

Decisionmaking for European Economic and Monetary Union

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Occasional Paper 62

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**Decisionmaking
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and Monetary Union**

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I. Introduction

For decades the range of choice for an exchange rate regime consisted of fixing the exchange rate to an anchor currency or basket of currencies or allowing it to float, with or without intervention in the process. Now a more extreme option has emerged, hard pegs. Once considered as exotic, such arrangements as currency boards (Ghosh et al., 2000) or dollarization (Calvo, 1999), involving the surrender of all national discretion over the exchange rate, are now spreading. There is also serious talk about setting up regional monetary unions, in particular in the Mercosur area and in Southeast Asia (the Chang Mai initiative).

In parallel a new conventional wisdom has emerged under the rubric of “hollowing out.” The hollowing-out view holds that there is no workable middle ground between floating and hard pegs. Traditional fixed exchange rate regimes, involving some degree of discretion and intervention, fall in the unworkable middle. Although still in place in more than half of all countries, these regimes are doomed in a world of unfettered capital flows. Full capital mobility, in turn, is taken as a Darwinian step in mankind’s evolution.

As the hollowing-out view gains ground, Europe’s evolution is often seen as a blueprint for the emerging market economies. Over the last half-century, the European countries have moved from pegged exchange rates backed by capital controls to full capital mobility and a monetary union. Along the way, they have intensified their economic integration, eventually establishing a thorough

common market. And they are now pursuing an agenda of gradual political integration. The record is broadly one of peace and prosperity.

Is Europe a model? In order properly to answer this question, one has to look at the particular circumstances that brought about success, as well as the setbacks and costs incurred along the way. Were the costs worth it? Are the same characteristics present elsewhere in today's developing world? Is it not the case that the "European strategy" is made obsolete by the globalization phenomenon and the information technology revolution?

These questions motivate the present paper as it revisits Europe's postwar experience with exchange rate regimes. A key aspect is Europe's unflinching commitment to fixed exchange rates, indeed to the point of ultimately sharing the same currency. The paper argues that behind Europe's commitment to exchange rate stability lies a widely shared belief that it is a pre-condition for trade integration as it is the only way of establishing a level-playing field for international competition. This concern has led European countries to take various protective measures, including capital controls, until they were ready to adopt a common currency.

The following section sets the stage; it describes the exchange rate regimes adopted in Europe over the last 50 years. Section III argues the case that trade was a key concern behind the commitment to exchange rate stability. Having noted that fixed exchange rate regimes are inherently unstable, Section IV looks at the various measures that were adopted in an effort to increase the chance of survival of the fixed exchange rate arrangements. These measures at times severely constrained the financial markets, both domestic and external. But is not the case that such measures are costly and inefficient? The fifth Section attempts to answer that question and, surprisingly perhaps, finds no such evidence. Quite to the contrary, in Europe at least, domestic financial repression seems to have supported growth. The last section attempts to distill the lessons of Europe's experience. It argues that the choice of an exchange regime cannot be dissociated from the choice of a regime of capital mobility. Countries that are open, or country groupings that aim at deepening trade integration, may indeed opt for a fixed exchange rate regime. Hard pegs are an option, but not the only one once financial repression is no longer viewed as sinful.

II. Overview of Exchange Rate Developments

Fixed exchange rates were adopted in Europe in the immediate postwar period within the broader Bretton Woods agreement. It provided indirectly for fixed exchange rates within Europe but it was not a joint undertaking, nor was it intended to further any specific European goals. It matched European interests but also those of the United States since they were equally preoccupied with the restoration of trade links. Faced with an acute shortage of dollar balances, European countries did not move to establish currency convertibility from the outset. Rather they concentrated on developing bilateral payment settlement agreements, both among themselves and with non-European countries. Yet, early on within the Bretton Woods framework, they started to work out their own arrangements:

- The European Payments Union (EPU) was set up in 1950 to simplify the cumbersome web of some 200 bilateral payment agreements that had been set up. The EPU worked as a multilateral clearing system, focusing on the overall balances of payments of its member countries vis a vis the Union. The Bank for International Settlements (BIS) acted as agent for the EPU. Limited credit facilities were based on IMF-type quotas. They were extended to some countries that faced speculative pressure, for example during the Korean War in 1951-52, or in 1957-58 when France and the United Kingdom (UK) started to

run large deficits because their currencies had become overvalued due to accumulated inflation. As member countries grew less concerned about payments, they gradually lifted their extensive trade restrictions. Generally considered as a success, the EPU is credited with helping to restore intra-European trade. The EPU had some drawbacks, mainly its tendency to encourage trade amongst its members, discriminating against non-members. Over time the dollar shortage disappeared, lessening the need for the EPU which, in any case, had been explicitly created as a temporary arrangement.

- The restoration of currency convertibility in 1958 was a joint move. It was decided alongside the adoption of the Treaty of Rome, the foundation of Europe's Common Market. It also coincided with the end of the EPU. Convertibility only applied then to the current account. For many more years the financial account remained subject to fairly draconian restrictions in most countries.

Over the next decade, the arrangement provided for a high degree of exchange rate stability, with few realignments. The first major depreciation, by the UK, did not occur until 1967. It was followed by a depreciation of the French franc and a revaluation of the Deutschemark (DM), both in 1969. By the time the Bretton Woods system collapsed during 1971-73, further imbalances had accumulated inside Europe. After a series of realignments, most European countries undertook to maintain limited margins of fluctuation for their bilateral exchange rates while the other developed countries let their currencies float. The resulting arrangement, "the Snake," was a mixed success; most countries were able to adhere to the arrangement, but speculative pressure forced others—mainly France, Italy, and Sweden—to exit the Snake. Outside of Britain, no country seriously questioned the wisdom of keeping exchange rates pegged.

The main setback from monetary integration during this period was the abandonment of the Werner Report. Completed in 1970 and endorsed by the Council of Ministers in 1971, the Werner Report recommended the rapid adoption of a common currency. Three stages were envisioned, including the pooling of foreign exchange reserves for joint interventions. The turmoil surrounding the breakup of the Bretton-Woods system led the larger countries

to aim at more modest steps, partly out of pragmatism, partly as a pretext to escape a move that was clearly ahead of policymakers' thinking. The smaller countries, which were seeing their own policy autonomy decline, were frustrated but unable to shake the domination of the larger countries.

Monetary integration soon took another direction, though. The European Monetary System (EMS) was agreed upon in 1978 and launched in 1979. Eight of the then-nine members of the European Community became active members of the exchange rate mechanism (ERM). When the euro was launched in January 1999, all members of the European Union were part of the ERM, with the exception of Sweden, the UK and Greece. Greece joined the ERM later that year. Among European countries not members of the EU, Switzerland has traditionally steered its own currency alongside the DM, even though it has always been very careful not to declare an official linkup, and has occasionally used the exchange rate as a tool of monetary policy.

During its first ten years of existence, the ERM was buffeted by frequent crises. By the early 1980s its survival was very much in doubt, especially as a series of attacks affected the French franc in the wake of the election of President Mitterrand. The policy reaction turned out to be another show of support for fixed exchange rates as monetary authorities rededicated themselves to a new ERM, one where the DM would play the role of central currency. This "greater DM area" gradually asserted its credibility and became such a success that policymakers grew emboldened to move to the next logical step, monetary union.¹

Success was concealing a buildup of tensions, however. Inflation rates had not converged and yet realignments were seen as *passé* on the road to monetary union. The combination of accumulated imbalances and a major policy mistake—denial that German unification would require a DM revaluation—triggered a round of violent speculative attacks. Two countries (Italy and the UK) left the ERM and many were forced to devalue, some of them several times. The ERM was radically changed when its margins of fluctuation were widened to the point of irrelevance. While, for all practical purposes ERM currencies were officially closer to floating, unofficially the monetary authorities endeavored to keep currency fluctuations within narrow margins, in fact quietly mimicking the defunct

ERM. By then, monetary union had been decided and its start date firmly set.

Summarizing, since the early 1950s, with the notable exception of Britain, the European countries have continuously sought to tie their exchange rates to a fixed regime. The Bretton Woods system initially provided an adequate framework that did not require an additional, explicitly European, initiative. When it fell apart, Europeans promptly moved to develop their own arrangements, starting with the rather informal Snake, moving on to the more structured and cohesive EMS, and ending at a full-blown monetary union. This history reveals a strong commitment to exchange rate fixity, even as most other developed countries, including the UK, were moving in the opposite direction of increased flexibility.

III. Why Fixed? The Trade Connection

There are several reasons for adopting a fixed exchange rate regime. The most commonly cited reasons are: the lack of sufficiently deep financial and exchange markets; a strategy of importing monetary discipline; and a quest for stability for trade purposes. Investigating policymakers' true motives is generally a hopeless task, and this is especially the case for exchange rate management. Nevertheless, the approach taken here is that a policy that is upheld consistently over a long period must reflect true intentions. The approach does not assume that each and every policy outcome reflects intentions. For a variety of reasons (unexpected shocks, policy mistakes, or changing policymakers' views) outcomes may be wholly unintended. However, these are occasional and temporary disturbances that cancel out on average over a long period of observation. This is the strategy adopted here.

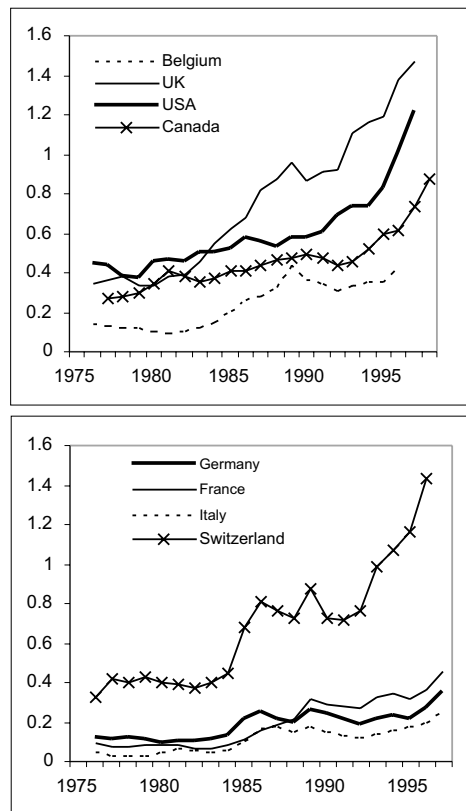
Illiquid markets

There is little doubt that financial and exchange markets were shallow in Europe in the 1950s, partly intentionally so, as explained in Section IV below. Allowing exchange rates to float freely under such conditions may result in excessive volatility. After the move to current account convertibility in 1958, capital account restrictions remained widespread, partly motivated by the belief that they

would assist the operation of the fixed exchange rate system. The question then arises: when did domestic financial markets reach a sufficient stage of development, permitting exchange markets to deepen enough, that exchange rates could be allowed to float if that were deemed desirable?

Figure 1 presents an indicator of financial depth: stock market capitalization as a proportion of GDP. The figure indicates that stock markets have traditionally been small in Europe, with the notable exceptions of Switzerland and the UK. Interestingly enough, Britain and Switzerland are the two countries that have demonstrated the least interest in a fixed exchange rate regime, and actually let their currencies float after 1973, with the exception of Britain's brief period of ERM membership. On the other side, a comparison with the perennial floater Canada shows that, for quite some time, Europe probably has had deep enough markets to operate reasonably stable exchange markets.

Figure 1. Stock Market Capitalization (ratio to GDP)



Source: World Bank

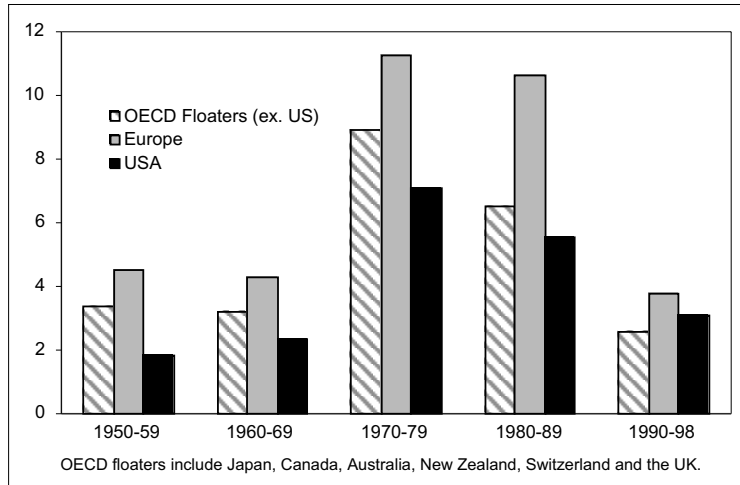
Monetary discipline

Fixed exchange rates discipline monetary policy when the peg is taken as the central bank's main target. The currency peg provides a nominal anchor that is as stable as the currency to which the domestic currency is fixed. Europe first used the US dollar as its reference currency and then gravitated towards a DM anchor. The discipline argument predicts that Europe's inflation rate should have remained close to that of the US early on, and then declined toward the lower German rate. It also predicts a contrast with other industrialized countries which have been floating for most of the post-Bretton Woods era (Japan, the UK, Switzerland and Canada; and more recently Australia and New Zealand). Figure 2 does not bear out these predictions. If fixed exchange rates were used as an anchor, it did not work. Europe (excluding the floaters, Switzerland and the UK) has, on average, had the worst inflation performance in the OECD area.

In many respects, the view that exchange rates can be used as an anchor is fairly recent, at least in European official thinking. When the EMS was created, reference was explicitly made to nominal exchange rate stability, not to anchoring inflation to best practice in Germany. Most ERM countries maintained other monetary targets alongside the exchange rate, mostly credit aggregates. Importantly, these multiple targets were not usually set consistently with respect to each other, or to Germany. Rather, they aimed at domestic objectives, mostly the level of interest rates and investment.² Realignments were not only possible but actively undertaken and always justified as a "correction" of accumulated inflation differentials.

In fact, the EMS was explicitly set up as a symmetric system, with no center currency. Its rules carefully avoided adopting the Bretton Woods presumption that high inflation-weak currency countries would bear the burden of adjustment in case of misalignment and market pressure. Responsibility for exchange market interventions was strictly bilateral, with unlimited support from the strong to the weak currency country. Applying the inflation-anchor argument to the setting up the EMS is a revisionist interpretation, building on the evolution that followed the currency crises of 1983 and the eventual adoption by France of the "Franc fort" strategy.

Figure 2: Inflation in the OECD Area



Source:IFS

Trade

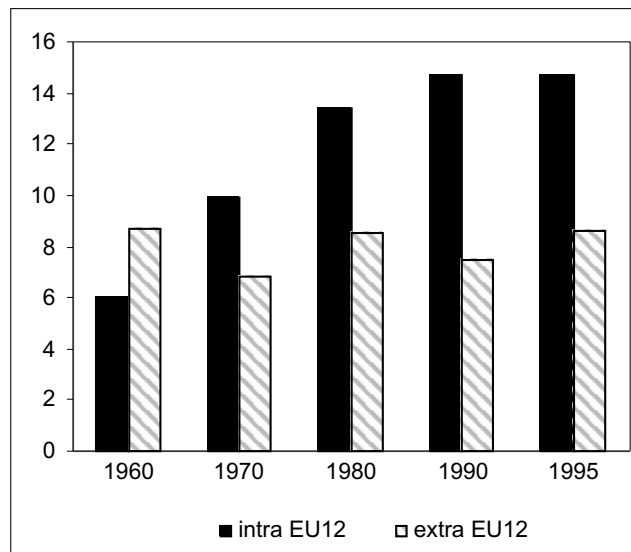
Fixed exchange rates are sometimes seen as a way of reducing relative price uncertainty for international traders, thus promoting commerce. This argument has no theoretical support (uncertainty can either encourage or discourage international trade depending on assumptions) and limited empirical support. See, for example, Kenen and Rodrik (1986) for a sample of industrialized countries and de Grauwe (1988) for the European Union; a recent review and more weak evidence is provided by Flam and Persson (2000), with stronger evidence in Rose (2000). Yet, this motivation has been crucial. Policymakers happened to believe that nominal exchange rate stability mattered for trade, in spite of the theory and evidence, and possibly for good reasons.

Most of the empirical evidence is based on high frequency (typically from one month to one year) fluctuations in the exchange rate. At such frequencies, there exist cheap hedging instruments, so that it is not surprising that the effect of exchange rate volatility is weak or non-existent. For technical reasons (chiefly the lack of enough observations), the literature does not deal with lower frequency changes, in particular with often deep, multi-year currency cycles. For example, the yen depreciated by 47% against the dollar

between 1978 and 1985, then appreciated 52% between 1985 and 1988, to depreciate again by 28% until 1990, and appreciate by 48% by 1995. Similar fluctuations can be found for the DM, which experienced a 92% depreciation between 1979 and 1985, followed by a 52 % appreciation by 1987. Such fluctuations cannot be insured against, at least not cheaply or conveniently.³ They simply wipe out established competitive positions. It is difficult to believe that they do not hurt trade.

Two pieces of evidence support the view that trade has been an essential motive in shaping European governments' attitude towards exchange-rate regimes. First, as shown in Figure 3, since 1960 the intensity of intra-European trade relations has deepened significantly, in contrast to trade with the rest of the world. The assertion here is not that fixed exchange regimes have allowed intra-Europe trade to increase by a factor of 2.5. The creation of a Common Market, and continuous and successful efforts at dismantling trade barriers, clearly lie behind trade integration. Rather the point is that trade integration has been a central objective pursued through all means available. If exchange rate stability is one such means, or if it was simply perceived as a means, it would be surprising that it was not used as well.

**Figure 3: Intra- and Extra-European Trade
(Average Imports + Exports as Percent of GDP)**



Source: European Commission

The second piece of evidence is the stability of intra-European exchange rates. The record is presented in Figure 4 for the three most important intra-European exchange rates vis a vis the DM. The figure displays the actual and Purchasing Power Parity (PPP) exchange rates⁴ of the French franc, the Italian lira and UK pound relative to both the DM and the US dollar. For comparison purposes, they are all expressed as indices computed to average 1.0 over the sample period. While PPP is not necessarily a fact of life, it seems to act as a reliable anchor for most OECD countries, as noted by Clarida (1999).

If the objective were to achieve a high degree of *nominal* exchange rate stability (e.g. the discipline argument previously dismissed), the figure would suggest complete failure. The trade motive would make sense, however, if the objective was to stabilize the *real* exchange rate: this is what shields intra-European trade from the vagaries of worldwide financial disturbances.⁵ To that end, all exchange rate agreements, in particular within the ERM, included specific provision for realignments and actual management of rates relied heavily on PPP. This is in line with the experience of France and Italy, and most other currencies display the same feature. The figure also reports the monthly variance of log-deviations of the actual from the PPP exchange rate; for France and Italy this variance is much smaller vis a vis the DM than vis a vis the US dollar. For Britain, which did not share the continent's preoccupation with stabilizing intra-European real exchange rates, the variances vis a vis the dollar and the DM are similar.

The explicit use of exchange-rate realignments to make up for accumulated inflation differentials within Europe strongly suggests three conclusions:

- For most of the postwar period, fixed exchange rates were not used as a disciplinary device. Indeed, continuing inflation drift was systematically accommodated.
- This approach changed in the mid-1980s when ERM realignments were explicitly avoided and adherence to fixed nominal rates became the pre-eminent monetary policy anchor in many countries. Yet, as the "Franc fort" strategy of "competitive disinflation" well illustrates, stabilizing real exchange rates was the overarching constraint.

- The relaxed attitude of Europeans with respect to the shift from the Bretton Woods system towards flexible exchange only concerned extra-European arrangements. This suggests little concern with mostly stagnant extra-European trade, sharply different from the view on intra-European trade and exchange rate regimes.

Figure 4: Exchange Rates: Actual and Purchasing Power Parity

Source: IFS, CD-ROM

IV. How It Was Done: Financial Repression

The emphasis on fixed exchange rates should have implied a willingness to give up the use of monetary policy for domestic purposes. That has not been the case. Until the mid-1980s, most European countries fully intended to retain their monetary instrument. The first country completely and explicitly to give up monetary policy independence, the Netherlands, did so only after 1982. In fact, in a large number of countries, monetary policy was not only seen as a macroeconomic tool but as an instrument to support fiscal policy (through the financing of budget deficits) and even to conduct structural policies. Bank lending was often directed to favored sectors and to firms identified as national champions; interest rates were kept low, often negative in real terms.

The conflict between fixed exchange rates and the active use of monetary policy was reconciled through internal and external financial repression, i.e. the use of widespread regulation limiting the normal activities of financial markets. Domestic financial repression included quantitative limits on bank credit, ceilings on interest rates, directed lending, priority to budget financing, limits on the development of stock markets, etc. External financial repression took the form of capital controls, including administrative restrictions on inflows and outflows, prohibition of lending to non-residents, the banning of forward transactions, the obligation for exporters to remit foreign currency earnings, etc. Domestic financial repression allowed the

authorities to control the interest rate independently of credit and money supply growth. External financial repression supported domestic repression by preventing arbitrage relative to the world interest rate. It also limited the ability of markets to attack the currency.

While Europe was quite fast at deepening its internal trade, it was notoriously slow at liberalizing its financial markets, both internally and externally. Table 1 reports the final year of liberalization. Restrictions did not apply continuously, they were applied on and off according to perceived needs. Even in periods when restrictions were not enforced, the empowering legislation remained in place, no doubt reminding investors and citizens that the regime was *de jure* one of restraints. This section first documents and then interprets financial repression.

Table 1: Year of Liberalization in Postwar Europe

	Internal	External
Austria	1981	N.A.
Belgium	1978	1990
Denmark	1980	1988
Finland	1970	
France	1985	1989
Germany	None	1981
Ireland	1969	1992
Italy	1983	1990
The Netherlands	1981	1986
Norway	1984	
Portugal	??	1992
Spain	1966	1992
Sweden	1983	
Switzerland	1975	1980
United Kingdom	1971	1979

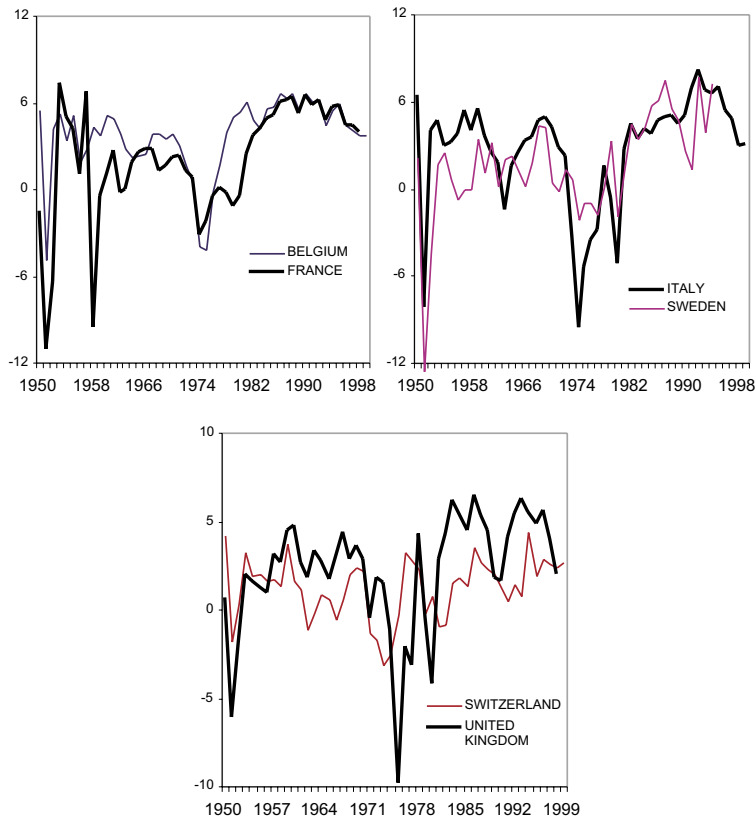
Sources: Exchange controls from Bakker (1996), p. 220; credit ceilings from Cottarelli et al. (1986), unpublished appendix.

Domestic financial markets

Internal restrictions mostly took the form of credit ceilings and other limits on credit availability. These restrictions were designed to control the money supply while allowing interest rates to be maintained at non-market clearing, typically lower, levels. The outcome was a rationing of liquidity, with real interest rates remaining

negative for extended periods of time as Figure 5 readily confirms for a few selected countries.⁶ Officially, interest rates were kept low to promote investment but the real motivation was to permit the cheap financing of budget deficits. In fact, the authorities were quite explicit on that point. For example, the French authorities had established a queuing system for bond issues by the private sector, in particular hollowing out periods when the Treasury was issuing its own debt.⁷

Figure 5: Real Long-Term Interest Rates (Percent)



Note: Ex post annual rates on treasury bonds.

Source: IFS

Capital account convertibility

External liberalization occurred several years after internal liberalization (Table 1). Various measures were in place to restrict capital movements. They mostly relied on direct administrative controls affecting citizens, firms and financial intermediaries. Belgium operated a dual exchange market, separating commercial from financial transactions. Full, unconditional liberalization did not become mandatory until entry into force of the Single Act of 1992. Except for Greece, Portugal and Spain, which were granted grace periods, liberalization was accelerated to July 1990.

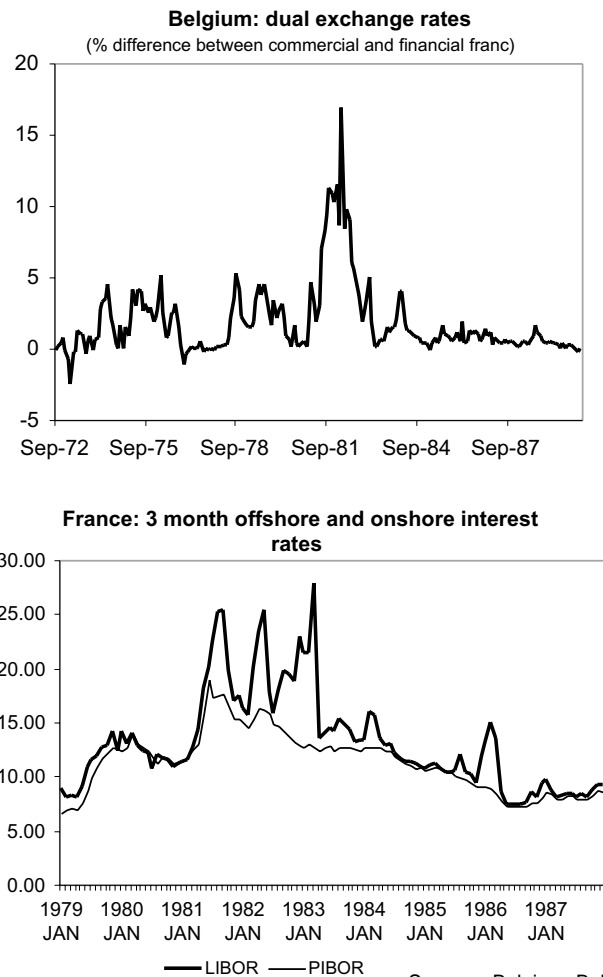
The main aim was to keep domestic interest rates lower than implied by the interest-parity condition. While it is often asserted that capital controls are ineffective, this has not been the case in Europe, as documented in Figure 6. The figure shows that the controls succeeded in creating long-lasting wedges between the two exchange rates (commercial and financial) in Belgium, and between the internal and external franc interest rates in France. Such deviations represent large profit opportunities. These unexploited opportunities are remarkable because they were riskless since they did not entail either exchange or maturity risk (the returns are in the domestic currency on identical assets). Of course, there was evasion and the measures never were 100% effective. Yet, the fact that the markets were unable to arbitrage away profit opportunities for significant periods of time—often more than one year—is clear evidence that the controls were effective. The main reason is that evasion is costly, eating into arbitrage profits. The figure also indicates that, in quiet periods, the wedge disappeared. This corresponds either to temporary suspension of the restrictions or the market's ability to circumvent capital controls given enough time.

Impact on domestic financial institutions

Almost by definition, financial repression looks bad. Is it not the case that it hampers both saving and borrowing, that it thwarts competition in financial markets with associated efficiency costs, and that it may even breed corruption and misuse of financial resources? The conventional answer is that policy intervention is appropriate because financial markets are far from perfect and the presence of information asymmetries can lead to instability and occasional, catastrophic crises. It is hard to disagree with the validity

of either of the opposing arguments. In the end, costs and benefits must be balanced. This section looks at the costs.

Figure 6: Effectiveness of Capital Controls



Sources: Belgium: Bakker (1996);
 France: Burda and Wyplosz (1997).

Beck et al. (1999) have developed a set of performance criteria for financial systems. Using the associated database, there is no clear indication that European financial systems have been seriously inefficient, at least as far as bank overhead costs and interest margins are concerned. However, the detailed analysis in Wyplosz (1999) suggests that this favorable assessment conceals rent extraction

by governments: banks have long benefited from an implicit state subsidy in the form of protection from internal (e.g. interest rates were regulated) and external competition in exchange for deficit financing on attractive terms. Good overall performance, therefore, has been achieved at the expense of bank customers unable to shop around for better deals. This is a clear case of crowding out of the private sector by the public sector.

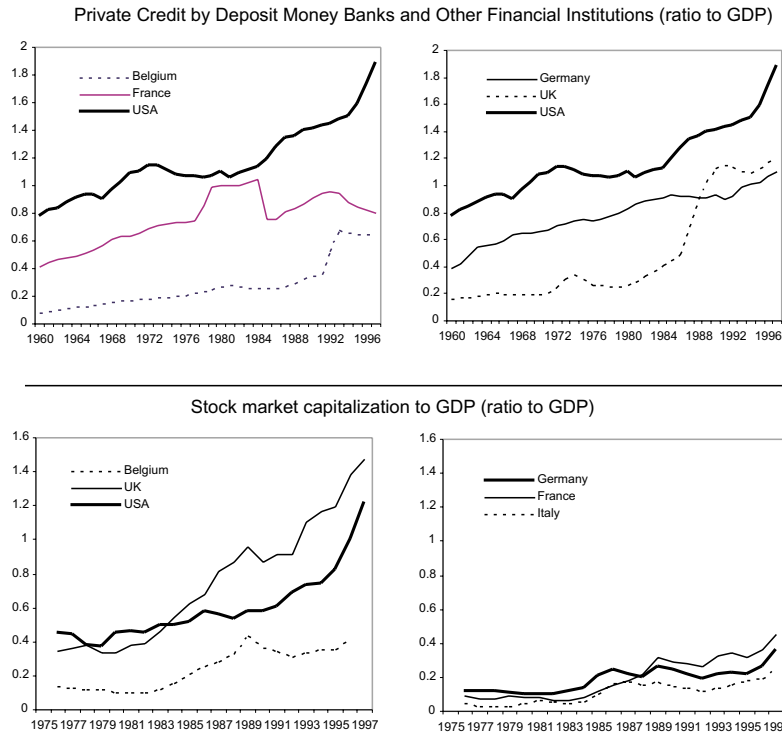
There is no indication that the size of the central bank (and seigniorage) is generally higher⁸ or that liquid liabilities (a measure of financial services provided by the banking system) are out of line with the situation in the US. The main difference concerns the extent of intermediation by the financial sector. The upper part of Figure 7 reports credit to the private sector for selected countries and the US as a ratio to GDP. Given that total credit did not differ markedly, the figure provides further evidence of crowding out of the private sector to finance public spending. The lower part of the figure shows that share financing did not make up for bank financing. This is also the case for private-sector bond financing.

Interestingly, intermediation remains comparatively low one decade after liberalization. Stock market capitalization is also still low, except in the UK whose City competes with Wall Street as a world financial center. Neither has bank lending yet caught up. The reasons for slow adjustment are unclear. Most studies emphasize regulation and entrenched market power.

Three main conclusions emerge from this overview:

- Domestic financial repression affected financial intermediation, crowding out the private sector to the benefit of public-sector financing.
- Domestic and external financial repression jointly allowed a segmentation of the domestic financial markets from world markets, delivering at times lower than market-clearing onshore interest rates.
- More than a decade after full internal and external liberalization, Europe's banking and financial markets are still undersized relative to US markets. Financial repression has long-lasting effects.

Figure 7: Intermediation by the Private Sector



Source: World Bank

Accidents

What about the benefits from financial repression? One expected benefit is to shield fixed exchange-rate regimes from speculative pressure, which is important for the stability of trading arrangements. Europe's history of frequent currency crises seems to dismiss that claim. Looking at the EMS, Table 2 reports the frequency of realignments, including the UK's and Italy's forced exits from the Exchange Rate Mechanism in 1992. Through the early 1990s, realignments were routine, in some years as frequent as the number of member countries. Realignments almost disappeared after the signature of the Maastricht Treaty, when the implementation of stern convergence criteria severely constrained macroeconomic policies, in effect making exchange rate stability the overriding concern of most governments.

Table 2: EMS Realignments

	Realignments	Number of countries	Realignment/ country
1979	3	7	0.43
1980	0	7	0.00
1981	4	7	0.57
1982	6	7	0.86
1983	7	7	1.00
1984	0	7	0.00
1985	7	7	1.00
1986	6	7	0.86
1987	3	7	0.43
1988	0	7	0.00
1989	0	8	0.00
1990	1	9	0.11
1991	0	9	0.00
1992	6	7	0.86
1993	3	7	0.43
1994	0	7	0.00
1995	2	8	0.25
1996	0	8	0.00
1997	0	9	0.00
1998	0	10	0.00

Note: participation is at end of year

Most of the realignments reported in the table were decided in the midst of speculative attacks. Many countries were unable to subordinate their policies to their fixed exchange rate commitments and sooner or later had to face the unpalatable choice between a devaluation and policy austerity. The repeated refusal to devalue, even after it is too late effectively to adjust the policy stance, is the most frequent trigger of speculative attacks.

Is Europe special in this respect? One way to answer the question is to ask whether European countries have been particularly crisis-prone in comparison with similar countries in the OECD area. Table 3 presents an index of exchange market pressure built following the method developed by Eichengreen, Rose and Wyplosz (1995). The index is a weighted average of quarterly changes in the exchange rate, the interest rate and foreign-exchange reserves, with Germany serving as benchmark. The index is larger the more these variables move over each quarter.⁹ Table 3 lists in decreasing order the fifty largest events recorded by the index over the period 1959 to 1998, indicating the corresponding country and quarter. Overall, European countries appear in 78% of the listed cases while they

represent 76% of the OECD countries under study (15 out of 21). Thus there is no indication that Europe, and the EMS in particular, has faced a proportionately larger share of currency crises than the other OECD countries. Nor did the future EMU countries face stronger speculative pressure after the EMS switched to wide margins of fluctuations in August 1993.

Unsurprisingly, the countries that have allowed their currencies to float are not present in the list.

**Table 3: Exchange Market Pressure 1959-1998
(50 strongest cases)**

1	1994.1	Ireland	EMS	26	1985.2	Australia
2	1971.2	Spain		27	1974.2	Sweden
3	1971.2	Switzerland		28	1978.4	Netherlands
4	1992.3	Sweden		29	1969.2	France
5	1978.3	Spain		30	1980.4	Canada
6	1994.3	Greece		31	1977.2	Portugal
7	1985.1	New Zealand		32	1976.1	Italy
8	1974.2	Italy		33	1992.3	Italy
9	1996.1	Greece		34	1973.3	USA
10	1992.4	Ireland	EMS	35	1974.1	Denmark
11	1983.4	Portugal		36	1976.1	Spain
12	1998.1	Greece	EMS	37	1992.4	Norway
13	1977.3	Spain		38	1974.2	Norway
14	1974.2	Spain		39	1968.3	France
15	1982.4	Spain		40	1980.1	UK
16	1986.3	Australia		41	1975.1	Norway
17	1967.4	Finland		42	1977.3	Denmark
18	1985.4	Greece		43	1973.3	Japan
19	1973.3	Ireland		44	1979.3	Denmark
20	1964.4	UK		45	1992.3	Canada
21	1978.1	Finland		46	1972.3	UK
22	1973.3	Netherlands		47	1973.3	Canada
23	1976.3	Netherlands		48	1992.3	New Zealand
24	1973.1	Greece		49	1983.1	UK
25	1983.1	Greece		50	1959.4	New Zealand

Source: author's calculation from IFS data

It seems reasonable to conclude that Europe's experience as a fixed exchange rate zone is unremarkable. What makes Europe stand out is its continuing attachment to a fixed exchange rate regime. Most other OECD countries have allowed their currencies to float as they were dismantling their domestic and external financial controls. Europe's response, instead, has been to strengthen exchange rate fixity by aiming at a currency union. This reaction to the conflict between monetary policy independence and fixed

exchange rates in favor of the latter confirms Europe's paramount commitment to nominal exchange rate stability. This is in line with the view that the authorities have taken great care not to disrupt trade within Europe.

V. Overall Assessment: How Bad Was It Really?

The traditional macroeconomic development literature (see e.g., McKinnon, 1979), eventually enshrined as the 'Washington consensus', argues that financial repression hurts economic growth. This view is largely informed by the experience of developing countries, for example Latin America between 1950 and 1970. A possible problem with the conventional wisdom is that it is based on the experience of countries that resorted to wide ranging and extensive controls, often alongside serious political instability and many other potential impediments to growth, of which financial repression was just one component. Europe, on the other hand, experienced its best economic-growth performance in the postwar period, fastest in the 1960s at the heyday of financial repression while goods markets and trade were being liberalized.¹⁰

Section III argues that financial repression was, partly at least, driven by the trade-related concern with real exchange rate stability. Section 4 documents the effects of repression on financial markets. An assessment of Europe's strategy then requires tracking the impact of trade integration and financial repression on growth performance. It could be that trade integration buoyed growth while financial repression slowed it down, with an overall favorable impact. It could also be that fast growth was simply a catch-up

process after the damage of the war, too powerful to be blocked by financial repression. In that view, growth would have been even faster had financial markets been liberalized earlier.

This hypothesis can be formally tested using the now standard approach developed by Barro and Sala-i-Martin (1992). Since Europe stands out among the developed countries for its commitment to exchange-rate stability, but otherwise differs little, it is natural to compare its performance with that of the other OECD countries. The Appendix presents estimates carried out with a sample of 14 countries, chosen for data availability reasons.

So what is the verdict on the role of financial repression and the exchange-rate regime? In contrast with conventional wisdom, internal financial repression—captured by the presence of credit constraints—is found to have a *positive* effect on growth, adding one percentage point on average to annual growth in per capita GDP. The effect of capital controls is not well established, possibly not significant, but certainly not adverse. The adoption of a fixed exchange-rate regime has a small, negative but hardly significant impact on growth. Importantly, trade openness raises growth: a 10% increase in the ratio of the average of exports and imports to GDP is found to raise annual economic growth by 0.2%.

Europe is a special case both because of its widespread and long-lasting use of financial restrictions and its attachment to fixed exchange rates. But rapid postwar growth may have been driven by the catch-up from extensive damage suffered during World War II. For instance, GDP per capita fell by more than 60% in France, Germany and the Netherlands, while it grew by almost 40% in the US. Could Europe's fast growth in the 1960s be mistakenly attributed to contemporaneous financial repression?¹¹ This possibility is also explored, and rejected.

Overall, the conventional wisdom that financial repression seriously hurts growth is not supported by the postwar experience of the OECD countries. It may be that the survival of a fixed exchange rate regime requires financial repression, so we need to look at the overall package: fixed rate regime *plus* financial repression. The effect of such a package on growth is found to be positive. According to the estimates in Column (4), the combination of a fixed exchange rate, credit ceilings and capital controls adds 0.9 percentage points to growth annually, without even taking account of the favorable effect of increased trade integration.

It is unclear what precisely lies behind these results. They certainly challenge conventional wisdom, but not accepted general economic principles. We know from second-best theory that there is no presumption that financial repression has negative effects in the presence of financial market imperfections: for example, credit rationing or connected lending. More generally, the strong adverse effect of other non-market distortions that often coexist with financial repression may be inaccurately attributed to it. Europe indeed has long been characterized by widespread government intervention in goods and labor markets.¹² But the formal evidence presented here certainly does not support the view that financial repression *in and of itself* has hurt growth in postwar Europe.

VI. Lessons From Europe: Different Models for the External Regime in the Growth Process

Taking stock of the results presented above, it appears that continental Europe adopted a development strategy quite different from that chosen by the UK and the US. Its key features are the commitment to fixed nominal exchange rates and the readiness to repress financial markets in order to ensure survival of the regime until a full-fledged monetary union was adopted.¹³

Are there lessons for the next wave of countries catching up? Before jumping to any conclusion, two series of questions need to be addressed. First, how much can be safely inferred from Europe's postwar experience? Second, is today's world different from the period when Europe grew fast?

On the first point, it seems fair to assume that the empirical evidence presented above will not convince those who are skeptical of the paper's interpretation of Europe's growth experience. No attempt is made to demonstrate a link between trade and the exchange rate regime. Section III argues that the general inability to do so can be interpreted as suggesting either that there is no link or that we have not looked at the effects of long cycles of misalignment, most likely the latter. At any rate, it seems clear that, in reaction to the debacle of the interwar period, European policymakers wanted to eliminate the suspicion that the exchange rate was being

manipulated to achieve beggar-thy-neighbor advantage. They were particularly anxious to do so as they were engaged in far reaching, historical efforts at forging a single market for goods and services, which implied politically delicate decisions.

The evidence from Europe stands in opposition to the view that financial markets ought to be liberalized and if that means giving up the exchange peg, so be it. The strategy adopted in Europe put exchange rate stability at center stage and if that meant delaying financial liberalization, so be it. There is no evidence that Europe's strategy had an adverse effect on its growth performance.

Critics argue that the strategy was only possible because it was carried out with objectives much wider than a common market in mind. They claim that the required political will was undergirded by the ambitious vision of a monetary union, possibly even a federal union yet to be achieved. But this is a revisionist view. For example, the 1971 Werner Plan for a monetary union was unanimously greeted by the larger countries as unrealistic, and they proceeded to scuttle it at the first possible occasion. As late as 1988, when the idea of a monetary union resurfaced, it was still widely seen as unrealistic.¹⁴ It took an exceptional event, the collapse of the Berlin Wall, to trigger a deep reassessment that no political leader would have predicted just a few weeks before. Europe's integration has always been characterized by a process of muddling-through, two steps forward and one step backward, with deep and lingering divergences as to the true objective. This is still the case.

If Europe serves as an alternative model for exchange rate management, does the European lesson still apply in today's world? It seems easy to make the case that the answer is negative. The size of financial markets is several times what it was in the 1960s, and the information technology revolution makes borders obsolete. Financial flows are far too large to be stopped, and international lending far too convenient to be shunned by countries with massive capital needs. Why should any country decide to blunt such a powerful engine of growth, that not only provides resources on a scale unavailable at the domestic level, but also works as a channel for technology transfers?

While persuasive, these arguments are far from definitive. The very sophistication of markets can be used to harness them; the authorities can, if they wish, use information technology to monitor and regulate capital movements. Not all capital flows are equally

beneficial: foreign direct investment is useful capital, as opposed to “hot money” that comes and goes. Capital flows have a tendency to be destabilizing in the wake of rapid liberalization, as Argentina, Chile, Mexico, Korea, Malaysia and many other emerging market countries have discovered much to their grief.¹⁵

A reasonable reading of Europe’s strategy goes as follows. Like any price-fixing scheme, pegged exchange rates may result in mispricing and inefficiency in the allocation of resources and trade. On the other hand, the experience with deep and long-lasting misalignments should act as a sobering reminder that financial markets, including the foreign exchange markets, are open to problems of asymmetric information and resulting distortions. Misalignments of floating exchange rates often exceed those found in fixed exchange rate regimes; this is certainly the OECD experience. Fixing the exchange rate is a time-honored response to these distortions.

The choice of an exchange rate regime is not a black or white issue, but one that involves trade-offs, and that remains poorly understood. Rightly or wrongly, most European countries determined early on that misalignments were harmful to trade, and that the benefits from trade are first order ones, too large to be jeopardized by long-run exchange rate uncertainty. In contrast, financial repression carries at worst second-order negative effects. The postwar record does not indicate that this has been a policy mistake.

In fact, the choice of an exchange rate regime ought to be considered as part of a package that may include, if needed, some degree of financial repression. Pegged exchange rates are inherently unstable in a world where financial shocks eventually challenge the hardest commitment of the monetary authorities. Given enough time, pegged exchange rate regimes will ultimately collapse. Financial repression is therefore a useful backup to reduce the incidence of financial shocks and make fixed exchange rate regimes more manageable and longer lasting.¹⁶

While this conclusion has become less heterodox since the Asian crisis, the policy implications remain controversial. One view, developed in Eichengreen (1999), is that in a world of capital mobility, the only exchange regimes that should be considered are as presented in the introduction: the polar choices of free floating or hard pegs (currency boards, dollarization or monetary unions). An alternative view is that the costs associated with the polar regimes may be excessive for small, open, developing economies

and therefore the full capital mobility objective may not be as self-evident as it is often assumed to be.

European experience does not bear out the view that full capital mobility is sacrosanct. It also provides support for a strategy of regional trade opening within a broader political framework that may inspire other areas in the world. Small, open, developing countries may well find it a legitimate choice to aim for fixed, adjustable exchange rates, potentially on the way to monetary union. If this strategy clashes with full capital mobility, the European experience suggests that other choices are available.

Once this view is accepted, the middle ground is added to the choice between the polar extremes. Freely floating exchange rates tend to fluctuate to the point of disturbing trade competition in a way that is soon perceived as unfair, feeding suspicion among tightly integrated countries. What is good for the US or Japan may not suit the needs of small, open economies aiming to replace centuries-old regional rivalries with economic cooperation that will enhance welfare and peace. Hard pegs constitute deep and politically costly commitments which may benefit countries with a troubled record of monetary mismanagement (Argentina, Bulgaria), newcomers with no record at all (Estonia, Bosnia), or countries which have gone a long and cautious way towards integration (Europe). For the others, traditional pegs backed by some restrictions on financial markets remain a perfectly acceptable option.

An open mind would therefore investigate the following questions:

- If fixed exchange rates and full capital mobility are both deemed desirable, what are the costs and benefits of adopting a hard peg to a major currency? The experience so far with such arrangements is too short to reach robust conclusions. Hong Kong has suffered a blow after many highly successful years. Argentina is struggling with a strongly overvalued currency and seeks an exit option. The longest experience with hard pegs is that of the CFA countries of Western and Central Africa; the record is not particularly encouraging (World Bank, 1994).
- If a hard peg to a major currency is deemed undesirable, is a regional monetary union desirable and feasible? The European experience suggests a positive answer but also a warning that

such a step requires careful and lengthy preparation. Admittedly the process can be sped up, but monetary unions are unlikely to be set up in a matter of a few years, if only because they require fairly exacting political commitments.

- If a regional monetary union is the ultimate aim, how can it be achieved? The choice is between full capital mobility with floating rates and regional exchange rate pegging with restrictions on capital mobility. The European experience, including Britain's reluctance to adopt a regional peg, is that the shorter road to monetary union is unlikely to involve exchange rate flexibility.
- The remaining strategy is one of full capital mobility along with a flexible exchange rate. Europe has little to report on this option. Britain and Switzerland have mostly followed that strategy since the breakup of the Bretton Woods system, even though full capital liberalization came later in both countries. Both have successfully integrated themselves into Europe. Britain's experience has been checkered, suggesting passing dissatisfaction with the chosen strategy. The current overvaluation of Sterling is a useful reminder of the perils of misalignment. Switzerland has been quite successful, but it is arguably an idiosyncratic case.

Appendix: Growth Estimates

This appendix presents estimates of growth of GDP per capita in the OECD area following the approach developed by Barro and Sala-i-Martin (1992). The approach accounts for catch-up by including the beginning-of-period GDP per capita. It then adds a variety of variables which, theory predicts and previous empirical investigations have confirmed, affect country growth performance. These variables usually include a measure of education (a proxy for investment in human capital), demography, health, trade openness, savings behavior and infrastructure factors. The approach uses panel data for two reasons: it looks for general sources of growth, shunning national idiosyncrasies; and in order to eliminate shorter-run effects, it uses low-frequency data which severely limit the number of observations per country, hence the need to increase the sample size which is achieved by pooling as many countries as possible.

As the aim is to study Europe's experience relative to other similar developed countries, the sample includes the 14 OECD countries for which adequate data is available: Australia, Belgium, Denmark, France, Germany, Ireland, Italy, Japan, Netherlands, New Zealand, Spain, Switzerland, the United Kingdom and the United States over the period 1960-95. As is customary, cyclical effects are eliminated by using low frequency observations, five-year periods.

Given the similarity of OECD countries, several of the variables found significant in the empirical growth literature, which includes both developed and developing countries, play no role here and are left out. On the other hand, the specificity of Europe and the issues at hand suggest adding two institutional features: the weight of government—measured as its share of total employment—and the independence of monetary authorities—approximated by the inflation rate.¹⁷ The focus, however, is set on the role of financial repression. Internal and external repression is captured by two dummy variables developed in Wyplosz (1999) and extended here for the non-European OECD countries. A dummy measuring the exchange rate regime is also included.

The results are displayed in Table 4. Neither the fixed effects nor the time dummies (when used) are reported. The first four columns present different estimations of the same model with country-specific fixed effects, depending on whether subperiod-specific intercepts are allowed or not, and with or without cross-section weights (GLS estimation). The last two columns include additional variables as explained below.

The estimates appear to be very robust to the choice of estimating procedure, and generally in line with the literature. The credit constraint dummy is everywhere highly significant and precisely estimated to raise average annual growth by 1%. The capital controls dummy is also found to have a positive effect on growth but it is only significant at the 10% confidence level in columns (1) and (2), and not significant in columns (3) and (4). Operating a fixed exchange rate regime appears to reduce growth, but this effect is not systematically significant in column (3).

Although the catch-up effect is captured by the beginning-of-period level of GDP per capita, it can be argued that Europe's distinctive experience may be driven by the additional need to make up for World War II destruction, spuriously captured by the financial repression dummy variables. In order to check this possibility, two additional variables have been added: column (5) includes the gap in per capita GDP vis a vis the USA, and column (6) further adds the drop in GDP between 1938 and the trough year between 1940 and 1947.¹⁸ The results remain largely unchanged, certainly for the variables of interest, while the additional variables are never significant at the 5% confidence level.

Table 4: Financial Repression and Growth Performance
(Dependent variable: average annual growth rate of GDP per capita)

	OLS No time dummies (1)	GLS No time dummies (2)	OLS With time dummies (3)	GLS With time dummies (4)	GLS With time dummies (5)	GLS With time dummies (6)
GDP per capita	-0.050 **	-0.054 **	-0.043 **	-0.048 **	-0.139 *	-0.062
Beginning of sub-period	-4.172	-4.511	-3.372	-4.375	-2.539	-1.980
Capital controls	0.007 1.760	0.004 1.839	0.002 0.699	0.003 1.532	0.006** 4.708	0.001 0.304
Credit constraints	0.010 ** 2.977	0.010 ** 3.409	0.011 ** 4.280	0.010 ** 5.175	0.010** 6.369	0.008** 2.964
Fixed rate regime	-0.007 * -2.135	-0.008 ** -3.593	-0.006 -1.764	-0.004 * -2.375	-0.004 -1.615	-0.003 -1.235
Inflation	-0.207 ** -5.150	-0.198 ** -7.585	-0.179 ** -4.045	-0.186 ** -5.588	-0.187** -8.017	-0.122 * -2.377
Openness	0.021 * 2.067	0.019 * 2.343	0.025 ** 2.713	0.023 ** 3.943	0.021** 3.545	-0.006 -1.942
Size of government	-0.014 -1.038	-0.009 -0.980	-0.016 -1.589	-0.018 ** -2.962	-0.028** -5.256	-0.009 * -2.440
Higher education	0.004 0.441	0.003 0.419	0.001 0.115	0.002 0.528	0.009 3.140	0.008** 3.003
Fertility	-0.012 -1.419	-0.014 * -2.463	-0.014 -1.080	-0.009 -0.990	-0.004 -0.372	-0.002 -0.135
Saving ratio	-0.001 -0.259	-0.004 * -0.899	-0.002 -0.564	-0.007 ** -2.704	-0.008** -3.339	-0.001 -0.233
GDP/capita gap (relative to US) World War II	0.251	0.052	1.938	0.721	-0.003	-0.747
Adjusted R2	0.716	0.825	0.822	0.959	0.941	0.962
S.E.R.	0.009	0.009	0.007	0.007	0.006	0.009
N. observations	83	83	83	83	83	83

Sources: GDP, openness (exports plus imports of goods and services as a share of GDP), size of governments (ratio of public employment to total employment) and saving ratio: *OECD Economic Outlook*, December 1999; Capital controls and credit restraints: Wyplosky (1999); fertility and higher education: Barro-Lee data base from World Bank web site; inflation: *IFS*; World War II drop in GDP per capita from Appendix C in Angus Maddison, *Monitoring the World Economy, 1820-1992*, OECD Development Centre, Paris, 1995.

Notes: t-statistics in second line, **(*) significant at the 1% (5%) confidence level; White heteroskedastic-consistent standard errors. Fixed effects allowed.

Estimated period: 1960-1995 with 7 five-year sub-periods. Not reported: country-specific (fixed effects) and premium dummies. All variable in logs.

Unbalanced panel of 14 OECD countries: Australia, Belgium, Denmark, France, Germany, Ireland, Italy, Japan, Netherlands, New Zealand, Spain, Switzerland, United Kingdom, United States.

References

- Barro, Robert J. and Xavier Sala-i-Martin. 1992. "Convergence", *Journal of Political Economy* 100(2), pp. 223-51.
- Beck, Thorsten, Asli Demigürc-Kunt and Ross Levine. 1999. "A New Database on Financial Development and Structure", unpublished paper, The World Bank, June.
- Calvo, Guillermo. 1999. "On Dollarization", unpublished paper, University of Maryland. <http://www.bsos.umd.edu/econ/ciecpn5.pdf>
- Calvo, Guillermo, Leonardo Leiderman and Carmen Reinhart. 1996. "Inflows of Capital to Developing Countries in the 1990s", *Journal of Economic Perspectives* 10(2), pp. 123-39.
- Clarida, Richard. 1999. "G3 Exchange Rate Relationships: A Recap of the record and a Review of Proposals for Change", Group of Thirty Occasional Papers 59, Group of Thirty.
- Cukierman, Alex and Francesco Lippi. 1999. "Central Bank Independence, Centralization of Wage Bargaining, Inflation and Unemployment: Theory and Some Evidence", *European-Economic-Review* 43(7), pp. 1395-1434.
- de Grauwe, Paul. 1988. "Exchange Rate Volatility and the Slowdown in Growth in International Trade", *IMF Staff Papers* 35, pp. 63-84.
- Dornbusch, Rudiger. 1976. "Expectations and Exchange Rate Dynamics", *Journal of Political Economy*.
- Eichengreen, Barry. 1999. *Towards a New Financial Architecture*, Institute for International Economics.
- Eichengreen, Barry and Charles Wyplosz. 1993. "The Unstable EMS", *Brookings Papers on Economic Activity* 1, pp. 51-124.
- Eichengreen, Barry, Andrew Rose and Charles Wyplosz. 1995. "Exchange Market Mayhem: The Antecedents and Aftermath of Speculative Attacks", *Economic Policy*, 21, pp. 249-312.
- Flam, Harry^{and} Per Jansson. 2000. "EMU effects on international trade and investment", unpublished paper, Institute for International Economic Studies, Stockholm University.
- Ghosh, Atish R., Anne-Marie Gulde and Holger C. Wolf. 2000. "Currency Boards: More than a Quick Fix?", *Economic Policy* 31, forthcoming.
- Kenen, Peter B.. 1995. *Economic and monetary union in Europe: Moving beyond Maastricht*, Cambridge University Press.
- Kenen, Peter and Dani Rodrik. 1986. "Measuring and Analyzing the Effects of Short-Term Volatility in Real Exchange Rates", *Review of Economics and Statistics* 68, pp. 311-319.
- Krugman, Paul. 1979. "A Model of Balance-of-Payments Crises", *Journal of Money, Credit, and Banking* 11(3), pp. 311-25.
- Krugman, Paul. 1996. "Are Currency Crises Self-Fulfilling?", *NBER Macroeconomics Annual*, pp. 345-506.

- McKinnon, Ronald. 1979. *Money in International Exchange, The Convertible Currency System*, Oxford University Press.
- Obstfeld, Maurice. 1986. "Rational and Self-Fulfilling Balance of Payments Crises", *American Economic Review* 76, pp. 72-81.
- Posen, Adam S. 1993. "Why Central Bank Independence Does Not Cause Low Inflation: There Is No Institutional Fix for Politics", in: Richard O'Brien (ed.), *Finance and the international economy 7*, The Amex Bank Review prize essays: In memory of Richard Marjolin, Oxford University Press for The Amex Bank Review, 1993.
- Rodrik, Dani. 1997. "TFPG Controversies, Institutions, and Economic Performance in East Asia", CEPR Discussion Paper 1587, March.
- Rose, Andrew. 2000. "One Money, One Market: Estimating the Effect of Common Currencies on Trade", *Economic Policy* 30, pp. 7-46.
- Sachs, Jeffrey and Steven Radelet. 1998. "The East Asian Financial Crisis: Diagnosis, Remedies, Prospects", *Brookings Papers on Economic Activity* 1, pp. 1-74.
- Sicsic, Pierre and Charles Wyplosz. 1996. "French Postwar Growth: From (Indicative) Planning to (Administered) Market", in: N. Crafts and G. Toniolo (eds.) *Economic Growth in Europe Since 1945*, Cambridge University Press.
- World Bank. 1994. *Adjustment in Africa: Reforms, Results, and the Road Ahead*, Oxford University Press.
- Wyplosz, Charles. 2001. "Financial Restraints and Liberalization in Postwar Europe", in: G. Caprio, P. Honohan and J. E. Stiglitz, eds. *Financial Liberalization: How Far? How Fast?*, Cambridge University Press.

End Notes

- ¹ A detailed review of this evolution is provided by Kenen (1995).
- ² As described below, capital controls were extensively used to shield domestic interest rates from the interest parity condition.
- ³ In principle, firms can cover long term trade exposure by acquiring matching positions but they do not seem to do so.
- ⁴ PPP exchange rates are computed using CPIs and take as a base the average exchange rate over the sample period. None of the conclusions drawn are sensitive to the use of a particular price index or to the choice of a base level.
- ⁵ The statement announcing the creation of the EMS aimed at establishing “an island of monetary stability” in Europe.
- ⁶ The only country where real interest rates have not been negative during the postwar period is Germany.
- ⁷ For a detailed discussion of this point, see Wyplosz (1999).
- ⁸ The notable exception is Italy in the 1970s and 1980s which increased seigniorage revenues by tightening credit ceilings and raising the required reserve ratio.
- ⁹ The exact measure is $\alpha(di-di^*) + \beta(de/de^*) - \gamma(dR/dR^*)$ where i is the short-term interest rate, e the log of the dollar exchange rate and R foreign exchange reserves, with a star denoting Germany and the weights α , β and γ are the inverse of the sample variance of the relevant term.
- ¹⁰ South-East Asia too offers another counter-example to the conventional wisdom, see Rodrik (1997).
- ¹¹ I am grateful to Barry Eichengreen for pointing out the possibility that the results are spurious in this sense, as well as for suggesting the way to check it out.
- ¹² Studying the French postwar experience, Sicsic and Wyplosz (1996) conclude that public subsidies and directed lending have had a sizeable negative impact on growth.
- ¹³ A puzzling issue, not studied here, is the fact that European (and British) goods and labor markets have been far from free for most of the postwar period —and remain quite rigid in several countries.
- ¹⁴ Economic principles establish that the monetary union became logically unavoidable once it had been decided to free all capital movements

while keeping the ERM. It bears noting that the prime force behind the liberalization push was Margaret Thatcher who failed to see the economic logic, and came to bitterly regret it as it directly prompted her ouster.

¹⁵ For an overview, see Calvo, Leiderman Reinhart (1996).

¹⁶ As noted above, fixed exchange rates and financial repression were also instrumental in countries that sought to channel domestic savings towards preferred use, such as the financing of endemic budget deficits or of particular industries. This aspect is not taken into account in the present discussion.

¹⁷ There is much evidence linking inflation and central bank independence, see e.g., Cukierman and Lippi (1999). For an opposite view, see Posen (1993).

¹⁸ When there was no decline in GDP per capita over 1938-1947, the end-of-war year is conventionally set in 1945.

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