

NACHos and ECUs:

Issues in the Transition to European Monetary Union

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This paper provides a brief overview of some of the technical problems facing Europe in its quest for European Monetary Union -- one money in Europe. The details of European Monetary Union (EMU) are, of course, being negotiated more and more intensely by the day as the watershed year of European integration, 1992, approaches.

In section II of this paper, I take the goal of currency union by 1997 as given, and look at some of the delicate transitional and institutional issues that have to be resolved beforehand. Two issues merit particular emphasis. First, in designing their community central bank, Europeans face the classic tradeoff between institutional measures that enhance anti-inflation credibility (e.g., independence, long terms for governors) and measures that increase responsiveness of the central bank to cyclical fluctuations. Reaching agreement on how to balance this tradeoff is complicated by the fact the major players have very different central banking traditions, and will be entering EMU with widely divergent fiscal stances; Italy has debt/GNP ratio of roughly 100%, more than double that of Germany and France.

Second, the 1994-96 transition period from EMS (European Monetary System) to EMU poses enormous risks and problems. In the opinion of many experts, "stage II" is dangerously unstable. National central banks will surrender some of their autonomy to the nascent EuroFed ("European Monetary Institute"), but retain enough to be able to work at cross-purposes, as in the early days of the Federal Reserve System. Large speculative capital flows may also overwhelm the system, as speculators doubt countries' commitments to avoid final realignments during the transition. Speculation will be fueled by Spain, Greece and Italy's high inflation rates and debt/GNP ratios, and by Britain's insistence on reserving the right to opt out at the very last minute. Some leading economists have argued that Europe's stay in the dangerous halfway house of stage II should be made as short as

possible.

In the third section of the paper, I explore the deeper question of whether there is a compelling rationale for Europe's quest to have one money. In some sense, European politics make this question moot; the status of EMU has become widely regarded as a barometer of progress towards European unification. Research on monetary integration suggests that there is a certain logic to this status. Although the potential benefits of EMU are probably not all that great compared to say, the benefits of trade and capital market integration, it seems likely that EMU will fail completely unless Europe achieves broader integration.

As a device for abstracting from the immediate politics of the situation in Europe, I consider the economic case for a North American Currency Union between the United States, Canada and ultimately Mexico. I will argue that judged narrowly on the classic criteria for an optimal currency area, a North American Currency (the NACho) makes at least as much sense as a European currency (the ECU).

II. Progress towards EMU: A Brief Overview

As presently envisioned in the Dutch draft treaty, European Monetary Union will take place in three phases. "Stage I" is simply a slight embellishment of the current European Monetary System that consists of Germany, France, Italy, the Netherlands, Ireland, Denmark, Belgium and Luxembourg (the original EMS 8 that joined in 1979) plus the recent additions Spain and the United Kingdom. Portugal and Greece are expecting to join in eventually.

Considering the widely varying CPI inflation rates within the EMS (Italy's cumulative

inflation rate has exceeded Germany's by almost fifteen percent since 1986) and even more divergent fiscal policies, it is somewhat incredible that the EMS has been able to go for almost five years now without a realignment. This achievement is all the more remarkable in that France and Italy have now almost entirely dispensed with the capital controls that pinned up the EMS during its early years. The recent stability of the EMS has no doubt greatly strengthened and encouraged supporters of monetary union.

(a) Stage II: Preparing for Docking in 1997

Stage II is set to begin in 1994, which will witness the formation of the "EMI" or European Monetary Institute. Whether the EMI will be a nascent Eurobank or simply a glorification of the current central bank governors committee, is presently the topic of a heated debate. The Germans would like to retain the current set-up as much as possible during the transition, whereas the French would like the EMI to form the embryo of a Eurobank, with reserves and substantial control over exchange market intervention. During Stage II, there will be a tightening of the current 2.25% fluctuation bands, realignments will be avoided if not ruled out, and countries will prepare to meet strict economic convergence criteria if they want to join the initial group of EMU countries in 1997.

(b) Stage III: One Money Issued by a Centralized EuroFed

Stage III-- currency union -- is set to begin in 1997. Needless to say, 1997 is long ways off and speculators will have to wonder whether any deal made at the end of 1991 will ultimately be renegotiated. The United Kingdom has insisted on an escape clause allowing it to opt out at the last minute; the details of this clause are still be hammered out. Under the Dutch draft treaty proposal, a minimum of seven of the twelve EC countries will be

sufficient to form the EMU. Countries that opt out or do not meet convergence criteria (most likely Portugal and Greece, and possibly Italy and Spain) will have their membership delayed, but have their situation reviewed roughly every two years.

Convergence criteria are perhaps the main topic of dispute at present. At one extreme are the Germans who seem to view EMU as akin to docking two satellites orbiting in space; unless they are moving in perfect synch at exactly the same speed they will destroy each other upon touching. At the other extreme are the Italians who feel that if Southern and Northern Italy can share the same currency, so can any other two regions in Western Europe. Table 1 gives a few measures of convergence for Italy, France and Germany. Of particular interest is the fact that long-term Italian interest rates are still almost 3 percent above those in Germany and France. Though some of the differential may be default risk, a large portion represents expectations of devaluation. Short-term differentials are smaller and generally within the range permitted by movements within the target zones; that is, the fact there are short-term interest differentials does not necessarily prove that investors think a near-term realignment is likely.

The draft treaty specifies that to enter the EMU in 1997, a country's rate of CPI inflation in 1996 cannot exceed that of the average of the three best performing countries by more than 1 1/2 percent, and that its nominal long-term interest rate cannot exceed that of the three lowest countries by more than 2 percent. Moreover, the country must have respected its fluctuation margins within the EMS for at least two years. These criteria do not seem terribly controversial or stringent.

Far more contentious are the proposed restrictions on budget deficits and debt/GNP

ratios. The current draft treaty places limits on deficits of three percent of GNP, and limits on debt/GNP ratios of 60 percent. As Table 1 indicates, Italy with virtually a 100 percent debt/GNP ratio, would have to wait a long time to qualify if these guidelines were to stand. Naturally, Italy is pleading for flexibility. One school of thought, supporting Italy's case, is that divergent debt/GNP ratios across EMU members will not present any more a problem than differing state debt/Gross State Product ratios do in the United States' "monetary union". If investors perceive that Italy will have a high debt/GNP ratio, they will simply charge the Italian government a default risk premium. Germany and France are concerned that in practice, the EC will not be able to let a country as large as Italy default, and that there will be pressure on both EC fiscal policy and EuroFed monetary policy to help out. As an incentive measure, the draft treaty calls for countries that violate fiscal limits (after entering EMU) to pay fines to the EC treasury.

(c) *Potential Problems in Stage III After Unification*

The major question concerning stage III is how to design the EuroFed. The French have generally conceded that the EuroFed (European Central Bank in EC jargon) should be more independent than in the French tradition, but a host of technical questions remain in how to implement this goal. The fundamental question is how to retain (*West*) German anti-inflationary credibility without giving Germany dictatorship over the EuroFed. One solution, perhaps, is to have a voting scheme whereby countries with low interest rates, inflation and debt/GNP ratios are given a disproportionate share of voting power in EuroFed decisions; country size could also be a factor. This would have the effect of negating the influence of the high inflation countries without specifically naming any one country. There would be

some technical issues to resolve having to do with the appropriate measure of inflation -- a country that has high CPI inflation because of relatively fast productivity in the traded goods sector should not be penalized. But these problems do not seem insurmountable.

(d) *Potential Problems in the Transition Stage II*

There is little doubt that if Europe moves sufficiently far towards economic and political integration, and if the EuroFed is imbued with enough power and autonomy, stage III of currency union will not collapse in a big way. But stage II, the halfway house between the EMS and currency union, is replete with potential problems, and here the architects of currency union must take great caution. Countries such as Italy, with very high deficits and high real exchange rates, will face enormous temptations to devalue their currencies while the option is available. Financial markets will recognize this, and charge the Italian government high interest premiums, further compounding its incentive to devalue. How will speculators treat the pound sterling as long as Britain reserves its option to go pull out of stage III? How can the fledgling EuroFed (the EMI) effectively function as a loose confederation of semi-autonomous national central banks, autonomous and yet committed to fixed exchange rates?

The designers of the EMU seem to envision a seamless transition from stage II to stage III, but in fact Europe may be forced to move very quickly to stage III to avoid the instability inherent in stage II.

III. On Narrow Economic Criteria, Is Europe an Especially Natural Candidate for Currency Union? NACHos and ECUs.

Thus far, the discussion has mainly focused on the technical problems that stand

between Europe and the Nirvana of currency union. But one might well ask whether, absent any transition problems, currency union is a worthwhile goal. Though much analyzed, this question turns out to be rather difficult for economists to answer with any confidence, not least because there is no single consensus model of the role of currency in a developed economy. (Sorry!) To help illustrate the general issues outside the intellectual straightjacket of Europe's special situation, I would like to consider the prospect of a **North American Currency union** between the United States, Canada and perhaps eventually Mexico. I will focus mainly on a currency union between Canada and the United States, where of course the case is easier to make. I am quite serious about the potential inclusion of Mexico, however; it is easy to forget that Mexico has enjoyed significant periods of monetary stability over its history. Indeed, during the 1870s, the Mexican silver dollar was the standard for coins used in international trade in Asia and Japan.

(a) *Why Should Canada Have its Own Currency and Not California?*

Actually, if one were to go by the stabilization criteria developed in the classic literature on currency unions,¹ it is hard to see why Canada should have its own currency, and not California or New England. (No doubt there will eventually be an initiative on California's ballot to this effect someday!) Canada's economy has more in common with the United States' economy by most measures than do the individual economies of many states. Considering that seventy-five percent of U.S.-Canadian trade is *intra*-industry trade in manufactures², it is hard to argue that maintaining a flexible exchange rate between the U.S.

¹The classic literature on monetary unions dates back to the work of Mundell, McKinnon and Kenen in the 1960s.

²See, for example, the 1991 *Economic Report of the President*.

and Canadian dollars is essential to successful stabilization policy. It is certainly not the appropriate tool for offsetting say, a slump in the auto industry.

Figure 1 provides some evidence that the two countries do in fact face highly correlated macroeconomic disturbances. The two time series plotted in the figure are the differential between U.S. and Canadian real GNP growth, and the differential between real GNP growth in the U.S. and in the Twelfth Federal Reserve District. Superficially, at least, Twelfth district GNP is no more in synch with the GNP of the greater United States than Canadian GNP is.³ A more careful statistical analysis, allowing for population growth and time trends, does not contradict this impression.⁴

New England similarly seems like at least as good a candidate as Canada to have its own currency. Four years ago, the region enjoyed an unemployment rate of 2.3%, over 3% below the national average. But by March 1991, New England's unemployment rate had rocketed to 9.7%, almost 3% *above* the national average. Obviously, one can come up with many other examples of alternative currency groupings that, on stabilization grounds, make as much sense as the present one. Why not a separate currency for the major energy exporting states?

*(b) The Importance of Factor Mobility and Fiscal Integration
to the Success of a Currency Union.*

³Regional GSP data is from the San Francisco Federal Reserve's data base, and was available only through 1986. Canadian GNP is from *IFS*. The nine states in the Twelfth Federal Reserve District include Alaska, Arizona, California, Hawaii, Idaho, Nevada, Oregon, Utah and Washington.

⁴Obviously, these simple real GNP correlations do not control for the fact that Canada and the Twelfth District have had different monetary regimes.

There are, of course, other economic criteria to consider besides covariance of macroeconomic shocks. The optimal currency area literature also suggests that the costs of currency union are minimized when labor and capital are highly mobile across regions. Roughly speaking, the idea is that if capital and labor can freely flow to equalize rents and wages, then nominal exchange rate adjustments become less essential to regional stabilization. Capital mobility between the United States and Canada is already very high: In fact, by standard measures such as onshore-offshore interest differentials, it is at least as high as within Europe. One could say the same for labor mobility, though this may no longer be the case after 1992. Still, labor ability between the United States and Canada is certainly much more limited than it is across U.S. states. But it is worth noting that at the time of the founding of the Federal Reserve System, labor mobility between the Southern States and the rest of the country was also extremely limited, yet the system did not fall apart.⁵

Probably the best stabilization argument *against* a currency union with Canada lies in the way the Federal income tax system tempers variation in after-tax income across states. When Texas's income plummets after a steep oil price decline, part of the blow is offset by a decline in her Federal tax payments.⁶ During a boom, of course, the opposite occurs. By

⁵For a more detailed discussion, see Barry Eichengreen "Is Europe an Optimal Currency Area," University of California at Berkeley, January 1991. In any event, the importance of labor mobility to the success of a currency union is probably not too important empirically. Even within the United States, the time frame over which significant numbers of workers shift across regions is surely slower than the time frame for nominal *wage* adjustment.

⁶During a bust, Texas also receives higher net payments from various federal income maintenance plans including a social security. Empirically, however, this effect appears to be much less important than the tax effect.

some estimates, Federal tax and transfer programs offset regional (after-tax) income fluctuations by as much as forty percent. Because Canada does not participate in this mutual income insurance scheme, it has to be more concerned than a typical state of finding ways to stabilize its economy against region-specific shocks. Though this argument against a U.S.-Canada currency union has some force, it is not decisive. The economies of the two countries are sufficiently highly correlated as to overcome this objection.

When Europeans speak of the need for greater fiscal policy coordination in the advent of monetary union, they typically are referring to concerns over divergent budget deficit policies. But although budget deficit policy is important, lack of fiscal *coordination* is probably not as big a problem as the lack of fiscal *integration*.

(c) *Macroeconomic Policy Convergence as a Prerequisite to Currency Union*

Imagine for a moment (and it helps to forget about Quebec) that Canada and the United States suddenly decided to form a currency union. How hard would it be to accomplish the merger? Is Canada's present monetary and fiscal balance sufficiently close to that of the United States to make a merger feasible, or would the two countries first need to achieve much greater macroeconomic convergence? History does not offer enough experience with cross-country currency mergers for economists to develop an absolute standard for convergence. But if one compares the United States-Canada situation with the problems facing Europe today, the transition looks pretty smooth. As Table 2 illustrates, inflation rates within Europe have converged dramatically over the period of the European Monetary Union. In 1980, Germany, France and Italy's (CPI) inflation rates stood at 5.4, 13.3, and 21.3 percent. In 1990, they were 2.7, 3.4 and 6.6 percent. But as the Table also

illustrates, convergence between U.S. and Canadian inflation rates has been at least as impressive, probably more so. In fact, recent CPI inflation differentials between Canada and the United States have been roughly comparable to those between the U.S. and major cities in the Twelfth District.

Another convergence criterion that is often used in assessing European Monetary Union is the difference in debt-GNP ratios. Germany and France's not-too-hidden fear is that after currency union, the Euro-Fed will come under pressure to inflate to ease the real burden of Italy's debt, which is roughly 100% of GNP, more than twice the ratio for Germany, France and the U.K.. (This concern is surely overblown; after EMU there will simply be a greater default premium on Italian debt than on German debt.) Though Canada's debt-GNP is somewhat higher than the U.S.'s by most measures, the difference is small compared to the Italian problem.⁷

Finally, as Table 3 illustrates, recent U.S. and Canadian growth rates have moved at least as much in harmony as those across Europe.

(d) *Bringing in Mexico*

Admittedly, a North American Currency union is far more difficult to imagine when Mexico is included. But Mexico has dramatically opened up its borders to trade over the past five years; tariffs stand at less than a third of their 1985 level and the range of products

⁷It is worth noting that there is a significant gap between the debt-GNP ratios of the Netherlands and Germany. Neither this gap, nor the Netherlands position as an energy producer, has prevented the two from maintaining an extremely stable exchange rate over the entire floating rate period.

subject to import licensing has been dramatically reduced.⁸ If Mexico were to continue on its present course of economic reform, and if a North American Free trade agreement brings the kind of political currents witnessed in Europe, then the situation may be dramatically different in six or seven years.

Europe faces very similar problems in deciding whether and when to include Greece and Portugal in its monetary union, not to mention Spain and even Italy.

It is premature to get into the institutional details of how a NACHo-Fed would be structured. Clearly, Mexico and Canada would have to concede a dominant role to the United States, much the way the Netherlands and Belgium today almost totally subordinate their monetary policies to that of Germany. Abstracting from political realities such as national pride, the two smaller countries should be willing to acquiesce to a role proportional to their size since, as I argue below, they will enjoy a disproportionate share of the transactions savings engendered by currency union.⁹

(d) What are the Potential Economic Benefits to a North American Currency?

Are the benefits to having a common currency so great that they are worth all this trouble? Needless to say, this is the 64,000 NACHo question. Although economists think they understand the benefits of currency union reasonably well, measuring these benefits is

⁸As in the case of the U.S. and Canada, the lion's share of U.S.-Mexico trade is intra-industry. However, in the case of Mexico, this is partly an artifact of the *maquiladora* system that exempts some firms from paying import duties on parts that assembled into final products for export. If trade barriers were reduced, it seems likely that the share of intra-industry trade would drop.

⁹For Europe, of course, the problem of institutional design is a much more immediate question. How can the Aerie-Fed be designed so that it will inherit German anti-inflation credibility without giving a majority of the seats on the Board to (West) Germans?

difficult. First and perhaps foremost, eliminating exchange rate uncertainty should lead to an expansion in cross-border trade and investment. This theoretical-compelling effect turns out to be surprisingly difficult to capture empirically using standard trade equations.

Nevertheless, polls of European businessmen suggest that European Currency union will indeed have a significant impact on their plans.

A second virtue of currency coins is that they can provide a vehicle for high inflation countries to piggy-back off the credibility of their low inflation partners. This is an oft-cited virtue of the EMS, with Germany being the anchor of anti-inflation stability, though there is some controversy among economists over this point. Clearly, anti-inflation credibility would be perhaps the major benefit to Mexico of a currency union with the rest of North America, even if it were initially relegated to a satellite status.

Still, the benefits discussed above would seem to require only stable exchange rates and not a common currency? Why doesn't Europe simply tighten the EMS fluctuation bands a bit and declare victory? To some extent, the difference between fixed exchange rates and a common currency is only a matter of degree. Most of the systems one thinks of in the context of fixed exchange rates (such as Bretton Woods) are more accurately characterized as having "fixed but adjustable" exchange rates. As long as countries retain separate currencies, investors will rightly be skeptical of any claim by policymakers that exchange rates will never be changed. For example, despite the fact there has not been a realignment of the Italian lira against the German mark for almost five years, interest rates on long-term Italian government debt remain 3 percent higher than on German government debt of comparable maturity. If the Italian government truly intends to stick to its current exchange

rate against the DM, then it is paying a huge premium so that its citizens can enjoy Italian designer currency. Perhaps the most dramatic example of how fixed rates can ever be fully credible is the case of the Belgian franc and the Luxembourg franc, whose exchange rate has remained fixed at one to one for over fifty years. Nevertheless, mere rumors that Luxembourg considered not following Belgium at the last EMS realignment produced a small but persistent interest differential.

A very concrete gain to going all the way to a common currency is the reduction in exchange rate conversion and other transaction costs. The usual story is that these are large only for tourists, but recent studies by the European Economic Commission have challenged this view.¹⁰ These studies argue that by moving to a common currency, the European Community could save on transactions costs of from .25% to .4% of Community GDP per annum. The bulk of these savings (roughly 70%) would come out of exchange margin and commission fees paid to banks.¹¹ The remainder of the savings are due to reduced in-house accounting costs as firms are relieved of the problem of having to keep separate accounts in different currencies. In a North American currency union, it is very likely that the greater part of these savings would accrue to Canada and Mexico, since a significant proportion of their trade (not just with the U.S. but with third countries) is dominated in U.S. dollars.

Conclusion

¹⁰See The Commission of the European Communities, *One Market, One Money*, October 1990.

¹¹This estimate is obtained using two approaches, one based on banking revenue data, and one based on firm and household foreign exchange operations and their respective transactions costs. The bank revenue data are derived from a comprehensive 1989 BIS survey of major banks and foreign exchange dealers in twenty countries.

We have concluded that if currency groupings were decided on economic criteria alone, North America might well have a currency union ahead of Europe. But, of course, politics are paramount when it comes to a nation's currency.

TABLE 1

**Indicators of Convergence Between France,
Germany, Italy, and the United Kingdom**

	Private Consumption Deflator ^a	Public Debt as % of GDP ^a	3-month Euro-rates (10/18/91)	Long- term gov. rates
France	3.1	37.3	9.31	8.93
Germany	3.5	45.4	9.12	8.35
Italy	6.3	103.3	11.00	12.39
U.K.	6.5	44.5	10.31	9.79

^aEC Commission Forecasts

Differential in Real GNP Growth Between U.S. and Canada, and Between U.S. and 12th Federal Reserve District

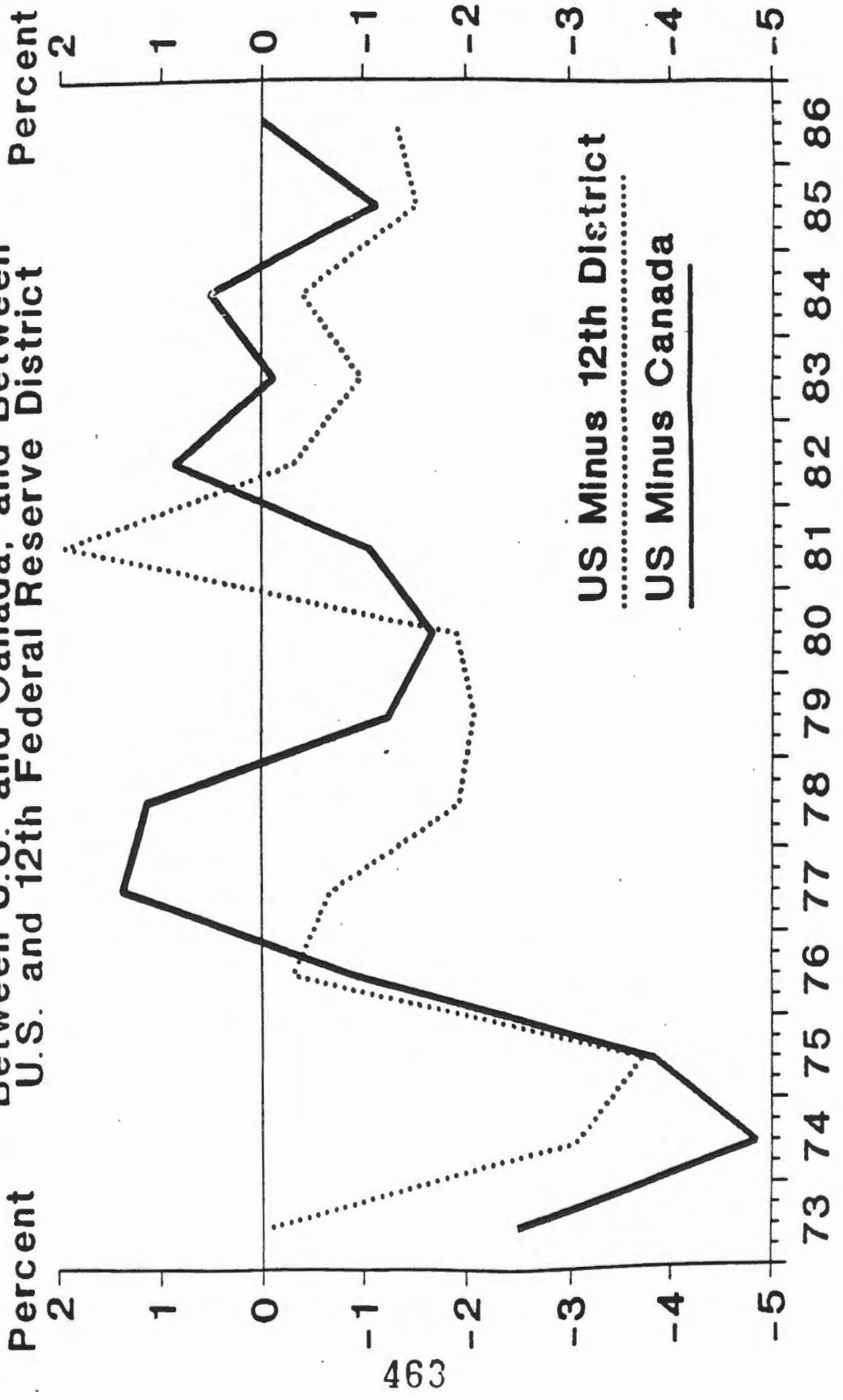


FIGURE 1

TABLE 1a**CPI Inflation Rates Across EMS Europe and North America
1980 versus 1990**

	<u>Germany</u>	<u>Italy</u>	<u>France</u>	<u>United States</u>	<u>Canada</u>	<u>Mexico</u>
1980	5.4	21.3	13.3	13.6	10.3	22
1990	2.7	6.6	3.4	5.9	4.9	26

TABLE 1b**Mean Annual CPI Inflation Rates Across the U.S., Canada
and Selected Twelfth Federal Reserve District Cities, 1984-1990***

United States	3.9
Canada	4.4
Los Angeles	4.6
San Francisco	4.0
Portland	3.8
Seattle	3.7

* Data for cities is all items for all urban consumers, U.S. Dept. of Labor.

TABLE 3**Harmonization of Recent Growth Rates within Europe
as Compared to Canada and the United States.***

	<u>Germany</u>	<u>France</u>	<u>Italy</u>	<u>U.K.</u>	<u>U.S.</u>	<u>Canada</u>
1987	1.6	2.2	3.0	4.7	3.4	4.0
1988	3.7	3.8	4.2	4.6	4.5	4.4
1989	3.9	3.6	3.2	2.2	2.5	3.0
1990	4.2	2.5	2.6	1.6	.9	1.1

* Source: 1991 *Economic Report of the President*