognized that this sector is characterized by rapid technological change. As a result, a majority of today's companies will have very short lifespans.

Previous speakers have discussed the intimate connection between the stock market and macro-economic performance in the present conjecture. However, it is also useful to view the current situation historically. Institutional changes in the economy subsequent to the Great Depression have given rise to safeguards aimed at preventing a protracted financial market collapse and economic breakdown. These changes gradually altered the behavior of financial market participants and have led to more fragile financial structures. This increasing fragility, in turn, demands earlier and greater intervention by authorities, thus creating even greater moral hazards. It is doubtful that such a dynamic of ever-increasing financial fragility can continue indefinitely into the future.

SESSION 2

What Would Minsky Think?

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MARTIN MAYER

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MARTIN MAYER

The Fed in Our Future

The central insights that Minsky had seem more relevant every year, even as we move into a financial structure that is very unlike anything he knew, and for which, in fact, we have no theoretical framework, always a difficulty for a theoretical economist. Minsky's particular strength was that he saw the need to understand how things happen, and by working out the process came to know a great deal more.

Last fall, Congress passed legislation that led to broad changes in the banking system. Very little thought has been given to the consequences of this legislation. An example of the kind of change made is that the Glass-Steagall Act, and all legislation since, contains a provision that allows banks to operate in the securities markets without supervision by the Securities and Exchange Commission. They have no obligation to register with the SEC, no obligation to report to the SEC. This was done away with in the new legislation. Now a bank must do 11 things in order to avoid having to register. But no bank can do all 11 and stay in business.

Most of this legislation went into effect this spring and now there are people at the Fed—and outside it—who are absolutely scrambling to figure out what the legislation means. It is typical American legislation; nobody knows what it means. It is another case where there was agreement on language but not on substance. It is yet another lawyer's work relief act.

The one thing that is clear is that at a time when the rest of the world is separating the

functions of banking supervision and monetary policy, the United States has gone the other way. The Fed has merged them together in legislation probably for as long as any of us will live. Minsky, incidentally, would have been pleased. To the usual arguments that the central bank cannot conduct monetary policy properly unless it knows in detail what has been going on in the banks, Minsky added a significant addition: that monetary policy cannot be safely made unless the policymaker understands in detail the effect of that policy on the stability of the banking system. I think the central banks are the home of moral hazard. I think that we have had great losses historically, first on the price inflation front, now on the asset inflation front, because of what was talked about in the previous session, the certainty that there is a Greenspan, or whatever, or that the market is too big to fail.

The thesis that underlies my latest book is that the banking system has declined as an economic force. Today only 20 percent of financial intermediation is done through banks, down from about 60 percent after World War II. It does not matter much any more what the banks do. It used to be that the prime rate mattered. Banks set interest rates, and because of the operation of the partial reserve requirement, the central bank could tell the banks what interest rate to set. In theory, changes in interest rates, and a little later in the availability of loans, affected the behavior of business, and the world's judgment of what was happening to business affected the equity and the commodities markets.

The central bank was a creator or, at the very least, a major facilitator of inflection points. Their ability to do that well, Minsky felt, was to a degree a function of the information they gained, not by bank examinations, for which he had limited respect. Minsky said that "bank examination is largely perfunctory, the domain of accountants who look for proper procedures, documents, and

obvious fraud, rather than an inquiry into the economic viability and the exposures to risk of banking organizations." In fairness, they've been trying to remedy that. But he felt that a major factor in the Fed's ability to move, and in its information, was the operation of the discount window, which permitted regulators a running acquaintance with the quality of the paper the banks had to offer for re-discount. Prior to the Depression, up to 40 percent of the reserves of the banking system were borrowed at the discount window. So the Fed was really in the underdrawers of the banks all the time, and knew what was going on in a way that mere annual examination does not. This, of course, disappeared with the excess reserves of the 1930s, and then the huge accumulation of Treasury paper at the banks in the war, which permitted them to run on their own oil in the 1950s, and which made Bill Martin's job a more interesting one.

Today the discount window is dead. It is a victim of the information revolution, of the perfection of the repo market and the Fed funds market, and of the fear that banks feel that if it is known that they are borrowing from the central bank, it will mean to observers that they cannot borrow anywhere else, and they are going to have a very tough time living.

Minsky's insight after Keynes is that interest rate manipulation works by changing asset prices. This is an insight that has come and gone with the passage of time. Marx had it in the 1860s when he quoted economists as saying of the panic of 1842: "We see here how rapidly and strikingly the raising of the rate of interest exerted its effect, together with the subsequent money pack in correcting an unfavorable rate of change and turning the tide of gold so that it flowed once more into England." Marx's comment on what the economists wrote was: "This effect was produced quite independently of the balance of payment. A higher rate of interest produced a lower price of securities of English as well as foreign ones, and caused large

purchases of them for foreign accounts.” In other words, as far as Marx was concerned, the maintenance of the gold standard by the Bank of England was a matter of manipulating asset prices through changes in the bank rate. An effect that was also achieved, although Marx did not know it, was that withholding credit from the note brokers compelled them to sell paper to fund their activities.

Now, how much attention central banks should pay to asset markets, especially the most liquid markets for paper, and the least liquid for real estate, which is where crises originate, has been a matter of dispute for as long as the words “central bank” have been in common currency. For Minsky the transmission from bubble to bigger bubble is through the availability of additional higher-priced collateral to fuel more borrowing. There is also a larger observation in Minsky that all classical economic analysis rests on the proposition that demand curves are negatively sloped. In other words, the higher the price, the less the demand; the lower the price, the more the demand. This is not necessarily true in the market for paper, where one can get a positively sloped demand curve. It is now fashionable to call this “momentum investing.” Momentum investing rests on a bastard version of rational expectations and efficient markets. If all information is in the price, and the price is higher than you think it ought to be, that must mean that people who know better than you are buying: people buy because the price is going to go up.

The problem for the Fed is the weakness of interest rate manipulation as a way to change something as basic as how markets discount the future in a world where the demand curve can be positively sloped. Worrying about financial fragility is quite right, and it is still the central element of the Minsky legacy. The Fed should certainly be devoting more of its research budget to distinguishing between stabilizing instruments. In fact, the Fed should be putting more money into trying to keep on top of the instruments that are being designed.

It was noted earlier that people are borrowing against their dot-com stocks to support their lifestyles. Dot-com stocks are restricted and cannot be sold. Owners can, however, do total return equity derivatives, which allow them to get the benefit of having sold without selling, without violating the letter if not the spirit of the law. The question of who is doing equity derivatives with the dot-com stockholders is one the Fed should know a lot about. It should know whether the banks are doing it and whether the guys in the banks who are making startup investments and providing venture capital are also the ones engaged in equity derivatives.

We live in an extraordinary time. The fact that things looked great in Japan in 1990, yet were not, ought not to convince us that they are not truly great in America today. They really are. The demand for investment capital is enormous. One could even argue that what is driving the current account deficit is the capital account surplus, the world’s desire to invest here rather than the propensity to consume imports here.

As of now, the Fed has a very small tool kit with which to control an area that will not control itself. What new tools it should have, what new tools it should ask for, which among its existing tools it should use are some things worth examining.

RONNIE J. PHILLIPS

*Dealing with Financial Crises:
Lessons from Minsky*

The Asian, Mexican, and Russian crises have generated enormous literature, but it is doubtful that such research will prevent the next crisis. Minsky’s main point is that capitalism tends toward financial fragility. So the policy problem is to create an institutional structure that will reduce the economic cost, the debt inflation boom and bust. Creating

some sort of market discipline will not put an end to these financial crises.

In looking at the Asian crisis it is important to ask whether this was a contagious crisis—one in which something that happens in one country impacts others—or whether it was a situation of debt deflation as described by Minsky and others, in which there are real economic costs. A recent study by the International Monetary Fund defined contagion as a statistically significant increase in correlation between the exchange rates, stock markets, interest rates, and sovereign spreads of countries. Using this definition, the IMF asked if Asia displayed this increase in correlation.

In some instances one could argue there was contagion, but the facts are not really clear-cut. However, making a case for contagion provides a rationale for wanting to have a lender of last resort and involving either a central bank or the IMF. The IMF approach is to examine the past and use it as a guide to make changes that prevent it from happening again. But Minsky's point was that looking at the past will not necessarily solve future problems.

The IMF, in its search for the causes of the Asian crisis, looked at its usual indicators for vulnerability—and found that in many cases, these did not apply. None of these countries had, for example, fiscal deficit greater than 2 percent of gross domestic product, and yet there was still a crisis. This does not give one much confidence in the IMF's research, or its ability to develop policies to prevent the next crisis.

What are the lessons that Minsky would draw in terms of policies for a financial crisis? One of the basic points about a debt deflation is that it will have significant economic cost. A contagion or liquidity crisis can be handled by the central bank. But debt deflations are different. In a debt deflation there must first be some sort of asset reflation. And, as Minsky noted, asset reflation does not mean just the use of monetary policy. Fiscal policy is also important.

In Southeast Asia, domestic financial institutions, fueled by external funding, suffered financial

asset inflation as returns on investment became historically high. When funding slowed and older lenders were replaced by newer ones, the bubble burst. The short-term nature of the foreign borrowing made it appear a crisis of liquidity, but the short-term nature of the external financing was maintained for a very long period. Thus, it can be concluded that the situation was more one of fundamental underlying insolvency—a debt deflation, whose recognition was triggered by liquidity problems associated with exchange rate devaluation.

Another policy issue often discussed by Minsky was transparency. Twenty-five years ago he laid out very specifically a way to change bank examination forms in order to give the Federal Reserve information to help it deal with financial fragility. He also discussed the role of the Reconstruction Finance Corporation, which in the United States in the 1930s took ownership of capital in the banking system, at one time, one third of the total amount. During the savings and loan crisis in the United States the Resolution Trust Corporation sold the assets of failed corporations in a controlled way that prevented exacerbation of the problem of asset deflation. Both corporations acted in the spirit of Minsky. The IMF and others, however, recommend more market discipline, reform, prudential regulation, and so on. Minsky's point was that market discipline is not going to work: instead, institutions must be created that are able to deal with that financial fragility.

In conclusion, a liquidity form of financial crisis that involves contagion can often be solved through a lender of last resort policy. For longer-term problems associated with debt deflations, more structural changes must be incorporated into macroeconomic policies designed to reflate financial assets. One important note is that as failed financial institutions are resolved, some substitute for the existing institutions must be made available. It is not enough merely to close insolvent institutions: their assets and liabilities must somehow be returned to the marketplace. This can be accomplished through capitalizing the

institutions or creating new ones. Recapitalization can come from government or external sources, and it may or may not involve government assumption of the institutions. It is of paramount importance that any recapitalization be accompanied by appropriate corporate governance restructuring and regulation.

L. RANDALL WRAY

Implications of Domestic Financial Market Liberalization

When I was a student of Minsky's in the early 1980s, he introduced us to Kalecki's equation, which he and we later found out was very similar to Jerome Levy's profits equation. In the Kalecki version, aggregate profits are equal to the sum of the private sector's investment, plus the government deficit, plus the trade surplus (or minus the trade deficit), plus consumption out of profits or, in short, capitalist consumption, and less saving out of wages, or, again, in short, worker savings. In his exposition, Minsky jumped to what is called the classical case, in which capitalists do not consume and workers do not save. Thus, aggregate profits would be equal to investment plus the government deficit minus the trade deficit. The early 1980s were interesting because the United States was struggling to break free from the Reagan recession with almost no private investment and a growing trade deficit. The only source of profit was the burgeoning federal budget deficit.

Minsky noted that the deep recession of the early 1970s was the first in which personal income never fell because the government's transfers, although resulting in deficits, rose sufficiently to maintain private income. The Reagan recession was similar because the Reagan deficits maintained personal income, which then continued to grow in spite of the recession. Essentially, the government provided a floor to aggregate demand by maintaining

personal income. Minsky argued that this was one of two key stabilizing features of the postwar big government economy. The other was central bank intervention as lender of last resort.

As the Reagan deficit continued to climb through the 1980s, the economy recovered and, indeed, profits boomed, even though investment remained sluggish for a very long time. This provided a new wrinkle on the Keynesian model, in which investment is supposed to be the driving force of the cycle. In fact, neither the Reagan expansion nor the Clinton expansion can be attributed to investment.

Minsky had emphasized the role of government transfers in fueling consumption, but what if consumers borrow simply to keep consumption up? Kalecki's equation subtracted worker saving from aggregate profits, but what if worker saving is negative, if workers spend more than their income? In such a case, even with a trade deficit and sluggish investment, aggregate profits could be positive without requiring government deficit spending. Theoretically this is possible, but Minsky was skeptical that it was sufficiently likely to warrant investigation.

Initially, research into this question was difficult because it proved to be too hard to allocate personal savings between profits and wages. But using Wynne Godley's approach, it is possible to address the issue. Godley's approach is to consolidate all levels of government into a public sector and, likewise, consolidate households and firms into a domestic-private sector. He then adds the foreign sector to get the whole picture. It can then be argued that if the public sector is spending more than its income, that must imply that at least one other sector is spending less than its income.

The United States runs a trade deficit that has generally been rising. When the U.S. government sector is in deficit it tends to generate a private sector surplus, some of which is drained off through a trade deficit. Using Godley's approach, there is no need to separate workers from capitalists; the

relevant breakdown is between households and firms, and data is readily available.

What we face today are unprecedented private sector deficits. This raises two questions: How can the U.S. economy boom in the presence of large and growing government surpluses, and how can we explain the apparent willingness of the private sector to spend in excess of its income to the tune of 5 percent of GDP and rising? For most analysts, the current situation is not difficult to explain. The government surplus is adding to the nation's saving, fueling investment in productivity-enhancing technologies. Wall Street is capitalizing future income streams, generating unprecedented private sector wealth, a type of saving that is not captured in the income and product account figures. Households are devoting a portion of capital gains to consumption, but wealth is growing faster than consumption. Household debt-to-income ratios are high, but this is not the relevant measure, because wealth is growing faster than debt. In addition, government saving is keeping interest rates low so that the burden of servicing debt is not excessive. Thus, many analysts argue, there are only two problems with the Goldilocks economy: the negative household savings rate and the growing trade deficit. Most analysts are confident that Chairman Greenspan will be able to keep the economy on track in spite of these depressionary influences.

How would Minsky explain the processes that brought us to this point, and what would he think of the prospects for the Goldilocks economy? He would argue that consumers became ready, willing, and able to borrow to a degree not seen since the 1920s. Credit cards became much more available, lenders extended credit to sub-prime borrowers, bad publicity about redlining provided incentive, and the Community Reinvestment Act provided the credit to expand the supply of loans to lower-income households. Deregulation of financial institutions enhanced competition. All these factors made it easier for consumers to borrow—something they were all too willing to do.

As Minsky used to say, as memories of the Great Depression fade, people become more willing to commit future income streams to debt service. The last general debt deflation is beyond the experience of almost the whole population. It is not hard to believe that since the United States has had only one real recession in nearly a generation, downside risks are small. Add to this the stock market's irrational exuberance and the wealth effect, and it is easy to explain consumer willingness to borrow. Even over the course of the Clinton expansion, real wage growth has been very low. And Americans are not used to living through a whole generation without an improvement in living standards. The first reaction was to increase the number of earners per family, but even that provided only a small increase in real income for the average household.

It is not surprising that consumers borrowed as soon as they became reasonably confident that the expansion would last. The result has been consistent growth of consumer credit. As Godley has pointed out, in the private sector the economy is now running deficits equal to well over 5 percent of GDP. Because the business sector is running only small deficits, almost all of the deficit is a result of household spending in excess of income. Nothing like this has happened before, at least in the postwar period.

Looking to the public sector, the consolidated government balance is over 2 percent of GDP. The federal budget surplus was 1.4 percent of GDP in 1999, a figure the Congressional Budget Office projects will double to 2.8 percent by 2010. By then government spending will equal only 16.9 percent of GDP, while tax revenue will still be equal to almost 20 percent of GDP. The federal debt held by the public will continue to decline, from 40 percent of GDP, to a little over 6 percent. It is important to note that the surplus is projected to increase as economic growth actually slows down, which indicates again that fiscal policy will be tightening, slowing the economy from a 4 percent growth rate to an average of 2.7 percent. The budget bias will be toward

surpluses, even when the economy performs far below its long-run average, which is about a 3.5 percent growth rate.

What would Minsky think of this bias toward surplus rather than deficit? He would reject the notion of retiring the outstanding debt stock as a worthy goal. Removing the most liquid asset from the economy as the government destroys almost \$3 trillion dollars worth of private sector wealth cannot be a good thing. He would also argue that the budget is far too biased toward a surplus. Should a recession occur, the budget probably could not be moved toward a substantial deficit until the country is deep in a recession, and at that point it will be too late to perform a stabilizing function.

Minsky would be skeptical of any claim that the Fed can prevent a downturn. For him, the primary role of the Fed in down times is to prevent an asset price deflation through intervention as lender of last resort. Nowhere in Minsky's writings is there any suggestion that lower interest rates alone do any good when spending turns down. Although he emphasized that rising interest rates can be a bad thing, because they can cause present value reversals, he never accepted the notion of a simple downward-sloping credit demand schedule.

Minsky would point to danger signs in today's economy, two of which are rising interest rates and increasing private sector debt ratios that are well above any previous record level. Higher interest rates will eventually increase debt burdens sufficiently that households will begin to default. It is somewhat ironic that the law is just now being reformed in a way that will make bankruptcy more difficult. While this will make it easier to collect on the debt, it also means that indebted consumers will have to cut back spending elsewhere, which would make it more difficult to climb out of a recession. The stock market has probably already started on its way down, yet that does not seem to be controversial. If it is true that the wealth effect has been driving consumption, then a stock market crash will kill the expansion.

Since the middle of 1997, profits have consistently lagged behind GDP growth and capital spending by firms. There is a financing gap, the difference between capital spending and available internal funds, which reached 19 percent in the third quarter of last year [1999], the highest since the mid-1980s. Business net interest expense is already rising, and will increase sharply as the Fed increases interest rates. A cutback in consumer spending, combined with rising interest rates, will widen the financing gap even further, which will probably lead firms to start reducing their own spending.

The expansion may not stall out in the coming months, but continued expansion in the face of a trade deficit and a budget surplus requires that the private sector deficit and debt load continue to rise. Minsky cautioned that government deficits cannot continue to rise relative to GDP without limit. He would probably argue far more forcefully against the belief that private sector deficits can rise without limit. While many economists would agree with Minsky's statements about government deficits, surprisingly, they do not recognize the danger of deficits in the private sector. There is no economic theory that suggests that private sector debts are safer than those in the government sector.

SESSION 3

The Financial Architecture in the Post–Gramm-Leach-Bliley Era

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ERNEST PATRIKIS

The Financial Safety Net in the Post–Gramm Act Era

Patrikis was disappointed that Gramm-Leach-Bliley did not go far enough toward deregulation and that, being devoted to delegating regulatory authority among agencies, it could result in more regulation rather than less. The delegation of authority heavily favors the Fed. The legislation passed at this time because the Fed realized that the best time to get what it wanted out of a deregulation bill was after a long period of economic growth, before a downturn, and when the Fed is highly respected in the financial community and on Capitol Hill.

Gramm-Leach-Bliley may be liberalizing legislation for banking organizations, but the bill was probably enacted 10 years too late. Although the economy is heading toward a downturn, regulators are giving banking organizations more power to invest. All that is required is that banks be well-managed, well-capitalized, and meet CRA criteria, standards that are not too difficult to meet during a business cycle peak. If a bank needs better management, it can be bought, but if its holding company runs into financial problems, it will probably have to divest itself of some key assets. The legislation therefore holds a danger for many companies of creating high entry costs that will limit the number of major financial organizations.

Although the Fed is the best bank supervisor in the world, it is not the best regulator. While supervision is qualitative and judgmental, regulation requires laying down rules that often are arbitrary and inflexible. Regulation forces an examiner to

make judgments when reviewing a bank's portfolio and its activities and risk control measures, and therefore often puts sand in the gears of an otherwise well-working market.

This legislation also may spawn some major acquisitions. U.S. bank holding companies will be allowed to buy and hold shares of nonbanking institutions. The foreign banking community and the investment banking community, however, are not enamored of the way the legislation was written or is being implemented. Dissatisfaction is directed at the provisions on merchant banking and the number of shares in nonfinancial organizations that financial holding companies can own. Some foreign banks may be contemplating debanking because they can already participate in nearly all the same activities as a bank (other than being a part of the payment system and having an account with the Fed—not terribly important for a foreign bank) without having a branch in the United States.

The role of the government is to provide a safety net for banks in trouble. But if this does not work properly, it is not the regulators who will be hurt, but the regulated. The discount window is another safety net, but provisions now in legislation narrow the Fed's ability to be a long-term emergency lender. Banks are not supposed to be too big to fail and they are not in the long term when only their shareholders are at risk; however, a sudden failure can reverberate through the economy even if banks are too big to fail overnight. If the Fed sees a very large financial organization in trouble, it will lend; whether it eventually stops lending can be decided later.

Insurance companies and investment banks should have access to the Fed for overnight liquidity. The former usually do not need overnight credit, they supply it. Usually it is investment banks that need credit, and they acquire it from the major banking organizations. But if banks and investment banks are competitors it may be more difficult for the latter to get overnight credit from private banks

when they need it. They will need access to the Fed—and if they accept the Fed's credit they will also have to accept its supervision. The Fed could do a good job supervising investment banks, especially if they leave regulation to another agency.

Broker-dealers already have a safety net in the Capital Planning and Investment Control, and state guarantee funds are meant to provide a safety net for insurance. These safeguards work well for small everyday needs, but it may not be able to handle a large crisis as effectively as can the Fed. The Fed can provide liquidity and is talented at bank supervision, but it does not have the expertise at this time to supervise investment banking and insurance. There is concern about how to regulate a conglomerate in the insurance, banking, and investment banking industries when its functions are covered by three different agencies: the Fed, the SEC, and the relevant insurance commissions. The Fed will have to adapt and to develop expertise in these areas.

The safety net is open to abuse by banks, which could divide their assets into "good" and "bad" banks and spin off the bad. Similar tactics could be attempted in the insurance industry. This possibility forces regulators to assess the entire industry for funds to bail out the bad firm while protecting the shareholders of the firm that spun it off. Under the Federal Deposit Insurance Act, a holding company has a responsibility to be a source of strength for its bank, but not for its insurance company. Federal legislation is needed to add this requirement: a holding company should not be able to take out dividends, reap tax benefits, and then walk away if there is trouble.

KENNETH H. THOMAS

CRA Grade Inflation

The Community Reinvestment Act (CRA) is legislation enacted in 1977 that requires banks, under certain circumstances, to make loans to businesses and individuals within their own community. CRA was little affected by Gramm-Leach-Bliley.

Under CRA, regulators are expected to be impartial referees between the banking industry and the community. In 1989, CRA bank ratings were made public for the first time. There are four CRA ratings: “outstanding,” “satisfactory,” “needs to improve,” and “substantial noncompliance.” Today approximately 98 percent of banks receive one of the two top ratings. Banks therefore have a 98 percent chance of passing CRA examinations, which tempts some observers to suspect that grades may be inflated. Thomas did his own reevaluation of banks and found that there was clearly some grade inflation.

CRA grade inflation can be explained by the “friendly regulator hypothesis,” according to which regulators, who must work closely with banks to complete their exams, develop a rapport with bank employees, and find it more difficult to give the bank a failing grade. Regulators may also see it in their long-term career interest to be friendly; most of today’s CRA consultants and top officers are former regulators. Furthermore, for regulators to give a low rating—one received by only 2 percent of banks—they must amass significant documentation to back it up, as a bank in that position would likely file an appeal.

In 1992, 10 percent of banks received a rating of “outstanding,” 79 percent “satisfactory,” 10 percent “needs to improve,” and 1 percent “substantial noncompliance.” When Thomas reevaluated these ratings by making various assumptions to remove the effects of grade inflation, he found that 23 percent of banks should have been rated “needs to improve” or “substantial noncompliance” as compared to the 11

percent that actually received such ratings. In other words, twice as many banks should have failed.

By the mid 1990s, CRA had been revised to include a new examination system that grouped evaluation criteria according to whether an institution was large, small, or a bank with special characteristics. The new, more quantitative system includes four specific tests: the loan-to-deposit ratio, percentage of local loans, percentage of loans to people with low and moderate incomes (LMI), and percentage of loans in LMI areas. In a second study of the ratings of 1,407 small banks, Thomas and his team of researchers looked at each of these tests and the banks’ final rating to see whether grades were inflated. Three separate panels evaluated banks on each criterion as “above average,” “average,” or “below average.” Evaluation of each bank required 10 to 15 hours to complete, with the entire study taking two years. The results, similar to those of Thomas’ 1992 study, revealed widespread grade inflation.

Examiners are often caught between bankers who complain that they are overregulated and community groups who complain that there is not enough supervision of bank compliance with CRA. Both they and the banks, however, must improve job performance. One remedy for the problem of grade inflation would be better disclosure of examination procedures.

NANCY A. WENTZLER

Strategic Challenges for the Banking Industry in the Changing Environment

The concept of a new economy has gained awesome power; it is used to justify consumption well above income. There may be reason to pause because the last time that “new economy” was so widely invoked was in the late 1920s. Significant

strategic challenges and risks, to both the banking industry and its regulators, are immediate and real. These challenges stem primarily from explosive changes in the broad array of technologies that can be applied to the production and distribution of financial products.

The sharp decline in the prices of new technologies coupled with the enhanced power and scope of their operation will threaten institutions locked in the old economy. The overall penetration rate for the Internet is projected to grow from 24 percent in 1998 to over 50 percent by 2001, by which time the penetration rate among employees is expected to be well over 75 percent. Currently only 10 percent of small businesses have an active website; this is expected to increase to 60 percent by 2001.

In financial markets, the revolution in telecommunications and computer systems has already dramatically improved consumers' ability to find the best price, and has correspondingly enhanced competition across a broad spectrum of markets. This revolution has reduced the cost of distribution of information and products along with their associated transaction costs and, most importantly, has flattened profit margins in traditional markets. Perhaps even more than Gramm-Leach-Bliley, technology has eroded the distinction between different segments of the financial market. Given the dramatic difference in the full cost of transactions to buyers versus sellers, it is difficult to envision a world in which the electronic exchange mechanism will not become the dominant marketplace. However, the necessary investment and risks required by this new marketplace are high. Demographic changes, such as the aging population, will also prompt revamping of the products and services provided by financial organizations, and legislation will change the financial marketplace. If banks are to survive these changes they must leverage their comparative advantages, continually redefine their market niche, and discard those products or services

that currently appear to be successful, but are likely to be outmoded in the future. Banks may win big or lose big.

The changes under way in banking might have an effect on bank profitability. One key feature of the technological revolution is the enhanced opportunity for price discovery. Online services match buyers and sellers at very low marginal cost for the best trade at any given moment; the result is a dramatic reduction in the full cost of any transaction including, most importantly, the cost of search time. Customers will be able to obtain multiple loan offers within hours or minutes without so much as visiting a bank's website. Banks will face a problem of trying to sell multiple products to a customer who rarely comes in or visits their home page. Electronic services will threaten traditional pricing schemes and diminish information available to banks. Higher prices usually have a greater likelihood of sticking when customers are ignorant of alternatives or the cost of discovering alternatives is relatively high. Information about consumers will be obtained by the company that matches borrowers and banks rather than by the banks themselves. Banks could refuse to participate in these electronic services, but would then run the risk of losing business to those who do.

A price squeeze in banking could lead to an earnings squeeze; indeed, this is already apparent in the banking industry. Net interest income in banking has been flat at best, and banks have begun to recognize the importance of noninterest income such as trading, fee-based activities, and fiduciary operations. For a period of time, banks will also need to maintain high-quality delivery in both the traditional storefront and on the Internet. Thus, as revenues diminish for some banks, the cost of staying close to the technological frontier increases for them all. Small banks have felt the profit squeeze most heavily as their net interest margins have been falling steadily over the last several years; their ability to recoup this leakage from

noninterest income sources is limited, and the return on assets for small banks is now at its lowest since the recession period of 1991. Large banks are facing significant pressure from nonbank financial firms that offer customers complete, personalized financial packages that are updated instantaneously and provide access to accounts at various banks and other financial institutions. Banks, then, may become warehouses that maintain accounts, while other financial firms maintain business where significant fee income is likely to exist.

Recent and anticipated changes in technology raise doubts about in-house ownership of human capital and other assets; is it still the most logical structural model or will outsourcing become a profitable option? Strategically, a large multiproduct bank cannot afford customers who seek low bids on every financial product, so it may attempt further integration of products to maintain its customer base. A bank could provide lifelong full-service financial management to individuals or small businesses. It could also provide guarantees or complete insurance on certain attributes of customers' portfolios. Such strategies would require substantial investment and thus are likely to be the domain of larger banks. Smaller banks could serve a critical role as virtual franchises for larger system managers, with products and services feeding into the network provided by the larger institutions. Smaller banks could also succeed by establishing local or niche products in which they can dominate.

An important outcome of these technological developments is a dramatic change of location and risk level in the system. The added zest at this time is that technologies are not changing slowly and deliberately with gradual diffusion and adoption, but in large clumps with significant, meaningful jumps in the types of technologies offered. Given the speed and ease with which consumers can access different features as they are made available, these jumps take hold and lose favor in the marketplace

more rapidly than in the past. In normal times changes might allow for careful deliberation and selection, but these are neither normal times nor normal risks.

SESSION 4

Changes in the International Financial Structure

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ROBERT Z. ALIBER

Financial Market Liberalization and the IMF and World Bank

Some analysts have argued that premature financial market liberalization that encouraged volatile short-term capital flows was the source of the Asian crisis. This argument mistakes the trigger of the crisis for its source: weaknesses in the banking system that accumulated over several years as a result of banks' engagement in Ponzi finance. The currency situation that triggered the crisis put a halt to the process by which banks continually rolled over their liabilities, which led to large declines in net asset values.

A crucial systemic flaw existed in the financial systems of Asian countries hit with the crisis: administrative control over bank lending rate. In effect, by putting in place a ceiling on bank lending rate, the governments of these countries were subsidizing inferior borrowers who could not have borrowed at the higher, market-clearing rate. By granting these loans, the governments encouraged waste and inefficiencies in production. The administrative ceiling on the lending rate also crowded out the relatively superior borrowers who eventually turned to international banks for credit. Thus, the paradoxical situation emerged in which countries with high saving rates borrowed from others with low rates (such as the United States). Administrative guidance on lending rates—a lack of financial liberalization, rather than too much of it—was responsible for the undesirable performance of the financial system.

The unavailability of sufficient credit to superior borrowers engendered by the lack of financial liberalization led to dependence on foreign capital

inflows. In a system of floating exchange rate, capital flows determine exchange rate movements. A decrease in the rate of inflow leads to a depreciation of the currency, and an increase leads to an appreciation. In the Asian economies, the increase in capital inflows led initially to an appreciation of the currency. However, once the banking crisis broke out and began to spread, the rate of capital inflow began to decline rapidly, thereby leading to sharp depreciation. The foreign exchange crisis thus acted as a trigger for the Asian crisis, which had its sources in the systemic flaws in the financial system.

PHILIP F. BARTHOLOMEW

International Financial Institution Reform

International financial architecture and the reform of international financial institutions are topical issues in policy debates. In March 2000, the International Financial Institutions Advisory Commission—made up primarily of monetarist economists—issued its report, which was subjected to a number of observations and criticisms by the Democratic Staff of the Banking Committee of the U.S. Congress in its own report. The U.S. Treasury Secretary had, earlier in the year, offered recommendations similar to the ones made by the Advisory Commission. The differences between them, however, lie in their tones, details, and political consequences.

The Advisory Commission's tone is highly critical and its detailed proposals impractical. Most important, its emphasis on radically trimming existing institutions and on increasing future foreign assistance assumes, unrealistically, that a consensus is going to develop in the Congress. However, both the Commission and the Treasury Secretary agreed that the International Monetary Fund has lost its original mission of addressing short-term financial crisis; instead, it has been increasingly focusing on long-

term development. Both also agree that, in the latter task, the performance of the IMF is hardly commendable.

However, one of the fundamental flaws of the Commission's report was that it did not provide any rationale for its main assertion about the need for an international central bank. It is interesting to observe that at the time the Bretton Woods negotiations were taking place, both monetarists and Lord Keynes agreed on the need for an international central bank; the U.S. Treasury, however, took a position favoring an international cooperative of central banks. A related issue is the allocation of votes in the international financial institutions. Under the current system, voting weights are tied to contributions, and therefore richer countries have a far greater say in the functioning of these institutions than do poorer, more populous countries. Critics of the IMF often overlook the fact that it is not just the United States that would have to be involved in any major reform initiatives; other rich countries, such as Japan and Germany, will also have to approve them.

The report by the Democratic Staff of the Banking Committee of the U.S. Congress concurs with most observers that the international financial institutions do need reform. In addition to being off the mark at times in their policies, these institutions seem to be highly inefficient bureaucracies whose effectiveness is often questionable. The report also argues that the IMF should return to its core mission of short-term lending and that the World Bank should concentrate on poverty reduction and long-term development. However, it is important to recognize that some of the long-term lending programs that the IMF promulgates are not funded by the United States; therefore, the Congress does not have any significant influence. As for the World Bank, contrary to the Commission's argument that U.S. funding for developmental assistance should be in the form of grants, the report suggests that such funding be obtained as loans. The advantage of loans is that, unlike grants, they do not have to go

through the appropriation process and hence can be quickly disbursed.

The Democratic Staff report also recognizes the urgency of debt relief for highly indebted poor countries, the need for well-functioning banking sectors in emerging economies, and greater transparency and better reporting of financial conditions by international financial institutions and sovereign governments. The process by which such reform can be implemented is a gigantic lacuna within the entire discussion of international financial institution reform, both political and in the reports of various agencies. As a result, it is left to the institutions to reform themselves, based upon what they perceive as the preferences of influential actors in the international financial arena.

DANIELA KLINGEBIEL

Globalization, E-Finance, and Changes in Financial Services Markets: Implications for Developing Countries

Globalization, deregulation, and advances in information technology and the Internet are changing financial services in a profound manner. Reductions in trade barriers, declining transportation costs, and advances in communication technologies are leading to increasing economic integration. Deregulation across markets and geographic areas is changing the financial sector landscape and increasing competition. The production process for financial services is also changing, though at different speeds in different areas, as a result of advances in information technology. For example, a typical over-the-counter or phone bank transaction costs about \$1.50, while the same transaction over the Internet costs only 2 cents.

The provision of financial services in an Internet world can be characterized along four dimensions: economies of scale, commoditization, up-front costs, and network externalities. The potential for cost

reductions through increasing scale has declined in recent years as a result of lower costs of technology. “Commoditization” refers to the extent to which services, such as lending and discount brokerage, can be easily unbundled and standardized. While up-front costs have fallen as a result of technical progress, there are significant barriers in the form of first-mover advantage and reputation building. Both make it difficult for a new service provider of a smaller size to enter the market and compete effectively. Finally, “network externalities” captures the fact that a service’s usefulness increases with the number of users.

The factors discussed above are transforming the structure of the financial services industry. The number of online competitors is likely to increase, though the incumbents may consolidate around a recognized brand name and try to capitalize on their sunk costs and reputation. Mixed conglomerates with interests in telecommunications, computers, and financial services are also emerging.

Changes in the nature and structure of the financial services industry have important implications for public policy. First, with respect to safety and soundness, traditional notions of assessing risk exposure and safety net operations will have to be revised. For example, if a mixed conglomerate were to get into serious financial trouble, what type of safety net operations should be conducted? Second, competition policy will face more challenges in defining and tackling new forms of market power. Technological changes are blurring distinctions along product lines, making it difficult for regulators to implement competition policy, as exemplified recently in the U.S. case against Microsoft. Third, consumer protection issues will become more important. Intensive efforts aimed at consumer education and development of standards in retail payment services, information sharing, and fragmentation need to be undertaken. Finally, heightened e-finance and other changes in the financial services industry will increase the risks of herding and contagion in financial markets, posing significant difficulties for policies aimed at reducing financial fragility.

E-finance can be a huge opportunity for emerging markets, in which it has the potential to improve the quality, extent, and scope of financial services. It also offers more cost-effective delivery. At the same time, e-finance will require countries to reassess their approach to financial regulation. A new approach, cognizant of the fact that these countries generally have weaker governments and institutional frameworks, a less-skilled workforce, and concentrated ownership structures, needs to be developed and implemented.

JAN A. KREGEL

Can European Banks Survive a Unified Currency in a Nationally Segmented Capital Market?

The expectation of many analysts that the euro will become a major challenge for the U.S. dollar as an international currency is misplaced. The basic difficulty is national diversity within the European Economic and Monetary Union (EMU) in regard to traditions, practices, and regulation of financial institutions. This both prevents the creation of a unified capital market and places EMU financial institutions, especially banks, at a competitive disadvantage vis-à-vis U.S. banks in global capital markets.

Behind national diversity in financial market institutions lies acceptance of the principle of “subsidiarity” within the EMU. According to this principle, insofar as a member nation recognizes the standards followed in other member countries as valid, it is free to develop and implement its own. The prevalent heterogeneity hinders European capital markets’ development of strength, efficiency, and depth, as well as limits the range of available financial instruments. In spite of early evidence that the euro is becoming an alternative to the dollar in global capital markets, the maintenance and enhancement of its position will depend on greater capital market unification within the EMU.

Emergence of the euro as a major currency in the global capital markets has as its corollary increased competition between U.S. and European banks. However, the rate of return on equity for European banks is currently lower than for their U.S. counterparts. One reason behind this is the relatively large dependence of banks on lending to businesses; such lending subjects a large proportion of bank assets to full capital requirement weighting. Another reason is that Europeans have been slow to achieve cost reductions through consolidation of their retail banking operations and transformation of commercial banks into investment banks.

The competitiveness of European banks is also hampered by the less developed state of asset securitization. In the United States, banks have been able to reduce their required regulatory capital by removing 100 percent weighted loans from the balance sheet by selling them through special purpose vehicles to capital market investors as collateralized loan obligations. Development of such a market for the euro zone would require harmonization of financial market regulations within the EMU. Indeed, if European banks cannot engage in the same financial engineering in the euro within the EMU as they can in dollar markets, the euro will never improve its position vis-à-vis the dollar as an international currency.

While several analysts have drawn parallels between the monetary unification of the United States and the path followed by the EMU, there are substantial differences. First, in the United States, control over the issue of currency is vested in the federal government; by contrast, in the EMU, this control has been handed over to a monetary authority that lacks any political legitimacy and is legally beyond political control. Second, the EMU’s principle of “subsidiarity” is in stark opposition to that of the United States, where a federal agency enforces common regulations on all interstate commercial and financial transactions. The success of the euro and the prospects of European banks in the global market will thus depend on the extent to which financial market conditions can be harmonized within the EMU.

P a r t i c i p a n t s

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