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European Currency Union

Remarks by

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I am deeply honored to have been asked to be here today, in this, the mother of Parliaments, to discuss some of the issues regarding the development of the European Currency Union. There are few more important issues facing this Parliament and the people of the United Kingdom. Today I shall attempt to provide some general historical and economic perspective on the issue of currency unions, with particular regard to the experience in the United States, in the hope that this might have some applicability to the particular situation now before you.

Let me begin with a number of disclaimers. Although I am a Member of the Board of Governors of the Federal Reserve System, I do not speak either for the System or for any of my colleagues. The views expressed today are entirely my own. Indeed, to my knowledge the Federal Reserve has never taken any position on the issue of European Currency Union. Nor would I support the development of such a position. This is rightly a matter for the people and legislatures of the nations of Europe, and not one in which we should become involved.

Let me also confess to some obvious personal limitations. I am not a European and so do not possess a European historical or political perspective. Clearly, at least some of the impetus behind the move to a single currency zone is to provide yet another continent-wide institution which would more closely integrate the nations and people of Europe. In turn, much of the driving force behind such integration is to prevent the kind of conflict and destruction which characterized European history in the first half of this century, and

hopefully to also help bridge the chasm which the Iron Curtain created in Europe during most of the second half of this century. As someone who never experienced the horror of the World Wars, I am ill equipped to fully appreciate the importance of this history as a motivating force.

Having cited the limitations of my perspective, let me turn to those issues on which I might shed some light. First, there does exist a literature on what constitutes an optimal currency zone. The key motivating force behind this literature is to consider ways in which macroeconomic differences among regions might be mitigated in the absence of currency movements. Second, I hope to provide some historic insight on the battles which led up to an American currency union, to help provide some insight into the political difficulties which we faced. Third, I would like to provide some personal perspective which I, as a policy maker, feel with regard to monetary policy issues, in the hope that this might shed some light on the possible concerns which a member of a European central bank might feel.

Economic Stabilization and Optimal Currency Zones

To begin, let us consider the most commonly stated advantage of multiple currencies. In any dynamic modern economy there are bound to be regional differences in economic performance. These differences might involve transitory factors which cause different regions to be experiencing different stages of the business cycle at any given point in time as well as long term structural differences in the performance of the key industries which characterize the local economy. A natural objective for economic policy is to assure that such differences become self correcting: that is, to assure that automatic stabilizers be in place which provide stimulus to economies which are performing below par and which constrain demand in economies with well above normal growth.

Movements in exchange rates -- which presuppose the existence of different currencies -- can act as such as an automatic stabilizer. It is important to stress that such stabilizing properties need not involve discretionary monetary policies on the part of the various regions involved. Properly used, a locally based discretionary monetary policy might well help to localize regional business cycles and thus to augment the stabilizing properties of which I am speaking. But, I wish to abstract from the issue of discretionary policy and focus just on what would automatically occur.

To do that, let us assume that there are two countries -- call them A and B -- which actively trade with one another and enjoy the free movement of capital. To abstract from discretion in monetary policy, let us assume that each country has adopted Nobel-laureate Milton Friedman's fabled monetary policy computer which expands the money supply at a constant rate and that the rate in each country is exactly the same. For whatever reason, country A begins to experience a recession. As nominal income slows, money demand in country A declines relative to money supply and the prevailing interest rate drops. In turn, this lowers the relative attractiveness of the country's financial assets. This in turn lowers the exchange value of country A's currency.

At this point, the automatic stabilizing properties of the exchange rate begin to kick in. In the international market, the price of goods produced in country A begin to fall relative to those produced in country B. Thus, country A's exports to country B become more competitive there while country B's exports to country A become less attractive. The exports of country A therefore increase while its imports decline. This produces a net stimulus to aggregate demand in A and helps to mitigate the recession there. The exchange

rate regime has thus helped act as an automatic stabilizer in the economy.

The existence of two currencies not only acts as a stabilizer of investment flows on a cyclical basis, but perhaps more importantly on a longer term structural basis as well. Let us imagine that country A's economic difficulties are not the result of a swing in the business cycle, but stem from a long run structural decline in the industries in which country A specializes. Again, under an unchanged monetary policy, the cost of longer term borrowing and investing in country A might be expected to decline relative to the cost in country B. This might tend to mitigate any structural decline by leading to increased international investment in new industries. Under a single currency regime, it would be impossible for interest rates to vary across countries.

Under a single currency, much of the adjustment in the attractiveness of relative investment would tend to result from emerging differences in the price of real assets -- particularly structures and land. Yet, if countries were pursuing a policy of long run price stability, this would require a decline in nominal asset prices. Such price declines are quite disruptive and tend to inflict significant damage in the financial services industry as the value of collateral underpinning the lending of these institutions declines. In the United States we experienced difficulties in this regard in the 1980s and early 1990s. The problems were particularly intense in regional settings. Examples include Texas and Oklahoma following the oil price collapse of the mid-1980s, the end of the so-called Massachusetts miracle in the late 1980s, and the decline in California real estate prices in the early 1990s.

Under a multiple currency regime such asset price declines would tend to be mitigated. Instead of nominal price declines, much of the economically mandatory real

decline in asset prices would be manifest in exchange rate adjustments. Thus, if there were such a thing as a "California dollar", the decline in California real estate prices in the early 1990s might have been as great in terms of U.S. dollars, but less in terms of the local California currency. Instead, we would have witnessed a depreciation of the California dollar relative to the U.S. dollar.

Regional variations in economic performance can be quite significant. For example, the United States now has an unemployment rate of roughly 5 1/2 percent. We are in the sixth year of an economic expansion, and so in theory, all regions of the country have had time to benefit from the expansion. Yet, in February, 11 states had unemployment rates of 4 percent or less, suggesting extremely tight labor markets, while 3 states, including California which comprises almost one-seventh of our economy, had unemployment rates of 7 percent or more, a rate which is more typical of an economic recession. Obviously, the automatic stabilizing effect provided by exchange rate variations which is described above is not applicable to the regional economic disparities within the United States.

The key question regarding an optimal currency zone is whether or not alternative stabilizing mechanisms exist. The literature has focussed on two such mechanisms: labor market mobility and fiscal transfers. Let us consider each in turn.

Labor Market Mobility

The United States is characterized by an extremely mobile work force. The U.S. Census Bureau estimates that roughly 17 percent of all Americans move in a typical year. This figure is particularly high for relatively new job holders. For example, 35 percent of individuals aged 20 to 24 and 30 percent of individuals aged 25 to 29 move in a typical year.

Roughly one third of those movers changed their county of residence and more than 40 percent of these changed their state of residence in a typical year. In total, 3 percent of the national population, some 7.7 million people, changed their state of residence in a typical year.

This is a major portion of the interregional adjustment in our economy both with respect to longer term structural issues and with respect to the business cycle. For example, during California's economic difficulties in the early 1990s, the rate of outmigration was quite significant. The Census Bureau reports that nearly 1.2m people outmigrated between 1990 and 1994. Many of these people moved to the Rocky Mountain states. Utah, for example saw a 24 percent increase in the number of jobs during the same period, with an increase of nearly 200,000 jobs. Colorado added 300,000 jobs, a 20 percent increase.

The effect on a state's population can be dramatic. For example, California's population grew at an annual rate of about 2.2 percent during the 12 year period 1980-1992. Had this trend continued during the recession years of 1993 and 1994, the state would have had 850,000 more people in 1994 than actually lived there. The state of Massachusetts lost 16,000 residents between 1989 and 1992. Had the state kept pace with national population growth, it would have had an increase of 200,000 people. Neighboring Rhode Island and Connecticut had smaller populations in 1994 than in 1989.

This kind of labor force mobility helps mitigate the aggregate job loss during recessions. Although much of the price of adjustment is borne by workers who are forced to relocate, the beneficial effects of such labor mobility clearly show through in the overall level of unemployment in the country as well as in the level of aggregate output. More

precisely, there is very little in the way of an alternative to this relocation as a means of regional macroeconomic adjustment. Longer term, this relocation is even more dramatic. For example, between 1960 and 1990 the proportion of the U.S. population living in California rose by 37 percent. The proportion living in Florida almost doubled. By contrast, the proportion living in New York fell by more than one quarter.

In Europe, cross national migrations simply do not approach this magnitude. Of course, the European Community has taken dramatic steps toward ending the formal barriers which existed for citizens of any of the member states to live in and take part in the civic lives of their country of residence. But significant informal barriers remain. Linguistic and cultural differences no doubt are major impediments to widescale cross-country migration. Over time, one might expect these differences to diminish. One could well imagine retirees from northern Europe seeking out sunnier climates along the Mediterranean much as their American counterparts move to Florida. As the multilingual workforce expands, more workers might find the attractions of higher pay and the excitement of living in a different culture alluring. But this does not describe Europe today. As an alternative to exchange rate variations as a form of macroeconomic adjustment, Europe simply cannot rely on cross-national labor force mobility to the extent that it can be in the United States.

Fiscal Transfers

The second major source of interregional macroeconomic stability which can exist in a single currency zone is a regime of deliberately countercyclical fiscal transfers. In the United States, a uniform national income tax provides the major form of this transfer mechanism. For example, between 1987 and 1991, California contributed an estimated 16.6

percent of additional federal tax revenues. During this period the California economy was growing more quickly relative to that of the nation as a whole. As a result, it's contribution to federal tax receipts rose from 12 percent of the total to 13.4 percent of the total. From 1991 to 1994, the state's share of increased federal tax revenue fell to just 8.1 percent and its share of the national burden declined to 12.5 percent.

A similar story can be told about the state of Massachusetts. During its boom years of 1985-1989, the state's contribution to federal tax collections rose at a 36 percent faster rate than did total tax collections from the nation as a whole. During the Massachusetts recession from 1989-1992, the federal tax payments from Massachusetts actually declined in nominal terms, while total federal tax collections rose by roughly 10 percent.

The fiscal transfer value of these changes can be significant. For example, had California's tax share stayed unchanged between 1991 and 1994, its 1994 federal tax payments would have been $11 billion higher than they actually were. This $11 billion decline is equivalent to roughly $350 per capita. The corresponding effective fiscal transfer in the case of Massachusetts during its 1989-1992 recession amounted to nearly $550 per capita in 1992 alone. Per capita personal income in the United States was roughly $21,800 in 1994. Thus, the fiscal transfer effect of the variability in federal tax payments was roughly 1 1/2 to 2 percent of personal income. Perhaps an even more relevant comparison of the potency of this transfer is a comparison to personal income tax collections, which amounted to about $2300 per capita in 1995. Such a comparison indicates that a significant portion of the automatic stabilizing properties of the progressive tax system in the United States actually manifest themselves in a regional redistribution of the income tax burden.

And, it should be added that this inter-state fiscal stabilizing effect is in addition to the nationwide stabilizing effect which is rendered by a progressive tax system.

The key to success of any automatically stabilizing tax regime is an elasticity of tax revenues with respect to income which is greater than unity. In plain language, it is necessary that tax revenues rise and fall more than in proportion to income. This need not necessitate a formally graduated bracket structure. For example, the corporation income tax is essentially a flat rate tax in the United States, but corporate profits vary more than proportionately with income. Hence tax receipts have a similar high degree of variability or elasticity. The progressive bracket structure of the U.S. personal income tax interacts with a high GDP elasticity of many of the types of income on high-income returns to produce the magnitude of countercyclical stabilizing properties just described.

By contrast, Europe has no such automatic fiscal transfer mechanism. As I understand it, fiscal contributions to the EC are to some extent tied to VAT receipts. Yet, these receipts are a function of consumption expenditures which normally have a GDP elasticity less than one. European expenditures do involve some transfer oriented programs. For example, both the Common Agricultural Policy and the Regional Fund involve expenditure policies with a regional orientation. Of course, the United States also has expenditure policies with a regional orientation. But neither American expenditure policy (with some minor exceptions) nor those of the European Community should be considered deliberately countercyclical in their effects, or even in their intent. Instead, most such expenditures involve some combination of long term structural support for declining or depressed regions or industries. Again, Europe appears to lack the kind of automatic

stabilizing properties which a unified fiscal mechanism affords the United States to potentially act as an alternative to exchange rate variations.

In summary, a review of the economic literature on optimal currency zones suggests that Europe does not at this time possess the alternative stabilizing mechanisms which would normally define such a zone. At present, trans-national labor force mobility does not come close to the levels found in the United States. Furthermore, the potentially stabilizing properties of a currency zone-wide fiscal process are not now in place. These are not, of course, insuperable obstacles. One might imagine, for example, that national fiscal policies within the currency zone could be designed to provide both automatic and discretionary stabilizing mechanisms. However, such national fiscal flexibility seems inconsistent with the convergence criteria laid out in the Maastricht agreement. Alternatively, one could argue that the political and economic advantages of a single currency outweigh the costs involved in losing regional or national economic stabilizers. This is, as I mentioned earlier, an issue for the people and Parliaments of Europe to decide, not for members of the U.S. Federal Reserve Board.

As an observer from the other side of the Atlantic, the more relevant consideration in my mind is that these alternative stabilizing factors are likely to increase over time. For example, I am certain that the people of Europe will find their mobility on the increase and the traditional cultural barriers to migration on the decrease. Furthermore, assuming that a single currency and other moves toward a more federal Europe take place, it would seem likely that fiscal policy would become more centralized within the Community. As this takes place, it will be quite natural for policy makers to design both tax and expenditure policies

with stabilization properties as more central objectives. To say that Europe does not at this time seem to meet the properties as an optimal currency zone does not mean that this will never be the case.

Historical Perspective

Indeed, a look at American history suggests how important the passage of time is to acceptance of centralized monetary authority. Let us therefore turn to a brief review of the American experience to understand how contentious central banking and monetary issues can be in an emerging political union, and how similar issues might be confronted today. America is often held up as a prime example of a successful currency union. As I noted above, it does have many of the characteristics required for a successful optimal currency zone. But, a look at history suggests that this development was not as easy, or as straightforward as some might suggest.

From the inception of the American republic, the issues of monetary policy and central banking have been a keen part of the political debate. One of the key issues faced by our Founding Fathers, and one which ultimately will have to be faced in Europe assuming a single currency is developed, deals with the assumption of the debt obligations of pre-existing political entities which have been subsumed by new governmental forms. On this issue, the new Republic left nothing to chance. The Constitution -- which in general is a remarkably brief document noted for the many issues it omits to settle -- was explicit on this issue. Article VI begins: "All Debts contracted and Engagements entered into, before the Adoption of this Constitution, shall be as valid against the United States under this Constitution as under the Confederation."

In short, the new government promised to pay off all debts of the old government. This is an interesting decision both because of the potential problems that did not develop, but which we should consider, as well as for the resulting political decision to set up the First Bank of the United States. First, what could have happened? Following most of the major revolutions of the past two centuries, the new government repudiated the debt of the government it replaced. One of the key mechanisms of this repudiation involves a currency reform, often involving the substitution of one currency for another. Currency is, in effect, the non-interest bearing debt of the sovereign state. A sovereign state can always pay off debts (denominated in its sovereign currency) simply by printing more of it. The lender takes an inflation loss, but is made whole in nominal terms. Once a sovereign state loses its ability to cover its own debt through money creation, some other "sovereign" must assume that responsibility.

In large part to develop the confidence in the new government of the world financial markets of the time, Secretary of the Treasury Alexander Hamilton also adopted a policy of assuming the debts of state governments as well. Many of these were effectively bankrupt. They had issued currency along with the old Congress of the Confederation generically known as "Continental Dollars". During the period of Confederation, the phrase "Not worth a Continental" emerged -- reflecting the deep discount at which these notes traded relative to specie of the same nominal value. Hamilton, by redeeming Continentals at par, produced windfall profits for speculators who bought up these Continentals, and was widely criticized for this action.

Hamilton's problem was a generic one. Two states decide to merge and fix an

exchange rate between each of their currencies and some new, jointly agreed upon currency. State A enjoys tremendous confidence in the international community and has issued many bonds outstanding in its currency with 5 percent coupons. State B is not so fortunate because of an inflationary and profligate past and has issued many bonds yielding 10 percent in its currency. Selecting an exchange rate at the point of currency conversion is only part of the problem. The nominal value of the bonds of each country are therefore set, and are payable at maturity in the new currency. But that means that bonds denominated in the same currency (with equal inflation and default risks) now are paying decidedly different interest rates. Holders of the old State B bonds will presumably make windfall gains as their bonds, with their higher coupons, rise in price. In Hamilton's case, an exchange rate of one-for-one was selected, i.e. par. Holders of debt obligations (including currency) of the most fiscally and monetarily profligate states received the biggest windfall because their obligations were traded at the biggest discount to par value.

Hamilton accomplished this arrangement by creating the First Bank of the United States. This bank had some of the characteristics of a modern central bank, but far from all. It was, in essence, the fiscal agent of the Treasury. In its fiscal and monetary mission the bank was a clear success. The new Republic was put on a secure financial footing. As a political issue it was a failure. The bank charter lapsed. The unpopularity of the Hamilton program helped drag down his faction -- the Federalist party -- to defeat at the hands of Thomas Jefferson's Republicans, the historical antecedents to the modern day Democrats. Many Republican voters were small farmers who, in their view, had been cheated out of their continentals by big city speculators who supported Hamilton. The political side effect

of this was to give the concept of a central bank -- and central monetary authority -- a bad name.

A second crisis in the development of the so-called single currency zone in the United States came in the early 19th Century. At that time, state legislatures had the exclusive authority to issue banking charters. To turn a phrase, such charters were quite literally "a license to print money". More precisely, the banks could issue banknotes which were a more convenient mechanism for making payments than were specie. It should go without saying that the recipients of these charters were politically well connected. In the state of Maryland some politically well connected bankers, not satisfied with their legislatively granted license to print money, demanded that the legislature grant them protection from foreign competition -- namely, to give their banknotes some advantage over banknotes issued from other banks. The legislature complied. It imposed a tax on non-Maryland issued bank notes. The tax varied with the size of the note but on average amounted to about 2 percent. In effect, dollar bank notes issued by Maryland banks would cost $1 while dollar bank notes issued by non-Maryland banks would cost $1.02. Needless to say, that tax would probably be sufficient to be decisive in the market.

Chief Justice Marshall wrote the opinion for the U.S. Supreme Court which struck down the Maryland tax on banknotes in 1819. Marshall's ruling in that case, McCulloch vs. Maryland, included a phrase which is still popular today, and with which many in this room might be familiar: "The power to tax involves the power to destroy." Obviously this decision made the path toward a true single currency zone possible in the United States. Such a zone could not exist if the market value of currency was dependent upon the state of

issuance. But, the historical fact remains that 32 years after the Constitution was adopted, such practices were still being tried by the state legislatures of the new Republic.

Three issues dominated the national political debate in the decades leading up to the U.S. Civil War: slavery, tariffs, and the Second Bank of the United States. In the 1830s, the commercial interests of the East were agitating for the extension of the charter of the Second Bank of the United States, the rudimentary equivalent of the American Central Bank. The populist forces of the South and West were opposed. The debate was particularly intense with the Congress generally favoring the continuation of the bank and President Andrew Jackson opposed. Indeed, the debate became so intense that it managed to leave its permanent mark on the city of Washington. Those of you who have visited my nation's capital may recall that the city's designer, Pierre L'Enfant, intended a city of broad avenues with beautiful vistas. One such avenue was Pennsylvania Avenue which connected the White House, the President's residence, with Capitol Hill, where Congress meets. At that time the building which now houses the Treasury Department was about to be built. The story goes that President Jackson became so enraged at the pro-bank U.S. Senate that he marched out of the White House and planted his cane in the middle of Pennsylvania Avenue, insisting that the corner stone of the Treasury be laid there. While historians have probably modified the likely profanity that was actually spoken, Jackson's orders were to build the Treasury, "To block my view of that damn place." Today, traffic in the city of Washington still suffers from this debate about the centralization of monetary policy which took place in the fifth decade of the Country's existence. (One can only conjecture what Monetary Union will end up doing to the streets of Brussels.)

Monetary authority did become more centralized during the United States' Civil War. In 1862, the convertibility of Union currency into specie was suspended as money creation was used to help finance the War. The new notes were called "greenbacks". The War also led to the creation of the National Banking system, which served primarily as a means to mobilize national saving to help finance the Union's cause. After the War, a punitive 10 percent tax was levied by the federal government on the issuance of all state banknotes. But, the notes of national banks were periodically not considered the same as money. Milton Friedman and Anna Schwartz recount that in the decade after the Civil War these notes often traded at a discount to greenbacks. At particular disadvantage were banknotes issued at "country" banks where redemption risk was perceived to exist.

In 1879, the U.S. went on a specie-based standard, ending the greenback era. The central bank of the United States, the Federal Reserve, was created in 1913. But, it was not until 1934 that this monetary authority had fiduciary responsibility for the currency. It thus took 147 years from the founding of the Republic before we had a true "single currency" zone with a discretionary monetary policy controlling the creation of money. I recount this history because it serves as an important reminder, both of the value of time in creating lasting institutions, and of the inevitable political uncertainties involved in any matter having to do with money. Let me turn then to some of the inevitable political issues involved in central banking and assess the need for a balance between independence and accountability in any such institutions.

The Importance of Central Bank Independence

Central banks are one of the key institutions for the proper functioning of a liberal

political and economic regime. Yet the precise position of a central bank in such a regime is ambiguous. The demands of democratic governance argue for accountability of the central bank to the desires of the electorate. At the same time, the importance of a stable and dependable medium of exchange to the smooth functioning of a market economy cannot be underestimated. This latter requirement may necessitate some capacity for the central bank to resist short term political demands. The tension between political democracy and economic liberty exists in many forms in our societies. Yet few of us would freely choose to dispense with either democracy or economic liberty. We must therefore view this tension as an inevitable one, and do our best to harness this tension in a healthy way which produces sound public policy.

The raison d'etre of central bank independence centers on the issue of inflation and its effects on both short term and long term economic performance. While economists are prone to disagree on the details of the interaction of inflation and the real economy, I believe that a consensus now exists on this subject. In the short term, it is quite likely that temporarily higher levels of output and employment can be obtained by money creation. But, in the longer term there is no tradeoff between inflation and output. Indeed, the price of temporarily lower unemployment is often likely to be permanently higher inflation.

The tension between short term and long term economic developments sets the stage for the first of two arguments in favor of maintaining central bank independence from the political process. While much economic theory is premised on the existence of omniscient planners interested only in social welfare maximization, elected governments are in fact comprised of ordinary human beings with their own individual interests. The desire to be

reelected is quite a normal part of their individual preference functions. It is therefore only natural that their willingness to trade off short term costs for long term benefits may vary with the period until the next election.

In economic modelling terms, we might characterize this behavior as a variable rate of discount on policy decisions. As election time nears, the rate of discount rises sharply. Short term benefits become quite attractive, even at the price of high longer term costs. Similarly, short term pain for the electorate rises sharply in cost, in spite of potential longer term benefits. Thus, the attractiveness of purchasing temporarily higher growth even at the price of permanently higher longer term inflation greatly increases as election time nears.

Alternatively, after a government receives a mandate, its rate of discount on policy decisions falls markedly. The objective is the next election which may be four or five years distant. Being able to run as a government which reduced inflation may well have some political benefits. A rational politician therefore might well choose to tighten monetary reins just after an election, thus reducing inflation, while planning to stimulate the economy in the run-up to an election. Elections therefore would tend to dictate the timing of the business cycle with rapid periods of expansion preceding and during election years and periods of slower growth following elections. Indeed, in America there is a long literature on the so-called "political business cycle", which began with work by Nordhaus and MacRae in the mid 1970s.

Such behavior would be harmless political fun if there were no costs associated with economic cyclicality. While some theories suggest that some degree of business cyclicality is inevitable, even beneficial, an excess of cyclicality -- particularly cyclicality which is

artificially induced -- will tend to lower the long term output of an economy. Output is foregone during downturns and is inefficiently produced at times of excess capacity. From the perspective of maximizing economic efficiency and long term economic output, limits on the ability of a government to time economic circumstances may prove beneficial to the long term level of economic well being in a society.

The second argument for maintaining central bank independence is that a democratic government may permanently choose a rate of inflation in excess of the socially optimal level. The reasoning here centers on the assumption that inflation represents a means of transferring wealth from creditors to debtors. While the theoretical existence of perfectly rational expectations would make systematic, perpetual transfers of wealth impossible, the mere presence of an assumption that such a transfer would take place may be sufficient for an electoral bias toward inflation.

The political case for inflation is most clearly seen in a democratic society in which debtors outnumber creditors. The reality, or even the widespread assumption, that a wealth transfer is taking place would make inflation popular among the majority of the electorate. Further, the existence of economically irrational views such as "money illusion" makes the constituency for inflation potentially even bigger. As a central bank governor, I am particularly struck by the number of retirees who yearn for a return to the high-inflation, high-interest rate days of the late 1970s. Although the real returns to saving are essentially unchanged, and the real after-tax returns are higher in the present low inflation environment, these individuals felt most comfortable consuming the cash flow generated from the inflation driven depreciation of their stock of wealth.

The political imperative for inflation becomes particularly challenging when the government is the largest debtor in the society. Here, some form of "political illusion" may be involved. Inflationary finance may prove attractive to the government of the moment when it is viewed as less painful politically than either tax increases or spending cuts. This incentive may be particularly strong around election time due to the high rate of discount applied to policy decisions, as discussed above. In its most extreme form, governments may be tempted to monetize their outstanding debt rather than ask current taxpayers to bear the interest burden of political decisions of past office holders.

Even though these failures in the political market may give us some theoretical comfort that we are doing the right thing when we resist political pressure to inflate, caution is always appropriate when a policy maker assumes that his or her perception of the social optimum differs from majority will. Therefore, the first practical condition for central bank independence must be popular support for the concept of an independent central bank. In essence, the advantages of independence must be sufficiently manifest to the body politic that they or their agents must approve legislation for an independent central bank, and continued political support must be sufficient for that independence to be sustained.

The Federal Reserve is a creature of the Congress which established it. At any time legislation could be enacted which abolishes us or alters our status. Indeed, legislation to make such changes is frequently introduced, though it rarely moves far in the legislative process. The ultimate reason for this is a widely held perception that whatever the quality of American monetary policy by the Federal Reserve, direct or even increased political control would not enhance the situation. Practical political support, I believe, rests principally on

the central bank carrying out its mission in a reasonably successful manner. That mission, as outlined above, is to resist and hopefully correct the potential failures in the political process regarding monetary policy. It is therefore vital that the central bank strive to maintain the public appearance of independence, as well as its statutory and practical reality. If it were perceived that the Central Bank were in fact merely doing the will of the directly elected agents of the public, there would be no case against monetary authority being vested in those political agents.

Aside from acting independently, I believe that central bankers have a responsibility to explain to the public what they are doing and why. There is a widespread perception that we are monks who are secluded in our cloister. I think that perception is belied by our travel schedule and our regular interaction with groups from different parts of the country and the world. Regular interaction with the public not only informs the central banker about what is actually happening in the economy, it reassures the public that public policy is being made in a rational way which has the national interest as its goal. I believe that genuine two-way communication between the public and central bankers is vital to both central bank performance and central bank independence.

Another practical condition for central bank independence is respect for the independence and integrity of the other institutions of government. It is unlikely, indeed almost unthinkable, that a truly independent central bank could exist in a society in which other aspects of political and economic power were centralized in one place. Machiavelli commended his Prince, an autocrat, to be sure to "control the currency and the courts". No sensible autocrat would do otherwise. Thus, the existence of checks and balances within the

government, and within society, are key to the independence of the central bank.

In the end, the tension between accountability and independence is one which cannot be escaped. The challenge which you will face here in Europe, should you opt to move toward a single currency, is to design rules for your central bank which successfully balance accountability and independence. This may be particularly difficult as the political structure of the Community is itself evolving. Ultimately, responsibility is to the pubic at large. Responsibility and accountability to intermediary institutions which do not themselves possess the legitimacy given by public accountability will not suffice.

As a rule, we tend to view accountability and independence as polar opposites. But in a democracy, this is not entirely the case. Any central bank or monetary policy institution which stresses only its independence and ignores its ultimate accountability to the body politic may soon find its independence at risk. It will have lost touch with its ultimate mission -- serving the public at large. The basis of central bank independence is the role we can play in correcting some imperfections in the normal democratic process. But this independence is granted democratically by that process. Maintaining our independence is what we will be held accountable for and remembering that we are accountable is, in the end, the key to our independence.