



THE 1990 PER JACOBSSON LECTURE

**The  
Triumph  
of  
Central  
Banking?**

**Paul A. Volcker**

WASHINGTON, D.C.  
SEPTEMBER 23, 1990

THE 1990 PER JACOBSSON LECTURE

**The  
Triumph  
of  
Central  
Banking?**

**Paul A. Volcker**

WASHINGTON, D.C.

ISSN 0252-3108

Editor: Esha Ray

Produced in the Graphics Section  
of the International Monetary Fund

## Foreword

The 1990 Per Jacobsson Lecture, entitled "The Triumph of Central Banking?" was delivered by Paul A. Volcker at the Blue Room of the Sheraton Hotel in Washington on Sunday, September 23, 1990. Mr. Volcker is Chairman of James D. Wolfensohn Incorporated and Frederick H. Schultz Professor of International Economic Policy at Princeton University. Sir Jeremy Morse, Chairman of the Per Jacobsson Foundation, presided over the meeting, the proceedings of which are presented in this publication.

The Per Jacobsson lectures are sponsored by the Per Jacobsson Foundation and are usually held annually. The Foundation was established in 1964 in honor of Per Jacobsson, the third Managing Director of the International Monetary Fund, to promote informed international discussion of current problems in the field of monetary affairs.

The lectures are published in English, French, and Spanish and are distributed by the Foundation free of charge. Through the courtesy of other institutions, other language versions are also issued from time to time. Further information may be obtained from the Secretary of the Foundation.



# Contents

|  | Page |
|--|------|
| Foreword .....   | iii  |
| Opening Remarks  |      |
| <i>Sir Jeremy Morse</i> .....  | 1    |
| The Triumph of Central Banking?  |      |
| <i>Paul A. Volcker</i> .....   | 3    |
| <i>Sir Jeremy Morse</i> .....  | 18   |
| Questions and Answers  |      |
| <i>Paul A. Volcker</i> .....   | 19   |
| <i>Sir Jeremy Morse</i> .....  | 25   |
| Biography .....  | 27   |
| The Per Jacobsson Lectures .....   | 28   |
| The Per Jacobsson Foundation: Founding Sponsors,<br>Board of Directors, and Officers ..... | 30   |



# Opening Remarks

## **Sir Jeremy Morse**

Ladies and gentlemen: The Directors of the Per Jacobsson Foundation felt they were very lucky when they secured Mr. Paul Volcker's agreement to give the twenty-seventh Per Jacobsson lecture, and this huge audience shows that you think you are lucky, too. And Paul, I think you have attracted a bigger audience than the Per Jacobsson lecture has ever had.

There is no need for me to tell you about Paul Volcker—not because his biography is given in the program, but because you all know him. Let me only mention before he begins that we are going to follow our usual format for the lecture. After Paul has given his lecture he will answer questions. You can send those up, if you wish, written on the sheet at the back of your program. Indeed, we already have a question. But I think we will give—and Paul also would like to give—preference to questions from the floor.

Without any more ado, I'll ask Paul Volcker to present the Per Jacobsson lecture.





# The Triumph of Central Banking?

**Paul A. Volcker**

Chairman Morse, members of the Per Jacobsson Foundation, ladies and gentlemen:

I realize there is great wisdom in the old adage that what you think depends upon where you sit. In that spirit, let me concede at least the possibility that my own perceptions of central banking have changed since the days I practiced that honorable profession. Nonetheless, I am convinced there is objective reality in my impression that central banks are in exceptionally good repute these days.

I don't mean that central bankers personally have become modern folk heroes. That would be too much to expect. But somehow they and their institutions command more attention and respect as key performers on the stage of economic policymaking.

What we think of as central bankerly qualities, an emphasis on restraint and continuity and prudence, seem to have come more in style. In a turbulent world, the importance of restoring a sense of stability is more clearly recognized; that recognition in itself turns attention to central banks and monetary policy. Indeed, some now argue forcibly that price stability should be the principal goal—perhaps the only goal—of monetary policy. That thought was quite foreign to the earlier postwar generation, at least in the United States and many other countries.

No doubt, Per Jacobsson, who did so much to develop and sustain the ethos and practice of international central banking in the early postwar years, would look upon all of that as entirely fitting and proper. My distinguished predecessor as Federal Reserve Chairman, Arthur Burns, would certainly share that sense of satisfaction, but tinged with a good deal of surprise. After all, in delivering a Per Jacobsson lecture a little more than ten years ago, that wise scholar and practitioner described his anguish about the apparent impotency of central banks. He argued that, amid more powerful political, social, and economic forces, they had been unable to deal with the inflationary bias of the time. He was not optimistic about an early change in that situation.

I readily confess I have none of the apparatus of modern scholarly research to document the renaissance of central banking—no count of

column inches of newspaper space, no public opinion polling, no analysis of sound bites on television. But it seems to me that convincing evidence is all around us.

Take the intense discussions about the prospective economic and the potential political unity of the European Community. The key issue seems to be how to construct and maintain a strong and independent Community central bank, dedicated to the stability of the currency as its first priority. I have been interested, too, in observing the emphasis that the authorities in Eastern Europe have attached to creating strong central banks as an essential component of a market economy.

In some ways, that emphasis seems surprising. After all, capitalist economies historically developed long before central banks became at all common. There are today much more fundamental requirements for a market system—respect for private property, decentralization of authority and decision making, useful accounting systems, commercial law, and competition. I can only conclude that, in observing developments among Western economies over the past few decades, the leaders of Eastern Europe share the sense that, in today's world, questions of price stability and financial performance will bear heavily on their success. They believe the effectiveness of their new central banks will be critical to the outcome. In that same vein, the structure and appropriate degree of independence of the central bank has become a key issue in both the U.S.S.R. and China—and among some of the individual Soviet Republics as well!

What intrigues me is why the status of central banks is higher today than only a decade or so ago, the extent to which those institutions are really in better control of our financial destinies, and what that all implies for sustaining growth and stability.

#### THE REPUTATION OF CENTRAL BANKS

No doubt, several factors have contributed to enhancing the reputation of central banks. However, given their responsibility for monetary policy, shifting perceptions with respect to the importance of price stability must have been the most important.

Nearly all market-oriented economies, in greater or lesser degree, experienced cumulative and accelerating inflation through the 1970s and into the 1980s. For a while that inflation could be explained as an unexpected consequence of special factors, notably the successive oil crises. In the minds of some, central banks themselves were importantly responsible, not least in permitting excessive growth of world reserves during the transition to floating exchange rates. Moreover, the widely accepted intellectual doctrine that some inflation was a reason-

able trade-off for growth and employment tended to dilute efforts to deal with the situation.

All those rationalizations became less and less persuasive as basic economic performance—growth, employment, and productivity—seemed to deteriorate in the face of high and accelerating inflation. Exchange markets were unstable and a speculative atmosphere in many markets heightened the sense of foreboding.

In those circumstances, the monetarist refrain that inflation is, after all, in the end a monetary phenomenon struck an increasingly responsive chord among the body politic. In effect, central banks began to have a stronger platform for effective action.

### *The Fight on Inflation*

Without belaboring all the hesitations and the false starts, all the uncertainties and questions, by the end of the 1970s and the early 1980s a number of the leading central banks did act more forcibly against inflation. They acted in the only way they effectively could, by restricting the overall growth of money and credit.

It wasn't very fancy or very precise. Theorizing and empirical analysis about the stable and predictable relationship between money and inflation or the nominal GNP seemed to break down in the United States and other countries. In deregulated and increasingly fluid domestic and international markets, even determining an appropriate statistical definition of money became more difficult. It was sometimes even harder to maintain close control of those aggregates.

More significantly, as the restraint took hold, one country after another was caught up in recession or an extended period of stagnation.

But, in the end, inflation did recede. Then well before the middle of the decade, expansion got under way, first strongly led by the United States. That expansion has lasted into the 1990s; it has become the longest peacetime period of sustained economic growth on record. Moreover, the major countries with the least inflation—Japan and Germany—now seem to have the most vigorous growth, the strongest investment performance, and the best productivity among the major nations.

### *The Ability to Act*

The ability of central banks to take the initiative seemed more impressive, I think, because in many countries monetary policy, to use the common American colloquialism, seemed the "only game in town." That was surely an oversimplification, but it was true that, in

the face of political pressures and doctrinal controversy, the use of fiscal policy to help manage demand was sharply impaired.

The United States itself has been a prime case in point. To this day, a political impasse has permitted inappropriately large fiscal deficits to continue right through a period of business expansion notable for its length—and notable also for an abysmally low level of savings, heavy dependence on foreign capital to support even inadequate levels of investment, and a now chronically high cost of capital.

My country was not, however, alone in finding it difficult to conduct fiscal policy flexibly, or to reach and enforce decisions on other politically charged elements of economic policy. In that context, the relative professionalism and flexibility of central banks has by contrast seemed more impressive.

### *Professionalism, Continuity, and Cooperation*

Those qualities have enhanced the influence and stature of central banks in other respects as well.

The central banking community internationally at its best has been marked by a special sense of collegiality, mutual respect, and collective responsibility. Per Jacobsson himself did much to develop those qualities in his years at the Bank for International Settlements and the International Monetary Fund when the Bretton Woods system of fixed exchange rates was in full flower.

Of course, the success of the Bretton Woods system overtly depended on monetary cooperation—in the end, more than could in fact be delivered. Part of the attraction of floating exchange rates to many was that central banks could have more autonomy—they would somehow be less dependent on each other. I think it's fair to say that for a while central banks acted that way. But the events of the 1980s have made it as clear as ever that, in a world of integrated trade and free capital movements, there is no escape from the need to work cooperatively.

Once that became understood, the ability of central banks to communicate rapidly, to reach operational understandings among themselves, and to facilitate broader intergovernmental agreements have seemed particularly useful. The collective response to the Latin American debt crisis that threatened the stability of the international banking system in the first half of the 1980s is only the most obvious case in point. Almost throughout the decade central banks pioneered in reaching agreements to coordinate regulatory approaches internationally, climaxed by the recent Basle accord to standardize for the first time minimum capital standards for internationally active banks.

In assessing the role of central banks today, one more subtle point seems relevant to me as well. In a good many countries, those institutions have long been an important center for independent policy analysis and professional training, sometimes reaching beyond their immediate operational responsibilities. To take just two examples from different hemispheres, think of the role played for decades by the Bank of Italy or the Bank of Mexico in developing talent and in fostering a high degree of intellectual independence in their countries. That kind of performance could well provide an attractive model for other nations at an early stage of development or undertaking the transition to a market economy.

In passing, I might add that I find it interesting that, after lying dormant for years, the issue of greater formal independence for central banks of both the United Kingdom and France has been raised in recent years. While those governments have not seen fit to make legal changes in the status of their central banks, the debate seems to me symptomatic of the greater importance attached to strong central banking institutions.

### *The Relevant Questions*

A conclusion that central banks happen to be in relatively good repute today isn't the same thing as convincing evidence that those institutions have now, in fact, equipped themselves to assure greater price and financial stability in the years ahead. To make that case will require something more lasting than a demonstration that, at one perceived point of crisis, they could squeeze a good deal of inflation out of the system. Nor is one exceptionally long period of economic expansion—a period that followed deep recession—conclusive.

We are all aware the staying power of that expansion is being tested right now, particularly in the United States. Moreover, even during the years of growth our own performance has been marred by massive imbalances domestically and internationally, low savings, sluggish investment, unsustainable dependence on foreign capital, and slow productivity growth.

We should clearly recognize most of those difficulties lay beyond the reach of monetary policy, however intelligently managed. Given all the other hazards of economic life (including now the turmoil in the Middle East), it would seem to me not just simplistic but flatly wrong to suggest that the risk of a downturn in the economy, however mild, can be laid to monetary policy.

The relevant questions about monetary policy and central banking lie elsewhere, in matters more directly under their influence and

control. I believe those matters, taken together, will indeed have an important bearing on our collective prospects for productivity and prosperity over time, even though monetary and banking factors cannot be the whole story.

### *Areas of Concern*

My concerns lie in three areas: prospects for price stability, the integrity and solidity of our financial fabric, and the volatility of exchange rates.

Take inflation itself. In most of the English speaking world, as well as in some other industrialized countries, the rate of price increase had returned to the area of 4 or 5 percent—ranging as high as 10 percent—even before the latest oil crisis. That is true even though unemployment in the industrialized world, years after the last general recession, is still running significantly higher than earlier in the postwar period.

Even now, few of the middle-income countries in Latin America or elsewhere that had to cope with a crisis in external financing have been able to restore even a semblance of price stability. In the face of that failing, their growth prospects remain uncertain. In Eastern Europe, in China, in the U.S.S.R., we simply will not know for some time whether they can manage the transition to a market economy without becoming mired in inflation.

All in all, I think we are forced to conclude that even the partial victory over inflation is not secure.

At the same time, it is clear that the past decade has seen volatility in domestic and international financial markets, and strains on financial institutions, entirely out of keeping with earlier postwar experience. Indeed, nothing like it has been seen since the end of the 1920s and the 1930s—years, to put it mildly, of distinctly unsatisfactory economic performances.

### *Growth, Stability, and the Financial Structure*

I am of the generation educated in economics in the aftermath of the Great Depression. We were schooled in the dangers of the financial crises that preceded and accompanied that dismal period. The natural reaction in the private sector was to maintain highly conservative financial practices for years to come. In terms of public policy, in the United States particularly, regulatory powers and the federal “safety net” protecting banks and bank depositors were greatly strengthened. One result was to more strongly entrench compartmentalized and spe-

cialized financial institutions and to insulate them, in some respects, from the rigors of price competition.

The quarter century after World War II, in the United States as elsewhere, was characterized by unprecedented growth and remarkable stability, all seemingly buttressed by rather stable and orderly financial markets and great institutional strength. At least in retrospect, national authorities seemed more in control of their national economic destiny. In the heyday of Keynesian thinking, fiscal policy had some flexibility, and seemed generally to have predictably useful results.

For much of that period, monetary policy was thought to be distinctly subsidiary. Moreover, most central banks, in contrast to recent years, often resorted to selective credit controls and other administrative measures.

However, it was also true that economies did, in fact, usually respond promptly to changes in the supply of money and the availability of credit. Recessions were mild, if rather frequent. By recent standards, exchange rates and interest rates varied relatively little and, on average, the latter were historically low. Failures of important financial institutions were exceedingly rare, and they were limited among non-financial businesses as well.

In retrospect, it is clear that those were good days for central banking. Whether by design or not, the compartmentalization and specialization of financial institutions, and legal and customary limitations on interest rates paid by banks and savings and loans, made the economy sensitive to what we now think of as relatively small policy adjustments. Inflationary tendencies were pretty effectively limited. The inherent strength of financial institutions minimized the possibility that episodes of strain could invite systemic difficulties.

### *The Revolution in Financial Markets*

Plainly, by the 1960s, those arrangements began to come under pressure. For one thing, as international markets for both goods and money grew, the requirements for domestic growth and stability more and more were perceived as at odds with fixed exchange rates. Increasingly, the United States, the country that had come to epitomize open financial markets, itself turned to administrative controls to defend the dollar in international markets.

Before much time had passed, the same market and technological changes that lay behind the explosion in the volume of international transactions made those attempts at administrative control less and less effective. Over the same time period, the new technology began



breaking down the conventional and regulatory compartmentalization of domestic financial markets.

All that had profound implications for both commercial and central banks. With open international markets and domestic institutional innovation, the whole apparatus of administrative controls—selective credit controls, ceilings on total bank credit, official and customary limits on bank interest rates, and the like—became increasingly unacceptable. In part, they didn't any longer work very well. To the extent they did work, it was at the expense of greater economic distortions. The impact on particular institutions and segments of the market—particularly on commercial banks and housing—seemed more and more unfair.

For many commercial banks, the implications of the new developments seemed clear enough. One endemic concern was greatly diminished: the concern that, because of arbitrary ceilings or regulatory fiat, they would be unable to raise money at any price to fund their lending. Consequently, they felt internal liquidity could be sharply reduced. There would be no need to rein in aggressive lending policies for fear of lack of funds. The money could always be found, at a price, the refrain went, if not from one's own depositors then in New York or London or Tokyo—a perception reinforced in the 1970s by the flood of petrodollars.

To be sure, the risk of paying much higher interest rates if money tightened was there, but that risk could be hedged or passed on to the borrower by refusing long-term interest rate commitments. In the more competitive environment, relaxation of traditional credit standards and higher leverage seemed appropriate or necessary to maintain profitability.

Those competitive pressures were strongly reinforced as new technology and financial innovations made it easier for strong borrowers to raise money outside the banking system. More and more, strong business borrowers bypassed the officially protected and supervised banking system altogether, driving its institutions to weaker credits.

Of course the pace and intensity of these changes varied, country by country, but the tendencies were similar.

In the view of most practitioners and economists, the process was welcome. For a while at least, the competitive and innovative opportunities opened up by more flexible markets seemed to spur large gains in efficiency. Many financial institutions were able to profit handsomely in more volatile markets. There was a great deal of mutual congratulation about the ability of weaker borrowers to obtain credit.

### *The Implications for Monetary Control*

In that environment, the doubts raised by some inside or outside of central banks about the potential loss of control by the monetary authorities and the explosion of debt were overwhelmed by the market and political forces pushing toward deregulation. In the end, central banks would have to accommodate their operations to the new market environment rather than the reverse.

That meant that they would have to rely more fully on the classic indirect means of monetary control—that is, control over bank reserves and the monetary base. The clear implication was that market interest rates would have to be free to rise to whatever level necessary to equilibrate the demand for money with the supply. At the same time, the new market situation and the inflationary environment meant that the restrictive effect of any particular level of the money supply and of interest rates became increasingly difficult to judge.

I don't want here to review the history of the way the new approach was implemented in the United States or elsewhere during the 1980s.

Suffice it to say that the record is quite clear that, despite varied efforts here and abroad, central banks did not discover any monetarist holy grail. In the end, no country in which inflation had become embedded seemed able to moderate that inflation without a painful transition period of high unemployment, recession, and profit squeeze.

One moral of that story seems to me amply clear: procrastination in dealing with inflationary pressures is twice damned. Beyond a certain point, the inflation itself distorts the economy. And once inflation is ingrained, the dislocations entailed in restoring stability are apt to be larger.

### *Unfinished Business*

Difficult as the transition was, by the middle of the 1980s there was convergence toward greater price stability among almost all industrial countries, setting the stage for a long period of recovery and growth. In that sense, the concerted attack on inflation can reasonably be termed a success. But it seems to me equally true that that effort has left in its wake a large trail of unfinished business for central banks and other economic policymakers alike.

### *Threats to the Financial System*

One concern is the stability and strength of commercial banks and the financial system more broadly.

Financial market participants, of course, could see that more flexible and volatile markets themselves created new risks, particularly of a mismatch of maturities and currencies among their assets and liabilities. Those risks spawned enormous effort and ingenuity to find effective hedging devices, both for financial institutions themselves and for their clients.

Viewed on their own terms—that is, protecting particular institutions from particular specified risks—those efforts had substantial success, and they rapidly became an important source of profits for the innovators. What was less generally realized is that, with more and more hedging of known and specific interest rate and exchange rate risks by financial institutions, a different kind of risk, and a more insidious risk, developed to undercut their strength. Specifically, in the wake of the debt explosion many financial intermediaries have come to find more and more of their customers in severe financial difficulty, increasingly, it is now apparent, to the point of insolvency. In the end, the financial system as a whole, and individual institutions within it, can't be effectively hedged against the failure of large numbers of important clients.

There is a tendency to trace weaknesses in the credit structure to special factors—excessive enthusiasm in recycling petrodollars, the magnitude of the recession in the early 1980s, the collapse of the oil price in the middle of the decade, and so on. But surely, with so many specific problems converging after years of expansion, there have been more general factors at work.

One of those factors has been the intensity of the competitive pressures released by deregulation, globalization, and new technology. Another has been lingering inflationary expectations, particularly in real estate markets, encouraging speculative over-leveraging and over-building even in the face of historically high real interest rates. We are coming to understand that businesses heavily dependent on borrowed money and foreign markets cannot economically hedge exceptionally wide swings in interest rates and exchange rates year in and year out.

We in the United States are certainly now conscious of the perverse incentives, particularly in the thrift industry, spawned by government programs to protect depositors. And no doubt, the structure of large rewards for short-term performance in financial markets has diverted attention from the ultimate consequences of lax credit evaluations: those rewards were, in fact, often largest for those acting primarily as middlemen in arranging financing, leaving most of the credit risk to others.

In the circumstances, what has been surprising to me is that the evident weaknesses in the credit structure could persist so long with-

out more serious adverse consequences for economic activity. That, in a way, is surely a tribute to the effectiveness of the federal "safety net" in the United States (and comparable approaches, formal or informal, abroad) in diffusing points of strain and in maintaining depositor confidence. Perhaps more fundamentally important, aggressive risk-taking and leveraging could be sustained for quite a long time in the midst of good economic growth.

There are, however, limits to the rate of economic growth—limits determined in the end by productivity. Those limits are reflected in inflationary pressures and capacity limitations. As growth has slowed in the United States, so has the capacity to service the sharply higher levels of debt. When large deficits tend to keep interest rates high, the potential squeeze is intensified.

One clear danger is that a natural self-healing process of pulling back from excessively aggressive lending practices here and abroad could spill over into a mutually destructive retreat from ordinary prudent credit extensions. That is the kind of potentially contagious behavior that could turn stagnation or a mild recession into much more serious difficulties.

### *The Volatility Problem*

Those risks interact with a third major area of concern for central banking—the extreme volatility of interest rates, and even more exchange rates. I sense that the damaging effects on international investment, trade, and ultimately productivity have been significant.

I realize research economists have not yet reached a consensus on that point. I realize, too, that as a practical matter, changes in exchange rates induced by changes in monetary policy can be the effective cutting edge of that policy. Nonetheless, there is ample reason for concern.

We know of strong protectionist pressures fostered by the sense of unfairness and uncertainty fostered by extreme exchange rate fluctuations. We can see that exaggerated and speculative movements in exchange rates are quite out of keeping with underlying shifts in competitive circumstances. And any apparent benefits for monetary policy at particular times for a particular country are more likely as not to run against the interests of others.

### SOME BASIC CONVICTIONS

I am acutely conscious that it's much easier to describe problems than to set out convincing solutions. However, I do come away from

the experience of the 1980s reinforced in some basic convictions about the responsibilities of a central bank both in dealing with inflation and in exercising surveillance over the financial system.

### *Dealing with Inflation*

Certainly our collective experience strongly emphasizes the importance of dealing with inflation at an early stage, before it assumes a momentum of its own with deeply embedded effects on expectations.

What we in the United States discovered in the 1980s, and what other countries have discovered before and since, is that at a certain point in the inflationary process, public opinion will support strong policies to restore stability even though those policies seem to entail a harsh short-term cost. What still may be less well understood is that the best results will be achieved if an inflationary threat is dealt with at an early stage, before the public is fully alarmed, and that procrastination only invites greater difficulty.

I believe the recurring difficulty in acting before inflation builds momentum could be reduced if central banking statutes in the United States and other countries stated more explicitly that the main continuing purpose of monetary policy should be the stability of prices. That would follow a pattern already set in Germany.

No doubt the manner and intensity with which that goal is pursued at specific times will and should be influenced by surrounding circumstances. For that reason, I don't have much faith in setting out specific targets for reducing inflation; the pseudo-precision implied would risk undermining rather than reinforcing credibility. But, the experience of recent years, does suggest that vacuous admonitions that a monetary authority be all things to all men—for growth, full employment, and stability—risk confusion and misunderstanding about what a central bank can really do.

What matters more than any words in that respect is the pattern of central bank reactions over a period of time in a variety of circumstances. That is one reason that the approach toward the present pressures in the credit market is so important.

I know there are some—including overextended debtors and their creditors—in a mood to welcome “a little inflation” as a solvent for their difficulties. Many more suggest that central banks, and most especially the Federal Reserve, are precluded by financial fragilities from any effective effort to resume progress toward price stability.

I question the underlying premise of those views. No doubt, in gauging its policy posture in an already stagnating economy, a central bank will want to consider whether a tendency to contract lending is

not exercising an unduly restraining influence on the economy. But an attempt to validate imprudent lending practices by excessive monetary expansion, even if seemingly successful in the short run, would surely soon breed more excesses. In the context of the situation in the United States, a sense that the inflationary process was to be tolerated, or even aided and abetted, would all too likely drive up long-term interest rates and drive down the dollar, potentially adding to the difficulties in the financial system.

How much more constructive, in this country, that those strains, insofar as they are related to interest rates, be relieved by dealing directly and effectively with our budget deficit rather than by risking more inflation.

### *The Central Bank and the Financial System*

What seems to me beyond dispute, given the current situation, is that monetary policy and the structure and condition of the banking and financial system are intertwined. The reciprocal influences and interdependence make a compelling case that central banks have a strong voice and authority in regulatory and supervisory matters.

That conclusion, with respect to the United States, is reinforced by the fact that our central bank is the natural and strongest point of contact with foreign central banks, which typically exercise those supervisory responsibilities in whole or in major part in their own countries.

I do not want to deny that there are other legitimate public interests in regulatory policy, not least of finance ministry. Ways and means can be found to bring a variety of points of view to bear. But I would insist that neither monetary policy nor the financial system will be well served if a central bank loses interest in, or influence over, the structure and performance of the financial system.

The clear challenge for central banks and their colleagues in the regulatory process over the next few years will be to reinforce confidence in the banking structure while weaning it away from excessive reliance on official support. Nowhere is that effort more critical than in the United States. However, there is enough evidence of similar problems in other places to make evident that the problems are transnational. There is now, and will remain, a strong need to coordinate mutually reinforcing approaches.

To my mind, there is too much sloganeering in this area—deregulation against re-regulation, market discipline against governmental protection.

The fact is we cannot turn the clock back to compartmentalization and credit or interest rate ceilings; the enormous potential of modern technology won't permit it. Neither can we responsibly risk "pulling the plug" on deposit insurance, abruptly narrowing its scope or increasing its cost to the point that insured institutions cannot recover competitive strength.

The fact is that it will help to further deregulate when that will facilitate the competitive strength and stability of depository institutions. In the American context, the time has long since come for abolishing artificial geographic boundaries for banking, encouraging in that way more diversified institutions, including some with a strong base for world-scale operations. We can more straightforwardly permit our bank holding companies to participate in a greater variety of financial services where the risks are limited or manageable.

At the same time, we ought to recognize there are areas inappropriate for banking—and therefore safety net support—because of risk and conflict of interest. The kind of participation in real estate development that crippled so many thrifts is an apt example.

Those structural questions are matters of law in this country, but there is a lot the regulatory authorities will need to do within their own competences. Basically, a delicate balancing act is required to deal with the evident risks and excesses. Circumstances could well arise in which official support might be necessary and justified to head off failure, instead of picking up the pieces later. But such an approach will need to be complemented by encouraging further efforts by banks themselves to strengthen capital and, if appropriate, by stern disciplinary action with respect to lax lending practices and conflicts of interest.

Some of that may require new legislation. It will certainly require intelligent and able supervisors, sensitive to competitive realities and the dangers of overreaction on the one hand, but also to the need for discipline on the other.

One of the competitive and market realities is that, looking ahead, dealing with points of strain will require more knowledge of, and a degree of surveillance over, some nonbank financial institutions. Increasingly, an international approach will be needed as well.

That is demonstrably true with respect to capital. Clear understandings as to the appropriate allocation of official responsibilities for institutions operating internationally may be critical in emergencies. In all these areas, an environment of mutual exchange of information in a context of mutual confidence will be important.

## CENTRAL BANKING "INDEPENDENCE"

I think it a natural corollary of those points that an effective central bank must be a strong central bank, with substantial autonomy in its operations and with insulation from partisan and passing political pressures.

As a strong advocate of the independence of central banks within government, I hope I will not be misunderstood if I also emphasize that the ability to reach independent judgments about monetary policy must not imply isolation.

In the broadest sense, a central bank operating in an open democratic society will need to develop and sustain its basic policies within some broad range of public understanding and acceptability.

But there are much more specific considerations as well.

Inevitably, the powers and responsibilities of a central bank intersect with those of the principal political authorities. Historically, the most important particular point of intersection—and the traditional reason for central bank independence—has been government financing. The budgetary debate in this city of Washington right now makes the point that the implications extend far beyond the narrow question of whether or not the central bank buys securities directly from the government.

Looking ahead, the area of exchange rate policy may be as critical. Governments will not—practically they can not—divorce themselves from decisions on appropriate exchange rate regimes or, beyond some limits, actual exchange rate levels. At the same time, the conduct of monetary policy inevitably influences exchange markets, and, if the exchange rate is fixed, that influence must necessarily be directed toward maintaining narrow limits of fluctuation. At the extreme, a rigidly fixed exchange rate will, of course, imply loss of monetary policy autonomy.

We see that process at work today with respect to the European Monetary System. At the limit, when the effort to create a common currency is successful, the separate national central banks will find their identity submerged in a Community-wide institution.

*A Vision for the Future*

I might dream of a day of final triumph of central banking; that is when central banks are so successful in achieving and maintaining price and financial stability that currencies will be freely interchangeable at stable exchange rates. Then, as in Europe today, we could discuss merging independent monetary authorities into a collective central bank designed to preserve and institutionalize a stable common currency.



That is not for my lifetime—nor for any of yours.

But I do have the sense that central banks, working alongside their colleagues in ministries of finance, will need to give greater priority to the need for more exchange rate stability in the years ahead.

We have been reminded in recent years of the obstacles and difficulties that surround such efforts. But it also seems to me that the things I have emphasized today—the need to maintain progress toward price stability and financial strength in all our countries—must be the cornerstone for that larger work.

\* \* \*

*SIR JEREMY MORSE:* Thank you very much, Paul, for that marvelous lecture. I think the great thing about it was the blend of intellectual insight and practical experience. And it leads me to say one thing which Paul was too modest to say. The great deflation of the 1930s with which Per Jacobsson was so involved was not very well handled, and in the event the politicians and the commentators were able to put much of the blame onto the central banks. Now, if in the 1980s there was a successful disinflation leveling out into a sustained period of recovery, and if at the same time the reputation of central banks were enhanced, then no one takes more credit for that than Paul Volcker. [Applause]

## Questions and Answers

*Following the presentation, Mr. Volcker answered questions from the audience.*

*Question: The reputation of central banks, I think, has been greatly enhanced by international cooperation. I wonder if you could say more about that, particularly within Europe. The debate over a European central bank has really focused on internal issues rather than on the impact this will have on Europe's clout internationally. Do you think it will be easier to cooperate with Europe with a European central bank, or would you prefer dealing with individual central banks who perhaps have more individual power?*

*Mr. Volcker:* I think in this area I retain the hope that it will make it easier if you have an effective, centralized authority in Europe. One source of difficulty in dealing, let's say, with exchange rate pressures through complementary changes in monetary policy is that you have a lot of people involved on the other side of the table. As a practical matter, the way circumstances are today the principal partner in worrying about exchange markets vis-à-vis Europe and the dollar will be the Bundesbank and the mark, but it in turn, and we, have to consider how any action to some degree will affect all the other currencies and their positions within the EMS. If you can by one stroke eliminate those kinds of concerns—I don't say eliminate all the problems, there are lots of problems in achieving that kind of coordination—that I think would be a step in the direction of making it easier. I hope it would be one factor paving the way toward a little more coordination of policies trilaterally, helping to produce a more stable exchange rate situation. I would think that is one of the hopes that would arise out of this world.

*Question: That was an excellent speech, but I think it has a bad title as far as the United States is concerned. Most of these points you have recognized in your comments, but it seems to me that here the triumph has been somewhat limited by, first, poor fiscal policy; second, the need to walk a very narrow path between foreign and domestic requirements; third, the continuing, albeit somewhat reduced recently,*

*criticisms of the Federal Reserve's policies; and, finally and most importantly, the increased fluidity of capital and credit in the international markets. Have you any additional comment on this?*

*Mr. Volcker:* I would just emphasize that I'm not sure you read the title correctly. It has a question mark after it. I have the same questions that you do. The question mark is significant, and the burden of what I'm trying to say is the kind of questions you raise. The questions are very relevant and we haven't solved them yet.

*Question:* *Allowing for the fact that the buildup of an enormous national debt in several countries has led to a situation in which, let's say, 15 or 20 percent of fiscal expenditures are devoted to the service of the debt, do you think that this fact implies over time a risk that national debt should be contracted at, let's say, 8 or 9 percent for a long period, a risk that this national debt should be converted? And do you think that the time is approaching when the perception of that risk is becoming wider?*

*Mr. Volcker:* What do you mean by the national debt being converted? Is that a euphemism for not being paid or something?

*Question:* *Something like that, or not paid at least at 8 percent or 9 percent, or converted into other kinds of bonds carrying smaller interest rates.*

*Mr. Volcker:* Let me say that so far as the United States is concerned—and I think the other industrialized countries as well—we are far from that point. If you ever got to the point where that question is really seriously canvassed, I think the game has been largely lost. You would have a kind of situation that makes it extremely difficult to restore confidence and stability. I think your question is not irrelevant in the sense that that kind of question has arisen in some countries in Latin America, which unfortunately have been burdened with very heavy debt. The debt service is so large that it poses difficult transfer problems within the country, problems of whether they can get taxes, in effect, high enough to pay for ordinary goods and services and investment plus the interest on the debt.

I don't want to suggest that we or our leading economic partners are in that situation. I would worry more about the amount of private debt than public debt. The problem on the public debt side to me is largely the rate of increase. The financing of the increase in public debt has not yet begun to impair our capacity to service it, but the increase has an impact on the market and it makes interest rates higher than they

would otherwise be. It increases the cost of capital—I am thinking primarily of the United States—it weakens the ability to invest, it damages productivity, and it makes us dependent on foreign capital—all those things which I think are inimical to our economic performance, but not because we are yet even approaching the point of our inability to service it.

*Question: I wondered, in listening to the very, very strong case you make, which I think everyone will sympathize with, for a strong and independent central bank in relation to monetary policy and interest rates and the stability of the financial system, you didn't say a great deal about exchange rates. Now, I wondered if you feel that the same logic applies and that there is a strong case for saying the central bank should have the same degree of independence and authority in that field?*

*Mr. Volcker:* Well, I don't think there is, and I better explain that answer with some care. I was trying to hint—and I did nothing more than hint—that at the end clearly there are points at which central bank policy intersects with vital considerations of public policy generally, and I think the exchange rate is a prime case in point. I think, frankly, we may have seen some of that in Germany in connection with the exchange rate at which the East Germans were going to convert in combining with West Germany. There was much discussion as to what that meant for central banking independence. It seemed to me it was a little beside the point, frankly, because the Government had a perfectly legitimate interest, an overriding interest, in what that exchange rate was going to be. And I don't see that that really impaired the monetary policy responsibilities of the Bundesbank.

I would transfer some of the flavor of that answer to exchange rates more broadly. If there is going to be an international decision to fix exchange rates, at the extreme, that is not just going to be a decision, quite properly, among central banks. Once a decision is made, it will have a big influence on how central banks behave, and I think they should have independence in how they behave in that context. But the context will have been importantly determined by the governmental decision, and I don't think we can escape that in a democracy, or in an effectively operating political entity of any kind. At the extreme—again, as in Europe—if you fix the exchange rate tightly enough the central bank disappears, or at least the individual central banks disappear.

*Question: When you look at the present discussion in Europe about the creation of a European system of central banks, do you think it is*

*possible to have an effective single European central bank without a single political authority for it to be accountable to?*

*Mr. Volcker:* That is an interesting question. I had an ironical paragraph or two in my draft kind of addressing that point. I decided it was too long and too fancy and I took it out, but my point was to cite the possibility as evidence for the prominence of central banks. I don't know when else in history people have discussed creating a central bank before the symmetrical political authority was created. Be that as it may, I personally think the central bank could be created in the context of the discussion that is taking place. It may precede further development of the political authority. There is some political authority now, although it is a little fragmentary. I would think over time the decision to create the central bank, with all that means for economic sovereignty as the issue is posed, implies subsequent decisions in the political area to strengthen the political cohesion and governance of Europe, and that you would not forever have a situation of disparate and weak political authorities and a strong central bank. It doesn't seem to me to be sustainable over decades, but as part of a transition process, I suspect it can be done.

*Question:* *What probability do you think there is for the countries of Eastern Europe joining in the common central bank in Western Europe? Do you think that there might be some kind of a loose affiliation in the near term and then in the longer term having them join, or do you see something more dramatic in the near term?*

*Mr. Volcker:* I don't think I'm the one to deal with that question. I'm not close enough either to developments within the Community or Eastern Europe. I observe with great interest, but I don't think it is fair for me to comment in great detail.

I suspect, having said that, that there will be enough problems in getting a central bank started and a common currency started in a relative homogeneous area, the European Community, that trying at this stage to attach Eastern European currencies would be a complication. I also think that the Eastern European countries may find that a very close link to a European currency—or if you don't have one European currency, a very close link to one of the European currencies, or even the dollar—may become necessary in order to psychologically and otherwise attain stability and discipline within those countries as they make this very difficult transition.

There are lots of problems in this transition from a command economy to a market economy; looking at the experience of Latin America, you can see how difficult it is to restore stability, just a minimum

degree of stability in financial markets and in inflation, once the transition process has permitted a really explosive inflation.

Now, Latin America has had a long history of inflation and Eastern European countries have not, and that's the best thing they have going for them psychologically I think.

*Question: What should be the desirable macroeconomic policy mix in each of the Group of Three areas under the third oil shock?*

*Mr. Volcker:* Thanks a lot! A whole other lecture! I think one of the difficulties of this particular oil shock is that you have no idea how long it is going to last, where prices are going to go, and all of that is totally unpredictable to a poor economic observer. I suspect it is totally unpredictable to an astute political observer as well. In the circumstances, I think it reinforces the case for, whatever you do, moving cautiously. I don't think there is a case for a big change in policy.

I think it enormously reinforces, from my standpoint in the United States, the need for going ahead on the budget front. Some people have drawn the opposite conclusion, but here you have an event that is going to slow—if nothing else—slow the decline in defense spending and aggravate budgetary deficits in other directions. If we use it as an excuse for pulling back from even the minimal budget effort that was being talked about, it seems to me that would be a clear mistake and help jeopardize further the stability of the financial system.

I certainly don't think, as my remarks implied, that when you have a shock of this sort your immediate reaction should be, here or abroad, to validate the price increase and adjust to what may in this case be quite a temporary increase in oil prices.

In sum, I think in some ways it intensifies the case for doing fiscally what we were doing anyway, and at this point to me doesn't call for any strong change in policy posture so far as monetary policy is concerned, whether here or abroad.

Now, obviously, you must take all the other things into account. We have got extremely able people here, in the Federal Reserve and elsewhere, judging what is going on in the economy ex oil shock, and they have to take that into account in judging the trend of economic activity. But I don't think it calls for a dramatic change at this point.

*Question: You have alluded to Latin America's economic problems in the answers to a couple of previous questions. Given your own direct personal involvement in the early stages of what came to be known as the Latin American debt crisis, could you share with us your view of the present strategy with its emphasis on debt reduction and*

*official creditor enhancements, and, moreover, give us your own view of how the financial system reacted, looking retroactively back to 1982 when the crisis first broke?*

*Mr. Volcker:* I think what both the initial reaction—the years that I was there (which was five years after the crisis became overt) and the more recent developments (including the last year or so with a somewhat different approach) illustrate very well that once you get into this kind of a problem there is no easy answer. The idea that you can answer this problem by in effect canceling debts in whole or in part, and then expecting that the growth process will proceed in some easy way and the flow of external capital will be restored I think is an illusion. I think we are seeing that.

Now, of course, it wasn't much fun before either, before the debt was reduced, and it may be that the debt burden was so high, at least in some countries, that sooner or later in one way or another the debt had to be reduced by—if not in an orderly way—by *force majeure*. And it is better to do it in an orderly way than in a disorderly way, and I assume that is what we are trying to do at present. But I don't think there is any easy answer.

You had two aspects, obviously, to the debt problem. One was protecting, in some sense, the international financial system so that we all wouldn't be caught in a whirlpool of decline. I think that part was relatively successful. The other part—equally important—of restoring growth in Latin America, and in the other debtor countries, has proved to be even more difficult than we thought at the time and, of course, has been aggravated by imbalances in our own economic policies. Increasing interest rates and increasing the cost of capital in the Western world generally, or in the industrialized world generally and in the United States in particular, has not helped.

I was reluctant for years to sponsor or join in programs to write off the debt willy-nilly, for the reason that I thought it wouldn't help. Maybe the time had come to do it, but there is no magic answer.

There won't be a magic answer for Eastern Europe either, although the case is clearer for some countries in Eastern Europe.

*Question:* *There is a saying that the nail that sticks up gets hammered. Your comment about the central banks achieving greater respectability and greater prominence suggests that there is a risk now, a political risk, that governors of central banks could get into the political arena enough so that they would be hammered and thus pushed back into a corner. You didn't deal with that. I don't know quite how to phrase the question, but there does seem to be a risk that this may be*

*a high point leading to further political difficulties for the central banks.*

*Mr. Volcker:* I didn't put it in quite those terms, but, obviously, I wanted to raise the question whether we had the substance to justify all the prominence, and if things go wrong people look around for scapegoats. That just reinforces the idea that there is a lot to be done and there is no reason to take any great pride in what has been accomplished. At best it is a half-done job, and you know it is never going to be done completely.

The point I would like to make is that anybody who thinks that through one episode or in one decade central banks—or I suppose anybody else—are going to get themselves in a condition where they solve the economic problems of the world, or even substantially ameliorate them, without continuing challenge is wrong. And that is the simple message I would like to leave. [Applause]

\* \* \*

*SIR JEREMY MORSE:* Before we break up, I want to say two things. First, the Board of Directors of the Foundation has decided that next year, for the first time, we shall have two Per Jacobsson lectures—one in Basle in June at the time of the annual general meeting of the BIS, and the other in Bangkok in September at the time of the IMF annual meeting there. And secondly, there is now a reception outside through the courtesy of the International Monetary Fund, and I just want to say that if there aren't enough refreshments for all of you, that is one more tribute to our lecturer! Thank you.



THE 1990 PER JACOBSSON LECTURE



Paul A. Volcker

# Biography

Paul A. Volcker is Chairman of James D. Wolfensohn Incorporated and Frederick H. Schultz Professor of International Economic Policy at Princeton University. Mr. Volcker was Chairman of the Board of Governors of the Federal Reserve System from August 1979 to August 1987. Initially appointed to that position by President Carter for a four-year term, he was reappointed in 1983 by President Reagan.

Upon completion of his second term as Chairman, Mr. Volcker returned to private life. At that time, he agreed to serve as volunteer chairman of a newly formed, privately sponsored Commission on Public Service. The Commission studied problems arising in attracting, motivating, and retaining the quality of people necessary for government to function effectively. A final report was issued in April 1989.

In the course of his career, Mr. Volcker has worked in the U.S. Federal Government for almost 30 years, serving in high office under five presidents—John F. Kennedy, Lyndon B. Johnson, Richard M. Nixon, Jimmy Carter, and Ronald Reagan. Before becoming chief executive officer of the Federal Reserve System as Chairman of the Board of Governors in 1979, Mr. Volcker spent more than four years as President of the Federal Reserve Bank of New York, the principal operating arm of the System.

Earlier, Mr. Volcker had two tours of duty as an official of the U.S. Treasury, serving as Under Secretary for Monetary Affairs from 1969 to 1974. In that position he was responsible for developing and implementing treasury debt management, federal credit, and international financial policies. In the latter capacity, he was the principal U.S. participant in international monetary negotiations during the transition from the Bretton Woods fixed exchange rate system to the more flexible system of floating rates that has prevailed since the early 1970s.

Mr. Volcker was born in 1927 in Cape May, New Jersey, grew up in that state, and spent much of his adult life there. He earned his B.A. at Princeton University in 1949 and an M.A. in political economy and government at the Harvard University Graduate School of Public Administration in 1951. He attended the London School of Economics as a postgraduate student in 1951–52.

Mr. Volcker has received honorary degrees from a number of universities, including his Alma Maters of Princeton and Harvard. In addition to the Commission on Public Service, he currently is Chairman of the Advisory Board of the Center for Strategic and International Studies in Washington, D.C. He is also associated as Trustee, member of the Board of Directors, or on the Executive Committee of the Mayo Foundation, the Trilateral Commission, the Council on Foreign Relations, the Aspen Institute, the Japan Society, the American Council on Germany, the Arthritis Foundation, and the American Diabetes Association.

# The Per Jacobsson Lectures

- 1964 *Economic Growth and Monetary Stability*—Lectures by Maurice Frère and Rodrigo Gómez (Basle); out of print.
- 1965 *The Balance Between Monetary Policy and Other Instruments of Economic Policy in a Modern Society*—Lectures by C.D. Deshmukh and Robert V. Roosa (Washington); out of print.
- 1966 *The Role of the Central Banker Today*—Lecture by Louis Rasminsky; Commentaries by Donato Menichella, Stefano Siglienti, Marcus Wallenberg, and Franz Aschinger (Rome); out of print.
- 1967 *Economic Development—The Banking Aspects*—Lecture by David Rockefeller; Commentaries by Felipe Herrera and Shigeo Horie (Rio de Janeiro); out of print.
- 1968 *Central Banking and Economic Integration*—Lecture by M.W. Holtrop; Commentary by Lord Cromer (Stockholm); English and French editions out of print.
- 1969 *The Role of Monetary Gold Over the Next Ten Years*—Lecture by Alexandre Lamfalussy; Commentaries by Wilfrid Baumgartner, Guido Carli, and L.K. Jha (Washington).
- 1970 *Toward a World Central Bank?*—Lecture by William McChesney Martin; Commentaries by Karl Blessing, Alfredo Machado Gómez, and Harry G. Johnson (Basle); English and Spanish editions out of print.
- 1971 *International Capital Movements—Past, Present, Future*—Lecture by Sir Eric Roll; Commentaries by Henry H. Fowler and Wilfried Guth (Washington).
- 1972 *The Monetary Crisis of 1971—The Lessons to Be Learned*—Lecture by Henry C. Wallich; Commentaries by C.J. Morse and I.G. Patel (Washington); Spanish edition out of print.
- 1973 *Inflation and the International Monetary System*—Lecture by Otnar Emminger; Commentaries by Adolfo Diz and János Fekete (Basle).
- 1974 *Steps to International Monetary Order*—Lectures by Conrad J. Oort and Puey Ungphakorn; Commentaries by Saburo Okita and William McChesney Martin (Tokyo).
- 1975 *Emerging Arrangements in International Payments—Public and Private*—Lecture by Alfred Hayes; Commentaries by Khodadad Farmanfarman, Carlos Massad, and Claudio Segré (Washington); Spanish edition out of print.
- 1976 *Why Banks Are Unpopular*—Lecture by Guido Carli; Commentary by Milton Gilbert (Basle); French and Spanish editions out of print.
- 1977 *The International Monetary System in Operation*—Lectures by Wilfried Guth and Sir Arthur Lewis (Washington).

- 1978 *The International Capital Market and the International Monetary System*—Lecture by Gabriel Hauge and Erik Hoffmeyer; Commentary by Lord Roll of Ipsden (Washington).
- 1979 *The Anguish of Central Banking*—Lecture by Arthur F. Burns; Commentaries by Milutin Ćirović and Jacques J. Polak (Belgrade).
- 1980 *Reflections on the International Monetary System*—Lecture by Guillaume Guindeg; Commentary by Charles A. Coombs (Basle).
- 1981 *Central Banking with the Benefit of Hindsight*—Lecture by Jelle Zijlstra; Commentary by Albert Adomakoh (Washington).
- 1982 *Monetary Policy—Finding a Place to Stand*—Lecture by Gerald K. Bouey (Toronto).
- 1983 *Developing a New International Monetary System: A Long-Term View*—Lecture by H. Johannes Witteveen (Washington).
- 1984 *Economic Nationalism and International Interdependence: The Global Costs of National Choices*—Lecture by Peter G. Peterson (Washington).
- 1985 *Do We Know Where We're Going?*—Lecture by Sir Jeremy Morse (Seoul).
- 1986 *The Emergence of Global Finance*—Lecture by Yusuke Kashiwagi (Washington).
- 1987 *Interdependence: Vulnerability and Opportunity*—Lecture by Sylvia Ostry (Washington).
- 1988 *The International Monetary System: The Next Twenty-Five Years*—Symposium panelists: Sir Kit McMahon, Tommaso Padoa-Schioppa, and C. Fred Bergsten (Basle).
- 1989 *On Promoting Successful Adjustment: Some Lessons from Ghana*—Lecture by J.L.S. Abbey; *Economic Restructuring in New Zealand Since 1984*—Lecture by David Caygill (Washington).
- 1990 *The Triumph of Central Banking?*—Lecture by Paul A. Volcker (Washington).

Copies of the Per Jacobsson lectures are available without charge direct from the Secretary, the Per Jacobsson Foundation, International Monetary Fund, Washington, D.C. 20431, in English, French, and Spanish. Photographic or microfilm copies of all out-of-print lectures may be purchased direct from University Microfilms International, 300 North Zeeb Road, Ann Arbor, Michigan, 48106, U.S.A. Those living outside the United States, Canada, and South America should write to University Microfilms Limited, 30/32 Mortimer Street, London, W1N 7RA, England.

# The Per Jacobsson Foundation

|                    |                                      |
|--------------------|--------------------------------------|
| HONORARY CHAIRMEN: | Eugene R. Black<br>Marcus Wallenberg |
| FOUNDING CHAIRMAN: | W. Randolph Burgess                  |
| PAST PRESIDENT:    | Frank A. Southard, Jr.               |

## Founding Sponsors

|                     |                     |                        |
|---------------------|---------------------|------------------------|
| Hermann J. Abs      | Viscount Harcourt   | Jean Monnet            |
| Roger Auboin        | Gabriel Hauge       | Walter Muller          |
| Wilfrid Baumgartner | Carl Otto Henriques | Juan Pardo Heeren      |
| S. Clark Beise      | M.W. Holtrop        | Federico Pinedo        |
| B.M. Birla          | Shigeo Horie        | Abdul Qadir            |
| Rudolf Brinckmann   | Clarence E. Hunter  | Sven Raab              |
| Lord Cobbold        | H.V.R. Iengar       | David Rockefeller      |
| Miguel Cuaderno     | Kaoru Inouye        | Lord Salter            |
| R.v. Fieandt        | Albert E. Janssen   | Pierre-Paul Schweitzer |
| Maurice Frère       | Raffaele Mattioli   | Samuel Schweizer       |
| E.C. Fussell        | J.J. McElligott     | Allan Sproul           |
| Aly Gritly          | Johan Melander      | Wilhelm Teufenstein    |
| Eugenio Gudín       | Donato Menichella   | Graham Towers          |
| Gottfried Haberler  | Emmanuel Monick     | Joseph H. Willits      |

## Board of Directors

Sir Jeremy Morse — *Chairman of the Board*

|                          |                       |
|--------------------------|-----------------------|
| Michel Camdessus         | Jacques J. Polak      |
| J. de Larosière          | Robert V. Roosa       |
| Adolfo C. Diz            | Gengo Suzuki          |
| Alexandre Lamfalussy     | Peter Wallenberg      |
| William McChesney Martin | H. Johannes Witteveen |

## Officers

|                        |                         |
|------------------------|-------------------------|
| Jacques J. Polak       | — <i>President</i>      |
| Albert S. Gerstein     | — <i>Vice President</i> |
| Gordon Williams        | — <i>Vice President</i> |
| Joseph W. Lang         | — <i>Secretary</i>      |
| G. Michael Fitzpatrick | — <i>Treasurer</i>      |