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THE EXCHANGE RATE: ECONOMIC POLICY TOOL OR MARKET PRICE?

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Contents

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Preface

In November 1999 Barry Eichengreen and Ricardo Hausmann wrote: "Curiously, early contributions to post-Asia literature … said little about the choice of exchange rate regime, focusing instead on transparency, prudential supervision, policy toward capital flows, and IMF reform. The emphasis in recent writings is different; there, the exchange rate has taken centre stage" (Eichengreen and Hausmann, 1999: 1). This shift in emphasis, called by the authors a "maturation" of the debate, is indeed remarkable. In the post-Asian and ante-Brazilian crisis prevention debate, my attempts in the autumn of 1998, in my capacity as German G-7 Deputy Finance Minister, to shift the focus of attention to the exchange rate regime failed ruefully. Lacking the support of eminent economists such as Barry Eichengreen, I was denounced a priori as a "pure macroeconomist" trying to avoid the hard and complex "structural" questions. In the next round my pleas to make the exchange rate regime in developing countries more flexible without returning to the outdated regime of pure floating earned me the name of "Mr. Target Zone". At that time the new paradigm of corner solutions – choosing either absolutely fixed rates or free floating – had quickly been adopted by the United States administration and the International Monetary Fund, without waiting for the results of the commencing scientific debate.

In the new millennium the academic debate on an appropriate exchange rate regime for emerging economies seems to be reaching a new stage. The painful experiences with hard pegs, such as the once famous currency boards on the one hand and the "fear of floating" (G. Calvo) on the other hand have forced the debate back to solutions between the corners. However, many officials as well as the international financial institutions still adhere to extreme solutions. This is not surprising, given that the corners seem to offer a strictly unilateral approach. If emerging economies could just have the choice of fixing their rates permanently by dollarizing or floating them, countries with reserve currencies could avoid international commitment. Furthermore, if the exchange rates of the Group of Three (G-7) are to be set by market forces, the efficient allocation of international resources would appear to be guaranteed. Political initiatives by other G-7 countries are rare (France and Japan, 2001) and barely successful, as long as the majority of economists shares the view that only the corners of the continuum of possibilities can prevent crises and provide unilateral solutions to a problem which is multilateral by definition.

Abstract

The paper reconsiders the failure of mainstream economics to come up with a consistent and valid exchange rate theory. There has been broad consensus among economists for decades that changes in the value of money over time cannot be used as an economic policy tool because people would be quick to learn to adapt to any attempt to exploit the money illusion by inflationary policy. Paradoxically, the majority of economic analyses have never questioned the ability of policy makers to exploit money illusion over prolonged periods of time if the subject is the change in the value of money in space, i.e. exchange rate changes. The paper argues that the latter have to be treated in the same way as the former if economic theory is to be consistent. As a consequence, exchange rate changes can only be used to compensate for inflation differentials between countries, and nothing else. The paper draws on the European experience up to monetary union, as well as on experience in developing countries with different exchange rate regimes. It strongly rejects the idea of offering unilateral corner solutions for the exchange rate regimes of developing countries in a multilateral world.

I. INTRODUCTION

For economists brought up in the 1970s the controversy of fixed versus flexible exchange rates was every-day bread and butter. The collapse of the Bretton Woods soft peg system of fixed but adjustable rates required a quick political solution. The countries of the industrialized world were split into two groups: the large, closed ones opted for floating, while most of the smaller ones opted for a new peg with different anchors. Europe, with Germany as the anchor, formed the largest of these new soft peg groups. In economic theory, fixed versus flexible rates were part of the general fight of fading Keynesianism versus upcoming monetarism. Monetarism fought for a clear market solution and expected "stabilizing speculation", whereas most Keynesians mistrusted the "animal spirits" of the market and feared herd instincts and bandwagon effects.

Nevertheless, the different schools were united regarding one important aspect of the international monetary order: all admitted that any monetary system would have to assure sufficient flexibility of prices, expressed in an international currency, to avoid fundamental external disequilibria in trade. Although the monetarist school of thought expected domestic prices and wages to be flexible enough to adjust to real and monetary policy shocks, they advocated an additional exchange rate flexibility as a substitute for the lack of international price and wage flexibility.[1] The Keynesian approach was based on stickiness of wages and prices. With insufficient flexibility of wages and prices in general, the Keynesian approach asked for a buffer to smooth international shocks or to avoid domestic misalignments leading to external imbalances. Thus, in a Keynesian approach too, exchange rates should be flexible: flexible enough, if not floating freely, to avoid real cost inhibited by adjustment to unforeseen external events.[2]

The aspects of flexible versus fixed prices – an essential ingredient of the former remarks – have virtually disappeared in the modern debate on exchange rate regimes. The current approach centres around the capital account, with the current account being an appendix or result of capital transactions. The main topic of the former debate – how to avoid high and rising current account deficits and thus unsustainable capital inflows – has been replaced by the question of how to sustain high and even rising capital inflows. As Summers (2000) recently put it: "When well capitalized and supervised banks, effective corporate governance and bankruptcy codes, and credible means of contract enforcement, along with other elements of a strong financial system are present, significant amounts of debt will be sustainable". Given this "first" element of an effective national strategy for minimizing the risk of a capital account crisis, the second one follows:

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[1] Friedman (1962) and Sohmen (1967).

[2] Keynes argued against the return of Britain to the gold standard at the pre-war parity. The optimum currency area criteria of Robert Mundell and others were based on the idea of avoiding huge real costs by depreciating a currency which, due to a negative demand side shock, is overvalued.

> … the choice of appropriate exchange rate regime, which, for economies with access to international capital markets, increasingly means to move away from the middle ground of pegged but adjustable fixed exchange rates towards the two corner regimes of either flexible exchange rates or a fixed exchange rate, supported, if necessary, by a commitment to give up altogether an independent monetary policy". (Summers, 2000: 8)[3]

As a consequence, Summers concludes that the choice between the poles "has less to do with Robert Mundell's traditional optimum-currency-area considerations than with the country's capacity to operate a discretionary monetary policy in a way that will reduce rather than increase variance in economic output". Eichengreen and Hausmann (1999) attempt to solve the exchange rate question along the same lines by investigating the relationship between financial fragility and the exchange rate, rather than between the latter and prices and wages as well as interest rates.

The focus on the capital account in the recent debate explains the results. If the main target of economic policy in emerging economies is to sustain debt and stable capital inflows, instead of preserving competitiveness or high employment and living standards, the therapy may indeed be sought in the corners. Absolutely fixed as well as fully flexible rates may reduce the risk of destabilizing speculation and of moral hazard ("the time bomb waiting to explode") (Eichengreen and Hausmann, 1999: 2). The crucial question, however, is how to achieve simultaneously both internal and external equilibrium, as Eichengreen and Hausmann call it, remains unsolved. Even worse, with the corner solution hypothesis in place, and countries choosing the proper exchange rate regime by mainly considering the short-term capital account logic, economies may err in terms of effective adjustment to fundamental current account disequilibria or their domestic economic policy targets. For example, if a country with rather rigid wages and prices chooses a currency board, it may achieve in the short run the capital account results promised by the corner solution hypothesis. However, it is in deep trouble if prices and unit labour costs in the anchor country and its competitors rise less in terms of an international currency, and it is faced with competitive shocks and unable to restore competitiveness by means short of a full-fledged deflation. Its inability to respond to these shocks will sooner or later trigger a loss of confidence in the capital markets, and it will have to pay with high and rising interest rate spreads, thereby aggravating the fundamental imbalance. On the other hand, countries with relatively flexible prices and wages choosing floating may end up with too much flexibility if both flexible prices and flexible exchange rates move in the same direction.

Hence, as the recommendations of the different schools are contradictory, we are left to decide who was right: i.e. the economists of the old or those of the new generation. If the dominant problem in the international trade of goods, services and capital is still the inflexibility of wages and prices as well

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[3] See also Calvo and Reinhardt (2000b) and Fischer (2001) for similar views. The Meltzer Commission said in its Report (2000: 8): "Maintenance of stabilizing budget and credit policies is far more important than the choice of exchange rate regime", and recommends the corners "as neither fixed nor fluctuating rates are appropriate for all countries and all times". The fact that in the recent literature the "lender of last resort" is addressed as one of the most important problems is also based on pure capital account logic. In a broader view, the critical question is how to solve economic problems in emerging markets without net lending from abroad.

as the need to preserve competitiveness, the corner solution theory can hardly make sense. In this case a country choosing an exchange rate regime without taking into account its own degree of wage and price flexibility, together with that of its competitors, will not escape crisis, even if the financial system as such is strong and transparent. It is only if this still important but outdated problem can be solved somehow or other that the corners may be feasible. But, as will be shown below, the modern view does not prove the irrelevance of the old problem. In its obsession with the capital account, it does not address the pressing questions posed by the existence of different national labour market arrangements or different growth rates in countries with open trade and capital accounts. Even more astounding, the capital account approach leaves aside the obvious inconsistencies arising if trading partners choose the opposite corner, as was the case between Brazil and Argentina following Brazil's switch to a flexible rate in the aftermath of its crisis.

This paper follows some very simple considerations concerning the role of exchange rate changes in the globalized economy. After a brief discussion of the root causes of the modern corner solution view (section I) and of the different types of crises in different exchange rate regimes (section II), the various functions attributed to exchange rate changes are examined. The main questions provoked by the corner solution view are obvious: is the exchange rate a normal price like any other price on goods or the capital market? If yes, absolute fixing must be difficult to reconcile with a market economy (section III). Is the exchange rate a substitute for flexible prices and wages? If yes, can a priori recommendations for a corner solution be justified without a thorough investigation into the differences in wages and the price inertia of countries involved in international trade and free exchange of capital (section IV)? Is the exchange rate, as some observers believe, a normal tool of economic policy? If yes, is it sensible to leave it to the market or forsake its service by permanently fixing it? Do exchange rate changes efficiently buffer real shocks? If yes, should this adjustment mechanism be sacrificed for the sake of stable capital flows and reduced risk in international capital transactions (section V)? The last question was posed by critics from the United States before the European Monetary Union (EMU) had entered its final stage. Is this objection obsolete now, along with the indisputable benefits the anchor approach in the European Monetary System (EMS) brought about as a device to fight inflation (section VI)? What have been the causes of inertial inflation in Europe, and how might they eventually be overcome (section VII)?

Is anchoring a lasting solution or rather for transitional stages of disinflation and, if not, what are the implications for currency boards or for outright adoption of a foreign currency, such as dollarization (section VIII)? Is there a need for emerging economies to draw on foreign or domestic savings to finance investment, thereby creating the "original sin", as referred to by Eichengreen and Hausmann (see section IX)? The final section explicitly deals with the notion of an "impossible trinity" (an exchange rate peg, an open capital account and a monetary policy dealing with domestic affairs are incompatible). I shall now replace the impossible trinity by an "impossible duality" (an open capital account and national monetary policy are incompatible), arguing that no monetary regime can effectively isolate a country with an open capital account, and I shall draw some global policy conclusions.

This paper will not explicitly replicate the former controversy of fixed versus flexible exchange rates. But in questioning the new corner solution paradigm I will not be able to escape the final question: are variations in exchange rates necessary under all circumstances in a market economy? The answer, again, is trivial: no, they are not necessary at all, as prices, wages and interest rates can do the job of market clearing under most circumstances. Changes in the exchange rate can be a remedy in the event of catastrophes and big shocks, when the burden of adjustment can no longer be borne by the nation state alone. Beyond this, adjustments in the external value of money are indispensable only for the transition stage from high to low inflation. Regarding the adjustment of real income to changing real circumstances, if people can no longer be fooled by changes in the domestic value of money (usually called inflation), changes in the external value of money also become useless, as the exchange rate illusion will simultaneously be lost.

II. CAPITAL ACCOUNT OR CURRENT ACCOUNT CRISES?

Recent literature on the crises in international finance in the 1990s lays the blame on soft pegs for being the most important source of vulnerability. In Brazil, East Asia and the Russian Federation, pegged exchange rates and the depletion of reserves are found to be a "very serious" cause of crisis (Summers, 2000, table 2: 8), whereas fiscal and current account deficits, total indebtedness or the lack of general governance are not considered to be general features of a crisis-prone economy. This is true. The definition of crisis in these analyses, however, is restricted to capital account developments, thereby excluding the main targets of economic policy. The inclusion of growth, jobs and domestic inflation yields ambivalent results. A soft peg, which has served quite well many purposes – at least better than any other exchange rate system – should not easily be condemned in the end for causing a certain kind of crisis. Obviously, the analysis of different exchange rate arrangements in the circumstances prevailing in the country under consideration, and taking into consideration all the relevant policy goals, can do justice to the role of the exchange rate regime.

Crisis in general has been a common aspect of international economic relations in the past 200 years, irrespective of monetary arrangements. The gold standard, one of the corners, became famous for producing frequent crises, with countries being unable to return to their parities without forcing undue strain on the creation of employment and the growth of real incomes. This corner solution collapsed as many countries, for different reasons, were unable to live up to the degree of monetary convergence that the system required to replace successfully national policy-making by the golden anchor. Other kinds of hard pegs have time and again produced economic crises. China and Hong Kong (China) went through an extremely difficult adjustment process during the Asian crisis, as they refused to depreciate their exchange rates. Argentina (with a currency board since the beginning of the 1990s) is still in 2001 in a severe economic crisis, after the longest recession of all the crisis-stricken countries. Of course, Argentina

has not been in a capital account crisis for long as money has still been flowing in. But the country has had to be rescued several times by the international community, has to pay prohibitive interest rates, and is heavily indebted in a currency it cannot print.

The most impressive case of crisis in a corner, however, is East Germany (the former GDR) being in a monetary union with West Germany since 1990. In terms of capital flows, transparency and credible monetary policy, the region is in the best position of all small open economies in the world. Its overall economic position, however, is disastrous. After its jump to the corner of irrevocably fixed rates, it has almost lost its ability to export owing to a dramatic decline in international competitiveness (Flassbeck, 1999a). Even today, 10 years after the transition and huge fiscal transfers from the West, it is still in danger of falling permanently behind comparable economic entities.

But floating too has not been free of crisis phenomena. Far beyond the capital account reasons for the "fear of floating" (Calvo, 1999), floating has put its mark on the real economy of many countries, thus explaining the fear of unchecked exchange rate flexibility. The US export sector and its job perspectives were in crisis in 1984/5, following a huge and unjustified real effective appreciation. Germany, benefiting most from the strength of the US dollar in the first half of the 1980s, experienced the opposite effect in the second half of the decade when the deutsche mark bounced back. The Japanese economy went into a deep deflationary crisis in the first half of the 1990s, when, in addition to a restrictive monetary policy, its real exchange rate appreciated by some 70 per cent.[4] The same was true for Switzerland in the late 1970s. The country had to stop a sharp real appreciation of its currency and the resulting real shock by announcing unlimited intervention in case of a further inflow of capital. In the 1990s the devaluation of the euro caused crisis in many parts of the US and British economies, as well as in parts of Eastern Europe. On the other side, overshooting depreciation has very often provoked jumps in inflation or huge losses in real income due to a deterioration in the terms of trade. The economic history of France, Italy and the United Kingdom following the first two oil price explosions contains useful lessons in this respect. Quite recently, the burden of external debt was dramatically increased by overshooting devaluation in Asia. This put enormous strains on many countries lacking a credible exit strategy from the soft peg, with their currencies left to float freely after the outbreak of the crisis.

Hence, to limit economic analysis to capital account crisis may be a justified exercise for the restricted purposes of research. It cannot yield reliable economic policy recommendations as it covers too little of the ground relevant to overall policy objectives. The fact that crises, forcing the spectacular rescue operations of G-7 governments or IMF, do happen very often in middle-ground regimes, like a soft peg, does not prove the case against these regimes. Soft pegs are the policy generally chosen by countries aiming at disinflation by means of an external anchor. As the IMF admits, the performance of these approaches in terms of successful disinflation have been impressive (Fischer, 2001: 9; Mussa et. al., 2000). Given the institutional framework in these countries, if other exchange rate regimes do not offer

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[4] There are many reasons to argue that the revaluation has actually been the main reason of the Japanese slump Flassbeck (2000).

the same assistance to disinflation, it is hardly viable for economists to argue that high and unstable conditions surrounding the internal and the external value of money are superior to the opposite, even if capital account crises occur frequently on the soft peg way to low inflation.

Furthermore, many economies choosing soft pegs explicitly do so in an attempt to reach the corner of sustainable fixed rates and to avoid floating at all. This is pertinent for the small open economies in Europe, but the Brazilian "Plano Real" may be similarly interpreted. In such cases, the soft peg period with the incorporated disinflation and overvaluation is the transition period towards a more stable arrangement, or even a monetary union. Under these circumstances the "impossible trinity" (of a fixed exchange rate, capital mobility and a monetary policy dedicated to domestic goals) (Fischer, 2001: 4) – is not responsible for the vulnerability of the soft peg, but for the explicit attempt to converge towards the anchor and to finally replace a non-credible domestic central bank by a more credible external one. Given the difficulties of any transition under realistic conditions, it is hard to argue that the jump from high inflation and floating to low inflation and irrevocably fixed rates is easier than the way through a transitional phase with a soft peg and an anchor. Putting countries too quickly in one regime or another cannot answer the pressing questions related to the monetary integration of emerging market economies.

The widespread dislike of the middle-ground regimes in contemporary economics must have other reasons than those usually cited. The most important one seems to be only implicit in the debate. Is it not surprising that the advice to go to the corner of absolutely fixed rates or even to the outright adoption of a foreign currency (dollarization or euroization) usually stops short of recommending the establishment of a couple of monetary unions, following the European example? Even more astounding, many of the advocates of the corner solution have criticized the EMU harshly for giving up the most important instrument to fight the so-called asymmetric shocks, and have referred explicitly to the optimum currency debate. In the corner solution debate, however, this line of thought is denounced or ignored. I will try to show that the only reasonable way to fix rates permanently is by forming a monetary union. If there is any truth in my argument, the corner solution advocates are either blind or base their case on other arguments than those mentioned openly.

Both corners – floating on the one hand, currency boards or dollarization on the other hand – represent unilateral approaches. The emerging small open economy decides and executes both approaches without any assistance or cooperation from a reserve currency country. Is the leading motive behind the "corner solution" the reluctance to support any kind of international cooperation? Can the famous globalization of markets continue without global institutions and a much more global economic policy approach? Can emerging economies be fully integrated into the world market without offering them some effective influence over such crucial questions as the international level of interest rates? Can trade liberalization and the liberalization of capital flows be recommended without establishing global rules to avoid exchange rate changes distorting the optimal allocation of resources? All these questions are left unanswered and not even put on the table at official international organizations and fora. Instead, the unsound and inconsistent idea of the superiority of unilaterally executed corner solutions in the most

important areas of international financial relations is put forward as a purely national solution in an internationalized world.

III. FLEXIBLE PRICES AND FLEXIBLE EXCHANGE RATES

A certain branch of the neoclassical school in economics rests upon the idea that exchange rate changes are a necessary ingredient of a market economy, as only the existence of a flexible real exchange rate to complement the other two important "real prices", the real interest rate and the real wage, can bring about equilibrium in national and international markets. In this view, the corner of absolutely fixed rates cannot be sustainable per se, as price flexibility for market clearing is eliminated by the fixing of the nominal exchange rate. However, this hypothesis can be easily refuted by just looking at the concept of the "real exchange rate". Paradoxically, the "real exchange rate" has neither a real dimension nor is it an exchange rate. The real exchange rate measures change in the relative (nominal) competitiveness of countries, regions or companies by comparing the price (or unit labour cost) changes occurring in the entity under consideration within a certain period with price changes in competing entities. If there is a nominal exchange rate between these entities, the change in the exchange rate is taken into account by calculating in terms of one currency only. But if there is no exchange rate at all, the concept of the "real exchange rate" does not loose its validity.[5]

This observation bears some importance for the adjustment to shocks inside monetary unions and for hard pegs like a currency board. It also sheds some light on the polar positions of the above discussion of fix versus flexible. If a company is able to increase productivity by means of the implementation of a technological innovation, it may be able to reduce its cost level. With given nominal wages, the normal feature for a single company, unit labour costs fall, and the company may use this to cut prices and increase its market shares or to improve the level of its profits by unchanged prices.[6] In both cases the "real exchange rate" of the company has depreciated.[7] The adjustment process of regional economic entities is not different from that of companies. Seen from the perspective of competitiveness, regional entities consist only of companies.

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[5] In a recent paper Obstfeld (2001: 14) argues that the observation that real exchange rate variability is closely correlated to nominal exchange rate variability provides overwhelming evidence "that domestic price levels are quite sticky". It is just the reverse: rather, this evidence proves overshooting of the nominal exchange rate over fundamentals and misallocation by exchange rate variability. How else could one explain that the vast majority of all transactions in the real world takes place, successfully, without an exchange rate and with much lower variability in prices.

[6] This, obviously, is a Schumpeterian, not a Walrasian, view of the economy.

[7] In the latter case, however, it will be only captured empirically if the measurement of the real exchange rate is based on unit labour costs, and not on prices.

The assumption of given wages, however, has to be dropped if labour is not perfectly mobile between regions and states. If regional or national wages adjust to regional or national productivity, the sum of productivity gains of companies in the region do not accumulate to reach a competitive advantage vis-à-vis other regions. Unit labour costs do not fall completely, and not even relatively if the productivity advance of one region is much bigger than that of another. In this case the real exchange rates of the regional entities remain constant, without depriving any company in any region of gaining market shares beyond the borders of its home region in more or less the same way as within borders. If the individual productivity of a company outpaces that of its competitors in or outside the region, it will gain with given wages in both regions. Obviously, there is no need for a nominal exchange rate if the real one between regions and nations is kept constant in this way by the flexibility of wages.

If the increase in nominal wages in one country, however, permanently exceeds the pace of productivity progress, while it does not in the other, the real exchange rate of the former will appreciate, and, given normal elasticities, lead to a loss in market shares for the region as a whole, thereby creating external disequilibrium. Without a depreciation of the nominal exchange rate of the appreciating region, the fundamental disequilibrium will prevail until either the latter region adjusts with an increase in wages or the former with a fall in the growth rate of nominal wages. In these cases the flexibility of the exchange rate acts as a substitute for the relative inflexibility of nominal wages. Countries or regions lacking this wage flexibility have no other choice than to rely on exchange rate changes as the permanent loss of market shares becomes unsustainable. Favourable short-term conditions on the capital market may allow temporarily increasing capital inflows; the medium-term real adjustment, nevertheless, is unavoidable. Hence, the flexible rate hypothesis of former writers grounded on inflexible prices and wages was sound.[8] It cannot be rejected by a priori arguments based on capital account considerations. Only empirical analysis proving that wages and prices are much more flexible today than in former times could save the case for "fixing for your life" (Calvo and Reinhard, 2000b).

The logic of flexible prices with fixed exchange rates, pertinent as it is for hard pegs like currency boards or dollarizations, is often misunderstood. Whoever deviates upward from the anchor is bound to take brutal adjustment measures to catch up again if the once fixed exchange rate vis-à-vis the anchor is to be kept constant. It is by far not enough for the high-inflation country to revert to the growth rates of unit labour costs in low-inflation countries. Restoring the original competitive position – that held at the time the exchange rate was fixed – means deviating downwards by exactly the same extent. To reduce the growth rates of unit labour costs after a shock and adjust to the anchor growth rates means to stop the loss of additional market shares vis-à-vis low-inflation countries, as the competitive position will no longer be deteriorating. To regain the former position, it is necessary to "dive" below the anchor. If – as was the case in the United States and Germany in the 1990s – the anchor is still performing very well in

[8] The concept of flexibility of wages and prices discussed here should not be confused with the neoclassical flexibility of real wages needed for clearing on the labour market. I firmly refuse the neoclassical notion (see Flassbeck and Spiecker, 2000), but I see no way to avoid the adjustments to preserve international competitiveness in an open economy, as explained above.

terms of inflation (i.e. it can keep the growth rates of unit labour costs and prices very low), adjustment for the high-inflation countries with no exchange rate changes usually implies entering a deflationary circle of absolutely falling unit labour costs and prices, as happened in Argentina (see section VI).

IV. INFLEXIBLE PRICES AND FLEXIBLE EXCHANGE RATES

As mentioned above, the advocates of fully flexible exchange rates in the past usually based their argument on one strong pillar: if prices are not fully flexible, changes in the exchange rate in general are needed to equilibrate diverging "fundamentals" between countries. In such cases the adjustment of the exchange rate is, as a rule, superior to the quick adjustment of the fundamentals because it can help to avoid large real income losses resulting from deflationary adjustments.[9] That can be easily admitted. But while this constitutes an argument against fixing rates irrevocably in all circumstances, an argument in favour of fully flexible rates cannot be deduced from it. The experiences of the 1920s and 1970s as well as that of the Group of Three show that market-determined rates, as a rule, do not lead to more convergence, but systematically tend to increase divergence by overshooting their (equilibrium) ranges – defined by the divergence of the fundamentals. The corner solution of a fully flexible rate brings about precisely what it should have avoided.

The stylized facts of diverging fundamentals between two countries have been described above. Without prejudice to other factors obviously playing a role, by far the most important case is a temporary diverging inflation trend between countries.[10] Even this very simple constellation of the relevant data may lead to an insurmountable policy dilemma. Diverging inflation trends usually mean diverging nominal interest rates. The high-inflation country offers higher interest rates than the low-inflation one. This is to be expected, even if both countries have similar growth trends and exactly the same monetary policy stance. To bring domestic real interest rates in line with real growth rates nominal rates have to be higher in the high-inflation country.

Short-term capital flows are driven mainly by nominal interest rates and expected exchange rate changes. Exchange rate expectations in reality, however, do not incorporate permanently the "rational" solution which economic theory offers as "purchasing power theory". A country fighting successfully domestic inflation by means of restrictive monetary policy may, for the time being, gain credibility and an appreciating currency, as the markets do not anticipate the negative impact that the strong currency

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[9] This, however, is true only in the case of a certain kind of money illusion (section V).

[10] Diverging inflation trends in open economies are much more important than the "asymmetric shock", which was first discussed by Mundell (1961) in his optimum currency area paper. With diverging inflation trends grounded in different labour market regimes (see appendix to section VI), the arguments in favour of hard pegs or dollarization in this case do not hold (see, for example, Calvo, 1999), as long-lasting remedies, rather than one-off measures, to preserve competitiveness are called for here.

and still high inflation rates will exert on the international competitiveness of the country in the medium or long run.

Investors in short-term deposits in other countries do not systematically take into account the inflation rate in the high-inflation country. They do not buy goods in that country or retain the currency for a number of years; they put their money in for just a day, a week, or three months. If, during that period, the inflation divergences between a high-inflation and a low-inflation country do not bring about the general expectation of depreciation of the high-inflation country's currency, investment there is more attractive than in the low-inflation country.[11] Nearly all financial crises in the post-Bretton Woods period (UNCTAD, 1998: 55) have been accompanied by large nominal interest rate differentials. The funds flowing into the high-inflation country will increase the attractiveness of its currency, as they tend to appreciate rather than depreciate it. Even if governments try to limit the extent of appreciation of the domestic currency by buying foreign currencies, they will usually add to the confidence of international investors as international reserves increase.

Without excluding other possible cases, the basic logic of short-term capital flows with flexible exchange rates is a simple one: higher interest rates attract short-term capital. Inflation differentials explain most of the interest rate differentials.[12] Thus, the currencies of high-inflation countries tend to be appreciated in the short term.[13] But this undermines further the fundamental external equilibrium between high-inflation and low-inflation countries, as the real exchange rate of the country with the higher inflation rate is revalued – i.e. the loss in international competitiveness is aggravated. In theoretical terms, as the uncovered interest rate parity doctrine dominates the explanation of short-term flows, the role of the purchasing power parity (PPP) doctrine comes into play only at a later stage. When, owing to the visible deterioration of its international competitive position, the high-inflation country's currency loses the "confidence" of international investors, the overvaluation may have to be corrected. But by then it is usually too late to avoid a crisis.

The tendency of floating rates to overshoot was clearly recognized by early writers. Hayek (1937: 62) wrote:

> It is because with "mixed" national monetary systems the movements of short term funds are frequently due, not to changes in the demand for capital for investment, but to changes in the demand for cash as liquidity reserves, that short term international capital movements have such a bad reputation as causes of monetary disturbances. And this reputation is not altogether undeserved …

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[11] For an impressive description of the forces driving currencies beyond the fundamentals in emerging markets – in this case Poland – see NZZ (2001)

[12] This does not exclude the appreciation of currencies with relative and absolutely low interest rates, as the example of the Japanese yen in 1999 and 2000 amply demonstrated. There is no coherent theory of flexible exchange rates. The cases of high- and low-inflation countries demonstrate, however, that even in the most favourable circumstances – i.e. the absence of mere speculation – the market forces cannot find a sustainable exchange rate.

[13] A striking example was the recent switch in Hungary from a crawling peg to a flexible rate with inflation-targeting. Immediately after the move the Hungarian currency appreciated sharply, although the country still has an inflation rate of around 10 per cent (compared with 2 per cent in Germany, its main trading partner), as it offered much higher nominal interest rates than Germany.

and asked whether "national monetary authorities [are] in a position to prevent capital movements which they regard as undesirable…"? His answer is clear-cut:

> I am altogether unable to see why under a regime of variable exchanges the volume of short term capital movements should be anything but greater. Every suspicion that exchange rates were likely to change in the near future would create an additional powerful motive for shifting funds from the country whose currency was likely to fall or to the country whose currency was likely to rise. I should have thought that the experience of the whole post-war period and particularly of the last few years had so amply confirmed what one might have expected a priori that there could be no reasonable doubt about this. (Hayek, 1937: 63–64)

Hayek concluded that under a regime of fixed rates, like the gold standard, short-term capital movements would "on the whole" have a stabilizing effect on balance-of-payments disequilibria, whereas flexible rates do the opposite. "This means that if the original cause is already a short-term capital movement, the variability of exchanges will tend to multiply its magnitude and may turn what originally might have been a minor inconvenience into a major disturbance" (Hayek, 1937: 64).[14]

Even excluding irrational movements of exchange rates as the dominating force on the currency market yields no simple and lasting solution to equilibrate the fundamentals of countries with diverging inflation rates and interest rates. If, for example, inflation differentials between countries are deeply rooted in the institutional arrangements of the labour market, as very often seems to be the case (see section VII), there is no easy choice for the high-inflation country and definitively no corner solution available. Monetary policy is in a dilemma. There is no interest rate at which internal and external equilibrium can be achieved simultaneously.[15]

If, with a fully liberalized capital account, a high-inflation country chooses to fight inflation by means of high interest rates or by keeping the real interest rate as high as in the low-inflation countries, its currency will be attractive with both flexible as well as fixed rates for international investors in short-term assets.[16] In a fixed rate or semi-fixed rate environment, the high-inflation country's international reserves will rise in the short term despite the real revaluation and the loss of competitiveness. In a

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[14] Laursen and Metzler (1973) summarize the experience of the 1930s more or less in the same way: "Exchange rates at that time underwent frequent and substantial fluctuations … the fluctuations that occurred nevertheless created serious doubts concerning the effectiveness of a flexible exchange system in equalizing a country's international payments and receipts". They conclude "that a regime of flexible exchange rates would not be successful unless capital movements were subject to some kind of control" (pp. 277/8). Some modern writers wonder where the flexibility of flexible rates come from (Dornbusch, 1999: 325) and argue that the variability lost by "signing away an exchange rate" may show up elsewhere in the economic system. This is a strange argument given the fact that more or less all economists subscribe, rightly or wrongly, to the idea that the price level should by all means be prevented from fluctuating as otherwise the allocation of resources would be disturbed. Moreover, the exchange rate variability is only the byproduct of the pertinent inability to stabilize the price level in all countries in the same way. If the attempt to stabilize the price level fails, it is hardly a solution to introduce a price level substitute which is extremely volatile, and any attempt to stabilize the price level is bound to fail because the flexibility lost there will show up somewhere else.

[15] For the first description of this effect see Flassbeck (1998).

[16] For domestic investors it is always the reverse, i.e. attractive investment in a high-inflation country for foreigners means attractive indebtedness for domestic creditors in the low-inflation countries.

flexible rate world its currency will in nominal terms appreciate in the short run, despite of the even stronger real revaluation and the bigger loss of competitiveness. If the high-inflation country chooses to keep its nominal interest rates as low as those in the low-inflation country, it will be able to avoid destabilizing capital flows, but it will not be able to fight inflation by means of monetary policy.

Thus, both flexible rates as well as soft pegs between high- and low-inflation countries destabilize short-term international capital flows and directly undermine sound banking principles, even if standards and codes of sound banking are applied by the high-inflation country. Domestic stabilization in the high-inflation country can only be achieved if it offers consistently higher interest rates than those in the low-inflation countries. Thus, the inflation-rate differentials between weak-currency and hard-currency countries are matched by corresponding interest-rate differentials. But if, in the short run inflation differentials are not matched by a corresponding risk of depreciation of the high-inflation country's currency, a fundamental disequilibrium is inevitable.

Free capital flows between countries with differing inflation performances usually break the link between interest rate differentials and the risk of depreciation, as exchange rates do not follow PPP. Introducing PPP as a "theoretical norm"[17] is the only way out. With exchange rate expectations being "rational" in terms of PPP exchange rate expectation, (e^*) always equals the interest rate differential (i^*) and the price level differential (p^*)[18]:

$$e^* = i^* = p^*$$

But in reality this solution does not apply. Expectations are not rational along the lines of PPP, as unhedged borrowing offers short-term profit in both corners as long as the general expectation has not reversed. Let us take a simple example. Some of the countries in transition in Eastern Europe heading for accession to the EU and EMU choose a linear adjustment path from 10 per cent inflation today (2001) to 2 per cent inflation in 2005. If their real interest rates are as high as in Western Europe, an anchor approach (fixing vis-à-vis the deutsche mark) will offer arbitrage opportunities with an open capital account in the transition period, as their nominal rates are some 20 per cent (8+6+4+2 – the accumulated inflation differential) higher than in the anchor country for the entire period. At the same time, the real appreciation of their currencies will amount to 20 per cent if the nominal rate has not changed. At the end of the adjustment period they will have achieved convergence of the inflation rate, but their currencies will be overvalued. They will suffer from huge current account deficits due to loss in competitiveness and the service on foreign debt. One way or another, therefore, a financial crisis will be inevitable.

Choosing the corner of floating with restrictive domestic monetary policy to bring down inflation will destabilize the external account even more. Speculation on uncovered interest rate parities will yield

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17 The term is Schumpeter's (1939: 30).

18 As shown below (section VII), inflation can and should be replaced in most cases by unit labour costs.

high returns as nominal and real interest rates in the transition economies will be higher than in the first case. Additionally, the currencies of the high-inflation countries will tend to appreciate, thereby increasing the incentive for foreign investors to buy domestic assets and the incentive for domestic borrowers to lend abroad. Hence, the speculative bubble will, as a rule, be larger with floating than with a soft peg, and its ultimate burst will be more painful than in the case of an anchor approach. The theoretical solution introducing rational expectations based on PPP as a built-in stabilizer of the adjustment process is the least probable case. If a country chooses to adopt a strategy of disinflationary monetary policy, its assets become extremely attractive in both corners during the period of disinflation. Speculative capital starts to flow into the country, and domestic banks and companies borrow much more abroad than they would if the risk of a depreciation were present from the beginning. At the same time, as in any period of disinflation, the conditions for domestic investment deteriorate. Real interest rates are high and their effect is exaggerated by the real appreciation. Floating is worse than fixing as it adds to the persistent uncertainty, given non-rational expectations.

Thus, international investors may earn very high rates of return in countries where real income, domestic profits and the number of jobs are falling. Moreover, the developing or the transforming country is usually unable to cut interest rates because this would endanger the credibility of monetary policy at home. In the short term, at least, the political will to achieve economic stability is reflected in the decision to keep nominal interest rates high. How long an external economic imbalance following the exchange rate peg or an appreciation can be sustained is an open question. With growing visible external imbalances the market's willingness to believe in the emerging country's exchange-rate policy will fade. As soon as investors are convinced that the anchoring country will not manage to slow down the growth of its external debt smoothly, confidence deteriorates, thus leading to a reduction in reserves or a fall in the country's exchange rate.

Real-world examples of these constellations were provided by the Baltic Republics in 1992 and 1993, Mexico in 1994, the Russian Federation, Ukraine and Kazakhstan in 1995, and by some Asian countries in the big crisis in 1997/98.[19] The same pattern can be found in many developing and transforming countries which have not been at the centre of a crisis. Poland, the Czech Republic and Hungary (as high-inflation countries), in comparison with Germany (as a low-inflation country), had been in such a situation. With much higher inflation than Germany but with very similar real interest rates, these countries offered very attractive short-term assets for a couple of years after they had opened their capital market to the Western world. With or without pegs, their overall competitiveness deteriorated at the same time and their current accounts moved into deficit. Without correction of their overvaluation in

[19] Given the very often unreliable data, a simple but straightforward rule to identify a coming exchange rate crisis or a collapse of the real economy in an "emerging market" is the following: if nominal short-term interest rates in a developing or transition economy are higher than in industrialized countries by more than the growth differential and the nominal exchange rate of the former does not fall at an annual rate that equals the difference in (annual) interest rates, the constellation of data is not sustainable as either the interest rates or the exchange rates are too high in the "emerging market".

the course of the Asian crisis in 1997 and 1998, the situation would have been unsustainable in Poland and the Czech Republic. Only Hungary managed to avoid a permanent real appreciation by means of a consistent crawling peg for a couple of years.

The high-inflation/low-inflation case is rather easy to handle compared with a case where the interest rate differential is due to a real growth differential of the countries involved rather the inflation differential. The Republic of Korea prior to the Asian crisis approximated vis-à-vis the United States such a constellation. If in both countries the Taylor rule explains the short-term interest rate, the high-growth country will have a persistently higher short rate than the low-growth country. Arbitrage by international investors and domestic borrowers will again be the result. As in the high-inflation case, flexible exchange rates do not stop the net inflow of capital as long as there are no strong indications of depreciation of the high-growth country's currency. This time, however, the rational expectations hypothesis based on PPP does not even apply. The high-growth country may have rather low inflation. Appreciation increases the incentives for portfolio investment as it adds to the favourable interest rate differential without even the long-term threat of depreciation. A sharp and pronounced overvaluation will be the normal outcome in a floating regime. Although this may help to turn around the net capital flows, it will distort trade flows as well as investment incentives inside the country. The overvaluation will eventually provoke undervaluation without ever removing the source of the trouble, the diverging nominal interest rates.

The result of the preceding analysis is simple. Exchange rate changes are necessary to equilibrate the ever emerging gap between the price and cost level of high-inflation and of low-inflation countries. But, given the unavoidable shortsightedness of the market, the PPP rule has to be enforced by governments and/or central banks and cannot be left to the market. Diverging fundamentals other than the inflation rate divergences cannot be equilibrated by changes in the exchange rate.

V. EXCHANGE RATES AS A BUFFER FOR REAL SHOCKS

Dornbusch (1999: 323) called the peg of a currency the "loss of a key adjustment instrument" for economic policy and asked whether this could be really made up by wage and price flexibility. This assertion is worth considering as it meets the presumption of many economists that flexibility of the exchange rate is needed in open economies, as it is much more easily available than the flexibility of prices and wages.[20] In this view hard pegs or monetary unions are outdated supertankers launched by politicians for "political" reasons only, reducing the flexibility of the economy, and in particular the

[20] Rodrik (2000: 7) seems to share Dornbusch's view about the exchange rate being an "important policy tool", but qualifies the argument regarding the deflationary dangers of price and wage adjustment in a low inflation environment. Later, however, he praises real exchange rate changes as "an important contributor to growth spurts" and notes that countries without these depreciations would have been worse off. There can be no doubt about that. But who was better off then? Real exchange rate changes are a zero sum game. A true global approach has to address both sides and cannot stop short by pointing to the advantages of one side and ignoring the disadvantages of the other.

labour market in the participating countries. Modern economies, the advocates of this theory contend, are too inflexible to be managed without the much more flexible exchange rate as a "shock absorber". Only a flexible exchange rate, for example, could help to overcome the consequences of a so-called asymmetrical shock, such as an earthquake, in a country with open borders and intense trade relations with the rest of the world.

However, this theory raises serious doubts. Is it indeed true that exchange rate flexibility is an efficient instrument of economic policy, as a significant number of economists of all theoretical views would still have us believe? Let us examine the following possibility: the follow-up costs of an earthquake devastating a considerable part of the capital stock of a country. The real income of this country would inevitably drop unless there were external help. Apparently it is possible to adjust reasonably smoothly to such a shock if all parts of the population simply accepted the inevitable loss of real income. That would be the case, for example, if the work force were to accept the price hikes following the shock without demanding an increase in nominal wages from the state and the private sector.

An adjustment problem would occur, however, if the work force demanded compensation for the price hikes caused by the earthquake and could push through its demand. In this case, either profits would go down, with additional negative consequences on investment and the job market, or – if monetary policy remained accommodative – firms managed to reflect the excessive wage demands on higher prices, thereby turning the one-time price hike into a lasting inflation. Obviously, economists speaking of inflexible and encrusted labour markets and the consequent need for an exchange rate buffer are referring to such an eventuality. But would devaluation have the desired effect in the aftermath of an earthquake under the auspices of this kind of real wage rigidity? The work force in the fictitious country would not be willing to accept the inevitable loss of real income caused by the earthquake to society as a whole. However, according to the prevalent thesis regarding the buffer function of the exchange rate, they would accept a devaluation, which, because of worsening terms of trade, would in fact represent an additional loss of real income.

If this thesis were wrong, however, because the economic actors did not distinguish between price hikes induced by the earthquake and those induced by devaluation and if monetary policy remained accommodative, devaluation would result in an even more pronounced hike in the inflation rate than in the pure earthquake scenario. The need to tighten monetary policy would then be even greater. The consequence is simple: the currency of the earthquake-devastated country would devalue sooner or later if real wages were inflexible. Devaluation, at any rate, would not be a buffer for the real shock, but would at best compensate for the negative secondary effects of the shock in the form of higher inflation and a deterioration in the stricken country's international competitive position.[21]

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[21] Even more confusing are the consequences of the layer upon layer of supply and demand shocks after the German unification, which is often taken as an example of inadequate adjustment inside Europe due to a too rigid monetary system. The majority of economists took and continues to take it virtually for granted that Germany should have appreciated its currency after unification, even in relation to the European core countries. But why should the

(continued...)

With the thesis of the exchange rate as a buffer for real shocks, economic theory has built a strange inconsistency into its system of tenets. On the one hand, it states that economic policy in the long run cannot operate with change in the value of money over time – that is, with inflation – without causing the economic actors to lose "money illusion" and adjust their nominal demands to the climbing inflation rate. On the other hand, many economists consider changes in the exchange rate as a readily available instrument of economic policy. They do not point out that, in the long run, economic actors may, of course, also see through this specific form of money illusion, and may therefore rob it completely of its effect. The vicious circles of inflation, depreciation and resulting higher inflation that some of the European countries struggled with in the 1970s and the 1980s provide ample evidence of this.[22]

The reduction in the external value of money (that is, devaluation) is just as unsuitable and unusable in the long run as an instrument of economic policy as is the reduction in the internal value of money (that is, inflation). In a consistent theoretical framework (or with rational expectations) exchange rate changes provide just as little buffer against real shocks as do changes in the rate of inflation. Earlier economists were quite aware of this fact. Knut Wicksell, one of the great innovators, wrote at the beginning of the twentieth century that "a stable value of money in time as well as in space" is the central precondition for a functioning market economy. By the end of the century this insight seems to have been lost. According to Wicksell's logic, the only function to be attributed to fluctuations in the exchange rate is the balance-of-inflation differentials, for example, the difference between changes in wages per unit in comparison with countries which are not, or not yet, able to limit the internal devaluation of money quite as well as, for example, Europe or the United States.

(...continued)
deutsche mark have been appreciated? In its immediate aftermath, the shock of reunification was for Germany no doubt what is described in literature as a negative supply shock. The state reacted to it with a positive demand shock. As a result, Pan-Germany's real per capita income dropped; the previously high positive balance of payments slipped deep into the red; wages and inflation, as well as the public budget deficit, climbed much more steeply than before and than in other countries. Why should the currency of a country in that situation appreciate instead of depreciating? With the deutsche mark depreciating in real terms, the problem of countries like France would have been aggravated rather than solved. If, for example, the underlying cause of the European problems at that time was not to be found in misaligned exchange rates but rather in a misguided monetary policy approach in Germany, no exchange rate variation inside Europe could have contributed to dissolving the crisis. The undeniable fact that an appreciation of the deutsche mark would have helped France does not prove the case for an appreciation as the appropriate remedy for Europe as a whole (see section VI).

[22] The famous example Milton Friedman chose to demonstrate the superiority of exchange rate changes compared with price changes was "daylight saving time". He argued that changing the external value of money would be as efficient as a "daylight saving time" regulation, as all relevant prices would be changed at one stroke by an appreciation or a depreciation. Generations of economists seem to have accepted this example uncritically, although it is erroneous in nearly every respect. Daylight saving time is a convention to which the majority of people seem to agree as they consider it to be an efficient adjustment to changing daylight times. It is not, however, a substitute for a real adjustment which people are unwilling to perform, as in the case of exchange rate changes. In daylight saving time every individual moves the short hand of his watch and thus acts voluntarily to adjust. Exchange rate changes, like inflation or deflation, are felt indirectly by individuals in terms of falling or rising real income, but these cannot be imputed to the root cause. Even more, if people explicitly reject adjustment to a real shock but accept the effects of exchange rate changes, obviously they do not understand what's going on. Wicksell (1958: 247) rightly states: "As currency is primarily a measure of value, it ought to be possible, even in the most unfavourable circumstances, for a country to maintain that standard just as constant as, for instance, its standards of length, capacity or weight".

In such a framework fundamental trade imbalances are prevented, since all participating countries maintain their competitiveness, and the real exchange rate remains constant. In the past, flexible exchange rates did not offer good guarantee in the short run. In the long run, however, they performed passably well. But long phases of over and undervaluation of the nominal exchange rate, and thus long phases of misallocation of resources, were the price which had to be paid for the experiment with flexible exchange rates.

Why is it that the currency market misaligns time and again, whereas we believe that all the other markets – the markets for everyday consumer goods as well as those for extremely expensive investment goods – work effectively? As a radical liberal thinker, Hayek has led the way towards a solution: according to his theory of markets, the goods ones are efficient because in these markets millions of participants collect trillions of individual information units, which determine the prices of a huge variety of goods. A government can neither collect nor process this information reasonably, and thus cannot produce prices which adequately reflect scarcity. The market for currency (or stocks) is organized quite differently. In this market, information is collected which stems mostly from government sources, such as statistical offices or central banks. Some traders interpret this information in a certain way, even on a global scale, as they try to match the views which are seen as best representing those of the majority of their colleagues.[23]

The aim of the game is not to buy the product because it is needed to produce or sell something that forms part of an individual act of profit-making, but to make the highest profit with the best forecast of the final outcome. The result must not be "rational" in the sense of the rational expectations theory, as the market participants do not have to share the view that PPP is the only solution in any period of time. Thus, the equilibrium rate is unknown and speculation is not stabilizing – as foreseen by the early writers such as Friedman (1962), Sohmen (1967) or Johnson (1972) – but destabilizing in the short term. In the long run, the "theoretical norm" of PPP is valid, as huge disequilibria will always turn rates in the "right" direction. But short-term misalignments[24] inhibit huge losses in real output in the short and long run.

The more general policy conclusions are obvious: the role of a large variety of factors as potential determinants of the exchange rate or the degree of "credibility" a country can earn "in the markets" confuses the analysis in the capital account approach and its policy recommendations. Fiscal policy, for example, is given undue weight in "stabilization programmes", although it is far from being clear how an austerity programme including a reduction of public expenditure and all the other cruelties usually prescribed can help to overcome "incredible" economic policy in a country under suspicion of the

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[23] As shown above, Hayek (1937) consequently opposed flexible exchange rates and favoured an international standard.

[24] The case of the revaluation of the US dollar in the 1980s, or Japan's dramatic misalignment in the 1990s, has shown the degree of deviation from many equilibrium rate in the short and medium run. See the evidence of IMF (1998) showing that PPP holds for periods beyond 20 years.

"markets". This objection applies to all other "structural" measures, such as privatization or deregulation, usually enlisted as remedies to cure "fundamental weaknesses". The question whether such measures are needed or not may be an important one, but it cannot be answered by "evaluating" speculation in the financial markets. The majority of economic policy adjustments in any economy of the world is not related to the exchange rate question at all. It is only the capital account approach which gives undue weight to the "judgement" or the "confidence" of the "markets" concerning the future development of economies as a whole.

VI. REGIONAL SOLUTIONS: THE EUROPEAN EXPERIENCE

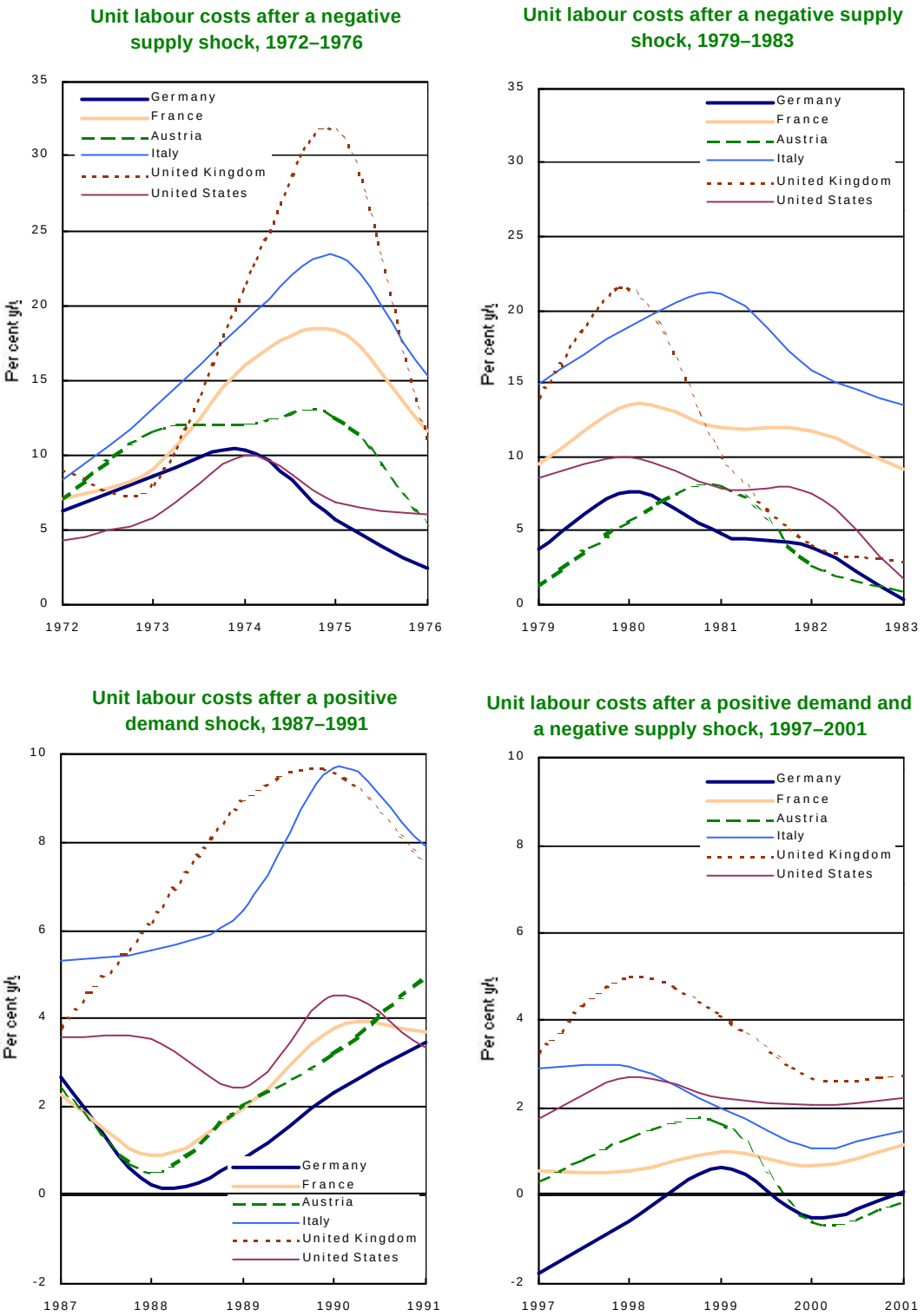
After the collapse of the Bretton Woods system, the most important of the smaller European economies decided to "tie their own hands" in monetary affairs, as it was later on called in Austria. The "snake" and the "snake in the tunnel" – i e. bands of fixed exchange rates around the fluctuating deutsche mark – were the first systemic and regional answer to the unwinding of the global system of regulated exchange rate relations in 1973. The search for a solution for the region as a whole incorporated many advantages. All the countries sacrificed part of their economic policy power to the group as a whole or to Germany as the anchor of the system. But, at the same time, they gained autonomy vis-à-vis market power and the influence of such multilateral international organizations as IMF. The Central Bank of Germany de facto acted as lender of last resort for the system, although this role had never been explicitly assigned to it.

The decision to stabilize its nominal as well as its real exchange rate may be an autonomous national issue for a country. But de facto it is in fact a bilateral question. The country pegging its currency needs another country's currency to peg to, thereby forming the "anchor" of the system. The natural anchor for many European countries at the beginning of the 1970s was the deutsche mark. It had been the most stable currency after the Second World War, and Germany's economy as a market for the products of neighbouring countries was large enough to give them the impression that their currencies could benefit from stability vis-à-vis the deutsche mark. Given the political will of all the participating countries in Europe to head towards further unification in many fields of economics and politics, from the beginning Germany did not just follow the smaller countries in this move, but actively participated in the first steps to form a new European currency system as soon as the turbulence of the collapsing old system had subsided.

An anchoring country in which the overall inflation performance is quite similar to that in the anchor country is in an easy position from the beginning. Austria in its relation to Germany is a good example. Nevertheless, the general inflationary performance in normal times is only one aspect. The real test for a successfully anchoring country is its reaction to different kinds of shocks compared with the anchor's reaction. Chart 1 gives the different patterns of reaction in low- and in high-inflation countries

Chart 1

Unit labour costs and external shocks



Source: AMECO database, European Commission, Brussels, spring 2001.

in the course of supply, as well as of demand shocks in Europe from 1972 to today. It contains unit labour costs as proxy for inflation in these countries, thereby hinting at the fact that conditions in the labour market play a crucial role in defining a country's role in the game. Chart 2 contains the rather similar pattern of the respective inflation performances.

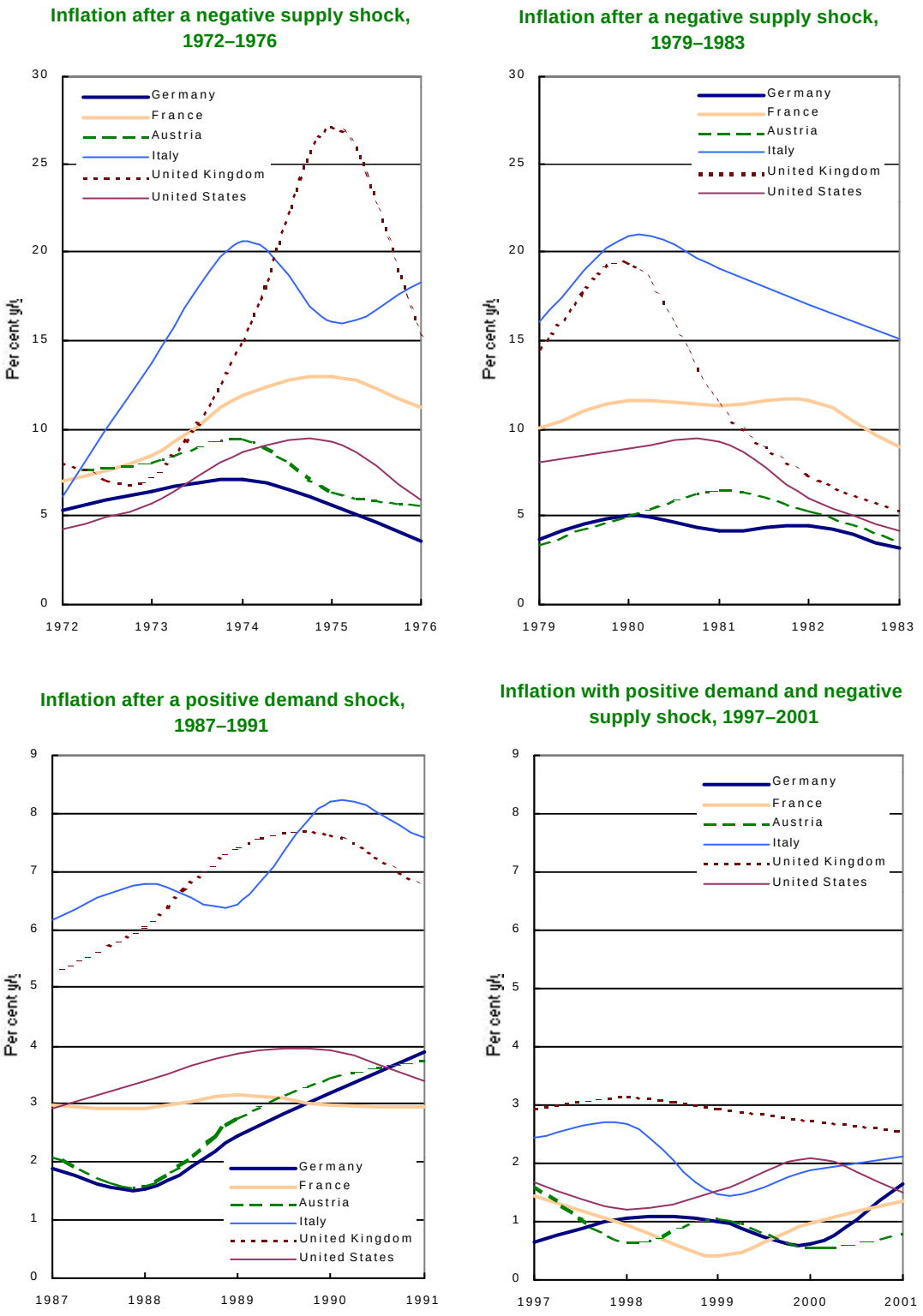
The group consists of Italy and the United Kingdom, the persistent high-inflation countries; the performer in the middle range is France; and Germany and Austria are the prototypes of what we call low-inflation countries. The United States is depicted as a reference line. Moving from the beginning of the 1970s to the present time yields a straightforward message: all the countries seem to have learned how to deal with the different shocks in the course of time. Germany has clearly been since the beginning the best performer as fas as the absorption of the inflationary consequences of shocks are concerned, and has consequently assumed the role of anchor. Austria follows Germany very closely in all aspects and has been able to keep its exchange rate stable throughout. The high-inflation countries have proved to be inflexible compared to the low-inflation ones, as their unit labour costs and their inflation rates jumped up following negative supply shocks and positive demand shocks and as a rule came down only slowly – i.e. the downward movement of prices and nominal wages was much more rigid compared with those in the anchor country. Consequently, anchoring economies which could not follow the anchor country had to depreciate in order to restore the real value of their currencies and their competitive position.

The most outstanding and clear-cut example of an unsustainable peg was the attempt of Italy and the United Kingdom to fix their currencies vis-à-vis the deutsche mark already in 1988, i.e. at a very early stage in the development of the EMU. In the wake of the stock market crash in the autumn of 1987, the central banks in the United States and Europe reduced their interest rates to historical lows, despite the fairly limited effects of the crash on the real economy. Thus, the monetary stimulation at a rather late stage of economic recovery gave new momentum to the global economy and world investment. Following the shock, the growth performances of the economies under consideration were more or less identical (see chart 3): all reached growth rates of 4 per cent or more, with the United Kingdom being the best performer at the end of the 1980s, and West Germany outpacing the others at the beginning of the 1990s following the unification boom.

The inflation performance during the crucial period 1987–1992, however, was quite different: whereas in the traditional low-inflation countries (including the United States) it remained below 4 per cent in spite of upbeat growth, in Italy and the United Kingdom inflation rose to 8 per cent or more. Even more pronounced were the differences in the growth rates of unit labour costs. Germany, Austria and France experienced a very slow and moderate reaction of wages to falling unemployment and rising growth; the increase in labour costs remained subdued and below the rise in prices. In Italy and the United Kingdom, however, growth rates of unit labour costs jumped from 4 to close to 10 per cent, outpacing the hard currency group. Thus, compared with the anchor country the two newcomers to the EMS, Italy and the United Kingdom, lost ground in the direct external competition with Germany, Austria and France. With fixed nominal exchange rates, accumulated over the four-year period 1987–1991, Italy's

Chart 2

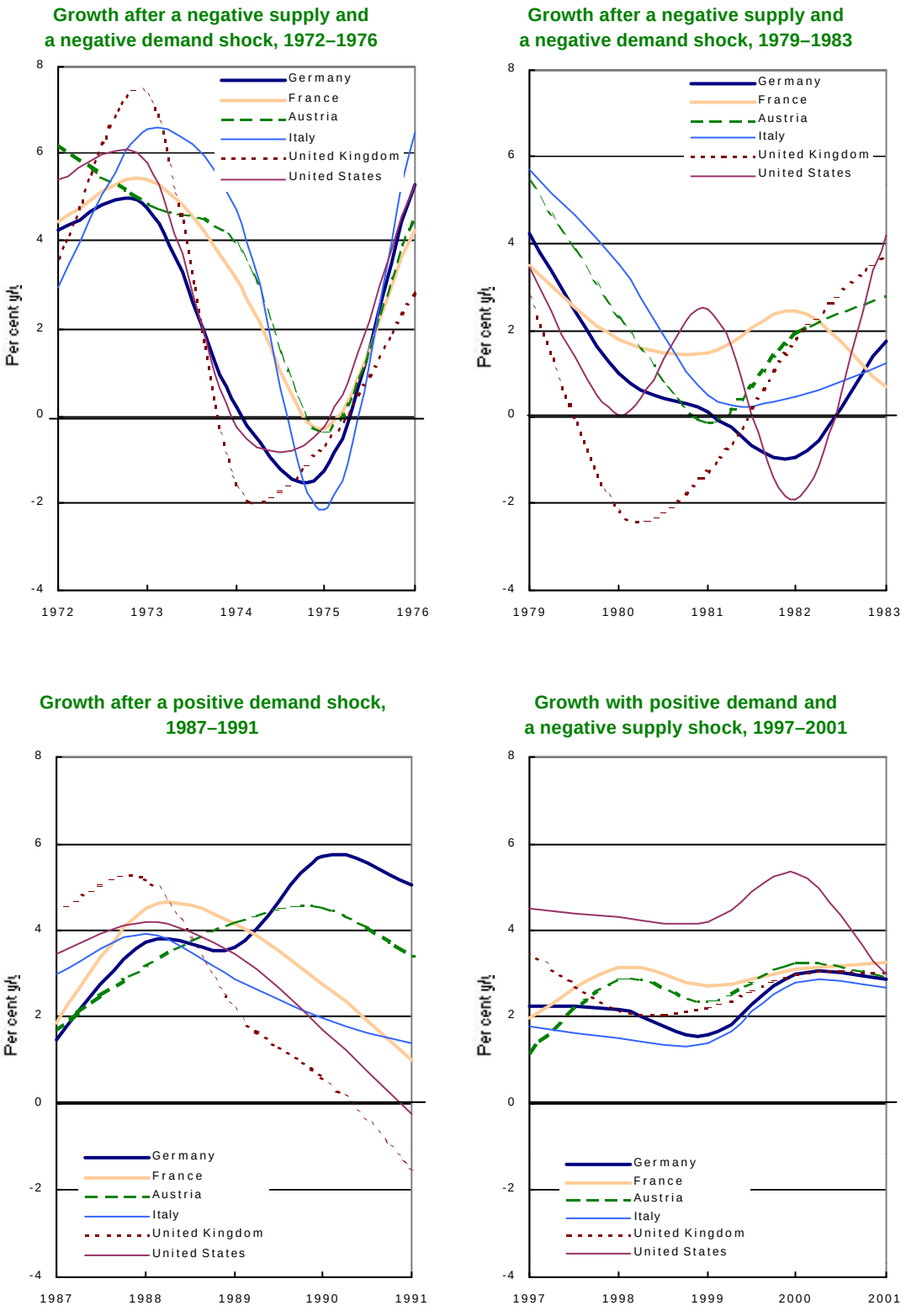
Inflation and external shocks



Source: AMECO database, European Commission, Brussels, spring 2001.

Chart 3

Growth and external shocks



Source: AMECO database, European Commission, Brussels, spring 2001.

real exchange rate (calculated with unit labour costs) appreciated by 23 per cent, and the United Kingdom's by 28 per cent vis-à-vis Germany. The loss of competitive power in these two countries was reflected in a huge swing in the current account from surplus to deficit.[25]

The United Kingdom and Italy, trapped by a deflationary threat on the one hand and the decision to quit the EMS on the other hand, opted for depreciation. It is easy to see from the above charts why the decision of France not to give in to the pressure coming from the "markets" in 1992 was justified. France as well as Austria were able to preserve their competitive position in the aftermath of the positive demand shock. France had been under pressure from the markets because the overall economic situation at that time was rather gloomy, compared to Germany or Austria, so that a depreciation would have been an easy way out of the recession. But the decision of the French government, with the assistance of most other members of the EMS, to stick to the "unwritten" rules of the game – namely to use depreciation only in case of an external disequilibrium – proved to be right. Putting it differently: the pressure of the markets in the case of France was quite unjustified, whereas for the United Kingdom and Italy it was fully justified. The bold move of the French authorities to challenge the wisdom of the market proved to be right.

This case of a currency crisis in Europe highlights the role that controls and interventions in the market for short-term capital can play and, at the same time, what role they cannot play. In the case of the pound and the franc in 1992, a massive and uncontrolled flight was by no means justified in either case. A thorough analysis by the authorities in both countries would have shown what the chart proves, namely that there was a limited need to adjust the pound but none at all to adjust the franc. There was no reason to panic or fear a total collapse of the EMS; but controls could have helped to avoid big and unjustified market instability. But with or without controls the British and Italian problem had to be solved.

The most important lesson to be learned from this event in Europe concerns the macroeconomic steering of the system. A better "early warning system" within the EMS could have prevented the systemic crisis. If the authorities of the EMS as well as of all countries involved had realized at a much earlier stage that the situation of the lira and the pound was becoming unsustainable, they could have reacted much sooner and depreciated the currencies of the two high-inflation countries already in 1989 or 1990, thereby averting the worst of the crisis and saving France from the contagion effects of a general speculation against currencies with fixed exchange rates.

The crisis phenomena and the waves of speculation frequently occurring in systems of fixed and semi-fixed exchange rates could give rise to the impression that an anchor approach to stabilize the external and the internal value of money is counterproductive in most cases. But things are not always so simple. Anchoring a small and very open country's currency has in several cases proved to be a very effective method of stabilization of the domestic price level. The main economic policy target many

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[25] Krugman's description of the European crisis as "second-generation model" of financial crisis is misleading. Krugman (1998) weighs heavily the fiscal situation of the countries in crisis, but does not take into account how quickly they all turned around after depreciation of their currencies, despite high budget deficits. In my opinion, there have not been several generations of models but only variations of one theme.

anchoring countries had in mind was not the external but the internal value of money. This approach has proven its merit time and again.

This is true for small anchoring countries in Europe such as Austria, the Netherlands and Belgium. In these economies inflation has been subdued for decades in the same way as in their anchor country Germany, and they have been able to adjust to shocks as effectively. The anchor approach has also been successful in some larger countries like France and Italy. Although France fixed its exchange rate later than the smaller countries (in 1987) and the adjustment was not always as smooth, it did manage to catch up fully with Germany's inflation performance. But even Italy, which was the subject of many speculative attacks and backlashes in its adjustment process, finally converged in terms of growth rates of unit labour costs and flexibility in case of shocks to the anchor. The growth rates of unit labour costs over time demonstrate the enormous convergence of performance of the European countries in the phase that could be called the third oil price explosion of 1999–2000. Wage growth in a formerly high-inflation country such as Italy does not exceed productivity much more than in low-inflation ones like France, Germany and Austria. Unit labour costs in the whole region have not risen at all in response to the oil price hike.

Obviously the critical question is whether this success should be attributed to the anchor approach or to other factors, with evidence for the United Kingdom and the United States showing that countries with flexible exchange rates can be as successful concerning the speed and sustainability of adjustment to shocks as anchoring countries. Of course, the Western industrialized countries have developed quite different institutional arrangements in the labour and goods markets to stabilize the internal value of money – arrangements that have proven successful. However, for some open economies pressure from outside and through the import and export channels has been stronger than domestic economic policy pressure alone. Italy is the most prominent example of a fairly large economy in which the domestic institutional framework has hardly been sufficient to successfully stabilize monetary conditions. But with the pressure from cheap imports and an ambitious target for the exchange rate vis-à-vis the deutsche mark, economic policy authorities could always force the economic agents to stick much more strictly to the rules of the stability game.[26]

[26] The question of whether the stability game has been overall successful in terms of growth and employment, the intrinsic targets of economic policy, is a different one. Monetary restriction normally goes with rising unemployment in the short term. However, if countries opt for long-term monetary stability – i.e. a stable domestic inflation rate – there are only a few valid arguments to defeat such an approach. The simplified Phillips curve analysis' record concerning the explanation of inertial inflation is hardly convincing.

Appendix: The roots of inertial inflation in Europe[27]

Why was the inflation performance of European countries so different in the 1980s? Why did it take more than a decade in Italy but only two years in Germany to bring inflation back to tolerable levels after the second oil price explosion? What explains the average performance of France in this respect and the excellent one of the Netherlands? The impact of monetary policy cannot explain the inflation outcome. While monetary policy was restrictive all over Europe after the oil price explosion of 1979–1980, on the demand side economic policy was much more expansive in Germany in the 1980s than in France or Italy. Obviously there must have been factors on the supply side of the economy responsible for the long-lasting stickiness of prices and for the inertial inflation in these countries. These factors must have forced monetary policy makers to tighten the monetary screws much more and much longer in the high-inflation countries to bring about the degree of monetary (nominal) convergence needed for a successful pegging of nominal exchange rates in the 1990s.

The supply side, obviously, represents the cost level of the economies under consideration. If overall costs are higher and more sticky in one country, a stronger impact of monetary policy is required to achieve the same result regarding inflation. In modern, vertically integrated, economies there is only one intermediary good which is not produced at a certain stage of the production process: that is labour as a whole. Thus, for large, relatively closed, economies nominal unit labour costs are by far the most important cost component. Unit labour costs for these regions (e.g. the United States and EMU) are highly correlated with the rate of inflation (chart 4). In log-linear terms: the growth rate of inflation (p) is determined by the growth rates of nominal wages (w) and the growth rate of the mark-up over costs (u) on the one hand and the growth rate of labour productivity ($\therefore$) on the other hand:

$$p = (w + u) - \therefore$$

If the mark-up is constant over time – i.e. if there are no changes in income distribution between labour and capital – prices are determined by unit labour costs alone ($w - \therefore$).

In this analysis either more or less exogenous nominal wages determine inflation directly or inflation inertia resulting from institutional arrangements fixing nominal wages in relation to past inflation, the degree of the exogenous role of wages depending on the centralization of wage settlements or direct government interference.[28] Given the undeniable success of corporatist approaches to determine wages and prices as well as the overwhelming empirical evidence of the dominant role of inflation inertia, it is

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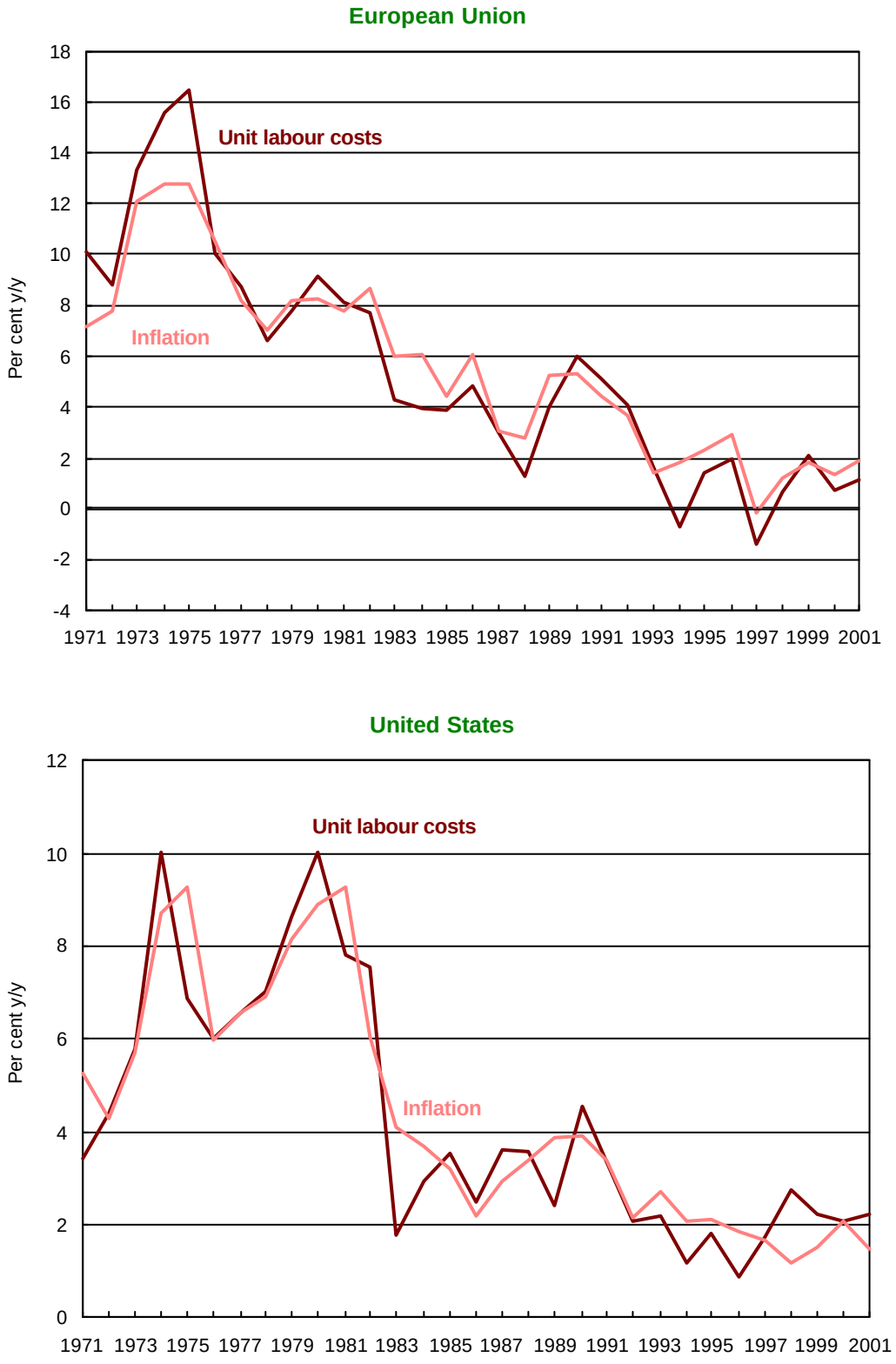
[27] This section was first published as part of Bofinger (2000).

[28] In Europe direct government intervention or even the determination of nominal wages by government decree played an important role during the convergence process.

Chart 4

Unit labour costs and inflation



Source: AMECO database, European Commission, Brussels, spring 2001.

rather surprising that IMF in its latest *World Economic Outlook* sticks to a fiscal deficit cum seigniorage hypothesis of inflation.[29] This inconsistency, obviously, is attributable to the underlying neoclassical employment theory IMF subscribes to.[30] If real wages determine employment by inducing companies to produce with more labour or more capital, nominal wages cannot be at the same time an important determinant of the price level. If, however, (exogenous) nominal wages determine unit labour costs, with labour productivity determined by investment and technology, and unit labour costs determine the price level, there must be another (exogenous) factor determining investment and the growth rate of production as a whole. This can only be the interest rate. Hence, monetary policy has to assume responsibility for the real development of the economy as soon as wages help to keep inflation down, a consequence that independent central bankers all over the world would like to avoid.

Negative supply side shocks have often been the trigger for inflation and resulting inflation inertia. Nominal wages play the crucial role. They may be rigid or flexible regarding the overall price level in the case of a supply side shock, like an oil price hike. If nominal wages are rigid, real wages are flexible if the price level moves as a result of a supply shock. Thus, the "rigidity of wages" proves to be an ambivalent term. Inflexibility or rigidity of wages is often blamed for being one of the main hindrances to a flexible response by labour markets in Europe. But the case of a supply side shock questions traditional concepts of rigidity as a pathological phenomenon. Neoclassical theory expects real, not nominal, wages to be flexible. But for real wages to be flexible, nominal wages have to be inflexible, if prices are flexible.[31] Thus, sticky nominal wages are clearly desirable in cases of supply side shocks. If commodity prices rise as a result of falling supply ("oil") and (rigid) money wages do not react, the shock is absorbed without inducing an inflationary spiral. However, if nominal wages are flexible (vary with prices), the effects of a supply shock will either increase inflation or will reduce demand and investment as soon as monetary policy tries to avoid an acceleration of inflation.

There is a second important aspect. For demand side policies, like monetary policy, to succeed in stimulating growth, rigid nominal wages relative to employment are the most important ingredient, as the experience of the United States in the 1990s showed very clearly. If money wages do not rise at an early

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[29] IMF (2001: 117). Although the IMF study points to the fact that "inflation inertia and money supply have to be found to be key determinants of inflation", it quickly turns to the "widespread view that fiscal policy is closely connected with the inflationary experience of many emerging market economies" (p. 123). The general obsession of IMF with fiscal policy is totally misleading. The graphs presented to show the correlation between fiscal deficits and inflation in emerging markets are unconvincing (pp. 128/9). But by consequently ignoring the riddles posed to its theory by Japan (exploding budget deficits and deflation) or the United States (huge budget surpluses and moderate inflation) in the 1990s, the analysis lacks credibility.

[30] See IMF (1999) and Flassbeck and Spiecker (2000) for an empirical refutation of the IMF view.

[31] Flexible nominal wages are superior to sticky ones only under conditions of negative demand shocks and "rational expectations" concerning future anti-inflationary measures of monetary policy. In this case a quick reaction of nominal wages and prices can help to avoid rising real interest rates and restrictive monetary effects on output and employment. But a symmetric reaction of nominal wages in case of an expansionary monetary policy would lead to the same result, namely a small reaction of output and employment. This time, however, the result is inferior to sticky nominal wages. Thus, monetary policy should rely on itself and not on the replacement of monetary policy by "monetary management by the trade unions" by means of falling prices and wages, as Keynes once had called it.

stage of the recovery, monetary policy can be accommodative for a very long time and unemployment can fall accordingly. There is only one exception: the degree of monetary restriction to achieve a certain fall in the inflation rate depends on the flexibility of nominal wages downwards, and not on real wages. If nominal wages are rigid downwards – meaning that they are slow to react to rising interest rates and rising unemployment – monetary policy has to tighten more than in the case of a quick and strong reaction of nominal wages, given a rather stable trend of productivity growth. Thus, as a rule, the nominal rigidity of wages is the preferable regime in a world bombarded by positive and negative real shocks from both sides of the market.

Flexible nominal wages in response to prices, and thus real wage rigidity, was the regime used by some of the large European economies to handle the two oil price explosions – with disastrous results. France and Italy, for example, had to fight since the mid-1970s with backward-looking indexation schemes; moreover, in those countries nominal wages were inflexible in response to unemployment. Consequently, flexible nominal wages (a function of past prices) led to inflexible real wages, and restrictive monetary shocks had grave consequences on the real economy, as prices reacted with a huge lag to the fall in demand. The important exception in continental Europe at the beginning of the 1980s was Germany: like the United States, it was successful in bringing unit labour costs and inflation rates down almost immediately after the end of the oil price hike. Some other European countries – a group consisting of the Netherlands, Belgium, Denmark and Austria – managed to keep pace with Germany, even in the first half of the 1980s.

Given the German and US examples, other countries quickly learned that inflation was not the solution to the emerging labour market problems in the aftermath of a supply shock. But the institutional arrangements on the labour market, which had been created to shelter employees from the negative repercussions of loss in real income, could not be dissolved quickly for political reasons. In consequence, instead of a quick dissolution of inflexible labour market regimes (i.e. the dissolution of nominal flexibility and reinstallation of nominal rigidity), the answer was harsh monetary restriction resulting in an extremely long period of disinflation, with the final conversion to the German and US level of unit labour costs and inflation only at the beginning of the 1990s. The price to be paid was much higher unemployment in France and Italy than in West Germany and in the United States before the recession of 1991/2.[32]

Pertinent to the understanding of the process are the cases of the Netherlands and France in comparison with West Germany. For both members of the EMS the development of unit labour costs in Germany was obviously the reference line, the "anchor" for all those countries aiming at membership of the EMS and later on of the EMU. German unit labour costs rose, by and large, by 2 per cent annually

[32] To be clear concerning the explanation of unemployment in France and Italy: it was not "neoclassical" unemployment caused by too high real wages, but rather "Keynesian" unemployment owing to too high real interest rates. The reaction of real wages relative to unemployment (the wage share) was, in the course of the 1980s, as flexible in France and Italy as in Germany and much more flexible than in the United States, where real wages hardly ever lagged behind productivity (Flassbeck and Spiecker, 2000).

throughout the 1980s. France did not manage to get its wage policy to follow this line until the second half of the 1980s, and fixed its exchange rate irrevocably to the deutsche mark only in 1987. The Netherlands adopted a quite different approach: after a huge inflationary bubble during the 1970s and an unemployment rate which doubled Germany's in 1982, the Dutch government adopted a new regime of labour relations. Under the supervision of the government, wage policy agreed to a moderation of nominal wage increases, even below the Germany rates, given the different national productivity trends. The real exchange rate of the Netherlands was devalued as the nominal rate was fixed to the deutsche mark. By this "beggar-thy-neighbour" approach the Netherlands economy gained overall competitiveness and won market shares all over Europe, whereas the high-inflation countries struggled with domestic as well as foreign demand.[33]

It is important to note that the successful non-monetary moderation of inflation was achieved in European countries with highly centralized processes of wage-bargaining, such as in Germany and the Netherlands. But, in stark contrast, a country with a highly decentralized labour market, like the United States, was able to compete with the most successful European approaches regarding adjustment to supply shocks, i.e. nominal wage rigidity and real wage flexibility, given more or less the same monetary policy stance, in the course of the 1980s. Thus, the United States could have fixed their rate vis-à-vis Germany at the same time as the Netherlands and much earlier than France. The fact that Germany and France were much less successful regarding their labour market performance throughout the 1990s seems to be a different story, as the Netherlands decoupled from Germany only after 1992 in terms of overall unemployment. Surprisingly enough this was not the result of an ongoing moderating of wages vis-à-vis Germany but rather the opposite, namely higher growth rates of unit labour costs and an acceleration of domestic demand.[34]

The lesson to be learned from the European labour market developments since the adoption of the plan for a common currency is rather simple: countries with very different labour market regimes can join a system of fixed or quasi-fixed exchange rates if they are able to adjust their unit labour cost developments to that in the majority of other countries. Any system is free to choose a growth path of unit labour costs, which will then determine the inflation rate, or to fix the inflation rate and let nominal wages adjust to this inflation target, given a stable trend of productivity growth. The transition to such a low inflation performance, backed by a sufficient degree of nominal wage rigidity and real wage flexibility, can be very costly, however. Any country joining a system which includes already successful countries should check on the possibilities to alter its labour market regime in time to avoid major blows to its economic targets and the stability of the whole system. If Italy, for example, had been able to abandon

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[33] Similar undervaluations occurred in Finland and Ireland. The EU Commission ignores these cases, thereby violating its role as the guardian of the smooth functioning of the currency union.

[34] See Flassbeck and Spiecker (2000) for a closer look at the facts.

much earlier on the "scala mobile", its scheme of backward-looking indexation, the adjustment costs for everybody in Europe could have been considerably diminished.[35]

Convergence of monetary conditions, including wages and unit labour costs, has been the main feature of Europe's path to monetary union. To be successful, dollarized countries or currency boards have to achieve the same degree of convergence with no assistance from the anchor country. However, as in Europe, convergence of wages and unit labour costs in recession periods of high or even rising unemployment is not sufficient. The real test is a high degree of convergence in the face of falling unemployment and high growth rates. For the EMU this test still lies ahead. Have the roots of inertial inflation been eliminated, or have the price rigidities of some countries just been hidden temporarily under the pressure of the supply surplus on the labour market?[36]

VII. THE ACHIEVEMENTS AND FLAWS OF SOFT PEGS

Outside Europe there are other prominent examples of successful monetary stabilization by means of an external anchor. Brazil has proven this in spite of the heavy weather faced by the economy. Following the introduction of the Plano Real in July 1994 and fixing of the real vis-à-vis the US dollar, the Brazilian inflation rate came down from a four-digit figure in 1993 to a one-digit figure after 1997. In terms of the pure reduction in the inflation rate this is an extraordinary performance. It is difficult to argue that the Brazilian authorities could have achieved this without pressure through the import channel mentioned above. But even with the inflation rate coming down quickly during the disinflation process, the external competitive situation deteriorated. Despite several depreciations of the nominal value of the currency, there was an actual appreciation of the Brazilian real, which had reached – according to the calculations of the national authorities and international organizations – an overvaluation of 20–30 per cent by the end of the disinflation process.

Certainly, an overvaluation of the currency is a necessary outcome if the anchor approach is to be rational. It is precisely the pressure stemming from overvaluation – i.e. from low import prices and tough competition in the export markets – that acts as a sanction against unjustified claims of workers and other sectors of society. With an overvalued exchange rate, the adjustment pressure of the world market (i.e. of "globalization") is artificially but voluntarily increased. Again, this kind of strategy is reasonable if

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[35] The problem of backward-looking indexation of wages and pensions is generally virulent in countries fighting with inertial inflation. Recent examples include Turkey and most of the transition economies in Eastern Europe. In these cases the traditional approach of IMF to fight budget deficits to restrain the expansion of the monetary base is extremely costly compared to income policy tackling expectations of inflation directly (Hoffmann et al., 2000).

[36] The crucial question concerning dollarization is not the volatility of national monetary policy but the labour market institutions keeping inflation low despite an expansionary monetary policy. Thus, even in the face of volatile interest rates in emerging markets, it is unjustified to state "not to have a central bank may actually be a benefit rather than a cost" (Joint Economic Committee, 2000: 13).

countries cannot do better than the anchor country, but they will suffer from money illusion. Without an anchor approach (i.e. with a constant real exchange rate) there is no help from outside for the domestic target of getting rid of certain kinds of money illusion. The whole burden falls on domestic institutions.

Unfortunately, from the very beginning of the implementation of the anchor approach, many international institutions and advisors did not pay sufficient attention to the necessary overvaluation of the anchoring country's currency and did not prepare the policy makers for the inevitable depreciation, i.e. they did not prepare a reliable exit strategy. The remedy for overvaluation is simply a nominal depreciation in the anchoring country when domestic stability is achieved. The depreciation should take care of the accumulated overvaluation of the disinflation phase. In the case of Brazil, for example, during the crisis it was rather obvious that the real had to be depreciated by something like 20–30 per cent to help the country out of the balance-of-payments trap.

Although the pure economics of the restoration of international competitiveness are simple, the political economy of this technical operation is a protracted one, and the pace of the progress towards a political solution has been generally underestimated.[37] Governments have put all their political credibility on the playing field and have succeeded in convincing people that the fix rate has brought more good than harm. Moreover, they fear a revival of inflationary pressures and the return of inflation-feeding institutions, such as the famous backward-looking indexation schemes for wages and pensions, as soon as the door is opened by an inflationary impulse coming from a depreciation. Additionally, in the phase of disinflation governments have been proud of gaining the "confidence" of international markets in the form of an inflow of short-term capital and an increase in international reserves. There is a risk of endangering these achievements by loosening the external grip on inflation.

However, many of the fears in the anchoring country seem to be exaggerated. Depreciation will cause only a small new inflationary shock (depending on the weight of imports on total value added), compared with the disinflation the country has managed to fight. But even this is only a one-off effect if strong second-round effects on inflation can be avoided. Crucial for the success of the operation to restore international competitiveness is to contain the depreciation to the absolute necessary minimum. At this stage only is the active assistance of the anchor country needed. It may help the anchoring country to retain the confidence of the markets it has gained so painfully by figuring out the necessary degree of devaluation and by direct intervention in the currency market in the case of heavy speculation against the anchoring country.

To float the currency of a country in an overvaluation crisis is quite wrong. The jump from semi-fixed to fully flexible rates that IMF had been advocating in the winding up of the Asian crisis and in Brazil is dangerous and unnecessary, as this policy usually leads to an overshooting of the devaluation, with disastrous effects on the financial system of the countries concerned and on the competitive position

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[37] It is more than surprising that Stanley Fischer, Deputy Director of IMF, admits frankly how difficult the political economy of an overvalued anchoring country is. Had this been understood from the beginning, the question of a credible exit strategy would have received much more attention (Fischer, 2001: 9).

of countries not yet involved in the crisis. The European experience can serve as a role model in this respect. In Europe the institutional arrangements of the EMS have often helped to figure out the necessary rate of depreciation and to add credibility to the measures taken by the depreciating country. Whenever market pressure forced a justified depreciation or authorities decided that a depreciation was inevitable, it has been possible to process the depreciation without the danger of overshooting by the markets. "Orderly depreciations" of the overvalued currencies of high-inflation countries have been the trademark of the EMS for many years.

VIII. THE LIMITS AND FAILURES OF HARD PEGS

External and internal stability of the price level is just a tool to better accomplish the relevant targets of economic policy, namely more employment and higher growth rates in real income. An anchoring country explicitly gives away important tools to achieve these targets. Thus, its overall economic policy success depends directly on the anchor country's own success. The latter's policy, however, may be ideal under the circumstances prevailing within the country itself, but that does not imply that it is the right policy for the group formed by the anchor country together with its surrounding satellite economies.

This was one of the main problems of the Bretton Woods system in the first two decades after the Second World War. US monetary policy may have been adequate for the United States. The Federal Reserve Bank was forced by law to take into account the economic environment in the United States to underpin its decisions – although the US dollar was the hegemonial currency of the global exchange rate system. The same is true for Germany as the anchor of the EMS. For the country with the hegemonial currency this policy can go on indefinitely, but for the system as a whole such a policy approach, obviously, is not adequate, as monetary conditions may require a quite different approach in other economies.

Apparently, other policy options have to be considered. The move to a multilateral monetary system, with all countries participating in the decision-making process, is the only consistent way out. Nothing short of a monetary union can help to avoid permanent mismanagement of global monetary policy. Hence, in Europe, the step to create the EMU was not just the result of the attempt of the French government to avoid continued political domination by Germany, as many have argued. From an economic point of view, it was also a fully justified step, given the fact that for systemic reasons Germany could not concur with Europe's needs in an overall non-inflationary environment.

For very small, extremely open economies, forming just satellites of the anchor country, the anchor approach may be adopted for a rather long period if, by and large, the anchor country's economic policy follows reasonable principles and accepts the existence of the satellites with benign neglect. But for any larger group and for countries of equal size or economic power, the anchor approach can only be a

transitional stage on the way to monetary union. A consistent monetary policy is only possible for the group as a whole and thus can only perceived by a united central bank. The transitional phase, however, can last a very long time. From the first steps to the last it took Europe 30 years. But the formation of the different steps towards monetary union and the political will to move further in the right direction may give such country groupings an enormous degree of independence to act vis-à-vis the rest of the world, and may minimize the interference of international financial organizations in domestic affairs. Thanks to the economic strength as well as stability of the anchor and its will to solve the multilateral problems, even small countries may be able to avoid the role of *demandeur* in Washington or to resort to IMF as lender of last resort.

The situation is totally different with unilateral solutions such as currency boards or dollarization. These systems explicitly lack the advantages of a monetary union, but have many disadvantages as they are neither transitional stages towards a monetary union nor sufficiently isolated from the floating rate regimes surrounding them. The future of the existing currency boards in developing or transforming countries is uncertain, with Argentina being the most critical case. Some observers still believe that Argentina has a chance to overcome the persistent economic slump by means of "structural adjustment", such as privatization or a further reduction in its public sector deficit. Hence, the country is still the object of generous unilateral assistance, as donors believe in its ability and willingness to adjust. Already in recent years the Argentine government has taken draconian measures to cut down public spending, e.g. by sharply reducing in absolute terms the salaries of public officials. The share of public spending in GDP is lower now in Argentina than in any other South American country.

Nevertheless, there is a fundamental misconception about the potential role of "structural adjustment" and fiscal policy in the case of a "trapped currency board", as seems to be the case in Argentina. This misconception is owed to the dominance of a neoclassical theory, which is based on the fiction of a smooth adjustment of "flexible prices" in a market economy. Giving up this fiction yields bitter results. Once a currency board regime is faced with an overvaluation of its currency in a world of rather stable price levels, it has virtually no chance to escape this trap by means other than a depreciation and the abandoning of the whole currency board. The overvaluation of the peso is quite obvious. Argentina may have avoided the emergence of a huge gap in its competitive position vis-à-vis the Western world after the introduction of the currency board owing to a rather successful anti-inflationary policy.[38] However, after the devaluations in Brazil and other South American trading partners vis-à-vis the US dollar, Argentina's position deteriorated sharply.[39]

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[38] Such a gap has definitively emerged in Bulgaria and most probably also in the Baltic countries with a currency board.

[39] Even Argentine officials admit that there was, at the beginning of 2001, an overvaluation of at least 20 per cent. But any attempt to restore competitiveness by domestic cost-cutting measures or government subsidies are bound to fail if they do not – as does a change in the exchange rate – discriminate between production for domestic purposes and exports. But if they do, they will necessarily violate international trade rules, which proves that these rules are more or less useless if they do not include unjustified exchange rate changes as one of the most important distortions to trade.

As shown above, the only instrument left to a country with an absolutely fixed exchange rate is wage cuts to adjust to such a revaluation of the real exchange rate. Unit labour costs have to fall in absolute terms. Thus, the reduction in Argentina in the salaries of public officials is insufficient. Those parts which are most exposed to international competition need to be cut, namely industry and agriculture in the case of Argentina. But even if this can be brought about by political pressure on unions and employers, there is no easy way out. An overall cut in wages may, as a rule, restore competitiveness but it will not offer a solution for the overall economy. In the very short run a reduction in nominal wages will not force the overall price level to fall, but will result in falling real wages. If real wages fall, the demand of private households will fall too as, apart from economic text-book cases, employment will not react immediately to the fall in real wages in a depressed economy. Faced with falling domestic demand and falling profits, companies may cut prices step by step and thus restore the real income of their workers. But the move towards deflation will not restore real demand, as workers – confronted with the fear of further cuts in wages, and in an attempt to take advantage of the benefits of falling prices – postpone consumption. In addition, the incentive to hold liquidity increases when prices fall.

This is especially important for a rather closed economy like Argentina. Wage cuts in such an economy prove to be disastrous as they quickly translate into falling domestic demand in one way or another. Even if the positive effects of an improvement in international competitiveness materializes, the negative effects on domestic demand by far outweigh the positive ones. This is the classical case where "the tail wags the dog", to quote McKinnon (1963). If fiscal policy in this environment tries to solve the crisis by further cutting domestic demand, the crisis can only be intensified. An overall reduction in domestic demand helps to reduce the current account deficit, and thus seems to heal the lack of competitiveness. In Argentina this "improvement" up to 1999 was regarded as a big success in the government's strong attempts to cope with the crisis. But the real test on competitiveness is a flourishing economy with no growing deficits, and not a stalling, or even collapsing, one with falling deficits on the current account. The mere reduction of absorption of internal and external resources is not sustainable.

At this stage it seems to be hard for policy makers to get a realistic picture of the state of the economy.[40] Capital is still flowing in to finance the current account deficit with no quantitative restriction. But most of the currency board countries have to pay rather high interest rates despite domestic stability. Argentina's spread on United States Treasury bills has hardly ever been less than 500 basis points, but it has been temporarily as high as 1,300 basis points. Bulgaria has a short-term interest rate of more than 10 per cent, as have also the Baltic states. However, 10 per cent is too high for domestic purposes if the inflation rate is close to zero, as in Argentina (at a real rate of 10 per cent in a recessive period) or close

[40] It is more than surprising that many people still believe that currency boards tend to create a monetary regime where foreign currency generation is automatically guaranteed through monetary inflows. At the same time it is admitted that countries with currency boards can have the problem of lack of competitiveness and of very high interest rates. Obviously, money may be flowing into the country, but only at rates which kill its economy (Argentina's short rate was as high as 18 per cent in the spring of 2001, with zero inflation). But even at astronomically high rates, money will not be available if overall competitiveness is not improved quickly, as everyday experience with bank lending shows.

to the Western level, as in the Baltic countries. An interest rate of 10 per cent may not be high for domestic reasons if the inflation rate is close to 10 per cent, as in Bulgaria. But then the competitive position has deteriorated, with an absolute fixed exchange rate, and the crisis in overall competitiveness will show up later.

A currency board or dollarization can only function properly if the anchoring country has a much higher growth rate of real income and can thus afford to pay higher interest rates in a hard currency or if the interest rates remain stable, as in the anchor country.[41] Otherwise the hard pegs will attract international investors in short-term assets in these countries, as the necessary link between higher interest rates and the risk of devaluation is abandoned and the chance of a bail-out is high.[42] In this case the economic fundamentals of the anchoring country are definitively in disequilibrium in one way or another, and the currency board cannot be sustained in the long run. The need to adjust the exchange rate may be obscured for a while by favourable external circumstances, but it will ultimately prove to be inevitable.

IX. ECONOMIC POLICY ERRORS BEYOND THE EXCHANGE RATE SYSTEM

Larry Summers, formerly Secretary of the United States Treasury, in his analysis of the international financial crises recommends avoiding "policy biases toward short-term capital". This bias, in his view, could be observed time and again in the recent crises. His position reveals the underlying confusion of mainstream economics when he adds that "we saw it [the bias] in the Russian Federation, in the government's determined efforts to attract international investors to the market for rouble-denominated GO's" (Summers, 2000: 9). Summers' description is not entirely wrong. Indeed, extremely high nominal interest rates and the dollar peg of the rouble attracted short term flows. Nominal interest rates amounted to something like 50 per cent, with overall price inflation at around 20 per cent.

Imagine the verdict of such an eminent economist as Larry Summers for the economic policy makers (and their advisors) in an industrialized country going for a real interest rate of 30 per cent and a

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[41] Currency boards are inferior to the anchor approaches used in Western Europe in the run up to the EMU, as they deprive national monetary policy of any means to provide sufficient liquidity to the banking system to allow for a steady-hands policy regarding the short-term interest rate. While a country with "tied hands" in monetary affairs has to follow the monetary policy of its anchor only, a currency board hinges on the willingness of the foreign capital markets to supply capital at a certain interest rate. As the judgement of the markets concerning the ability of the country to service debt fluctuates, both the short and the long rate may also fluctuate, thereby producing what the currency board should have avoided: an extremely unstable monetary environment. The same is true for dollarization if there is even the slightest risk of a sovereign default.

[42] As IMF – one of the strongest proponents of the corner solution – is willing to act as lender of last resort in currency board systems, the moral hazard for international investors is inevitable.

unilaterally pegged exchange rate with no exit strategy.[43] But the core of the problem is the domestic stance of monetary policy. No industrialized country could survive economically 30 per cent real interest rates, whatever the exchange rate regime might be. At the time of the installation of the peg, the Russian Federation was supervised by IMF. Under the guidance of an IMF programme its central bank gained independence without knowing how to use its power effectively. With and without the overvaluation of the rouble in real terms the country would have gone bust sooner or later. Hence, there is no point in saying that you should avoid "policy biases towards short-term capital". The point is, you should avoid disastrous domestic economic policy by any means because it will kill you, whether or not your country is attractive for international capital.

The crucial point is a simple one. There is no such thing as an autonomous or independent national monetary policy for countries with open capital accounts. High-inflation countries – those with relatively high growth rates or with misguided monetary policy, as in the case of the Russian Federation – cannot expect to be insulated from the rest of the world if there are no obstacles to the mobility of capital. Any deviation of interest rates from the fundamental equilibrium equation, and thus from PPP, will lead to speculative flows, irrespective of the exchange rate regime. If a country aims at fighting double-digit inflation (as the Russian Federation did in 1995), it has the choice to abandon capital account openness or to search for membership in a monetary block offering a clearly defined exit strategy when unavoidable real revaluation has to be corrected.

Some writers seem to presage this problem by creating dilemmas like the "original sin" of Eichengreen and Hausmann. However, if countries are lacking a deep and stable financial market a mismatch (either a currency or a maturity mismatch) will only be unavoidable if they are unable to stabilize their exchange rates (unilaterally or as part of a system). If they cannot stabilize their exchange rates permanently, their interest rates may be too high because of inflation also being too high. Then they should opt for "BBC" ("basket, band and crawl", as John Williamson, 2001, calls it), or an anchor approach. There is no other way out. The "original sin" hypothesis seems to assume a financially insulated economy with an open capital account, which, as we have seen above, is a contradiction in itself. The Eichengreen and Hausmann thesis is significant, however, as it hinges onto the underlying theoretical problem that the whole exchange rate discussion is implicitly burdened with. The "original sin" thesis would make sense if countries could avoid the impossible duality and were forced to borrow abroad or to draw on domestic savings to meet their development and investment needs. Neither option is realistic or necessary.

Developing countries may have current account deficits and thus net capital inflows. There are, however, close limits to both. Obviously, the formerly held view identifying more or less balanced current accounts with external equilibrium was exaggerated. Nevertheless, there are sustainable and unsustainable

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[43] However, it is quite surprising how many economists ignored the role of interest rate differentials in the Russian crisis. Instead, fiscal policy is discussed as if strict fiscal discipline could have healed the effects of an overly restrictive monetary policy. See Desai (2000) and Eichengreen and Hausmann (1999). Williamson (2001) is one of the few analysts with a clear vision of the role of interest rate differentials.

current account deficits, and there is speculation about sustainability in the markets, even in the case of the former. As a rule, current account deficits are unsustainable if they are closely related to a real overvaluation, a loss of competitiveness. As current accounts on the macro level are just the aggregation of accounts on the micro level, the same rules of sustainability apply as in the case of deficits of households and companies. A country or region consisting in general of the same economic entities as any other country a priori does not need foreign capital.[44] Seen from this point of view, it is a strange idea to believe that poor countries with little private households savings can simply "draw" on the existing savings of industrialized regions to finance their investment.[45]

Hence, currency mismatches are not a central issue. Maturity mismatches are of importance only if domestic savings determine domestic investment. If it is the other way round – i.e. the level of investment determines the level of savings – the maturity mismatch can be neglected as an economic policy problem. This is a crucial question, and probably the most important one. If the economic world is dominated by the autonomous decision of private agents to spend or to save, the maturity mismatch as well as the currency mismatch, and thus the capital account approach in general, have their merits. One of the arguments IMF brought forward in developed and transition countries to defend the anchor approach and/or high interest rates was indeed the "lack of capital" in these economies. According to this orthodox view, an inflow of capital from outside or the mobilization of domestic savings by high interest rates only could fill the "savings gap", and thus allow for a sufficient amount of investment in fixed capital. But if this is not the relevant theoretical model, the whole approach falls apart.

Saving out of real income is pivotal in theoretical models with given real income. If real income is endogenous – i.e. if we are dealing with economic models bound to explain why and how real income is or is not generated – the causal nexus of savings and investment is just the contrary. If savings do not create investment but investment creates savings, then the "original sin" is pointless. In a non-neoclassical

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[44] This fact, which is, following the above reasoning, the normal outcome has, according to Horioka and Feldstein (1980), been the basis of many misleading speculations concerning international capital mobility. Feldstein and Horioka argue that the high-slope coefficient is evidence for a rather small mobility of capital or restrictions for capital mobility, even in the group of industrial countries, as otherwise capital should be free to move and "to seek out the most productive investment opportunities worldwide" (Obstfeld and Rogoff, 1996: 162). This is a fundamental misunderstanding. It is just the reverse: the more similar in their structure and the more open the countries under consideration are, the smaller will be the net movements of capital (the balances) between them. Such a finding has no direct implications for gross movements. These can be extremely important and may lead, without the "contradiction" seen by Obstfeld and Rogoff (1996: 162), to "the remarkable closeness of the interest rates that comparable assets offer despite being located in different industrial countries". The country is usually no indication of category of importance in the markets or for economics, if we are not dealing with interferences in the market by national governments.

[45] Sometimes it seems to be forgotten in modern economics that the notion "saving in money terms" creates a fallacy of composition. The overall economy does not save. Total savings in money terms (monetary wealth, net financial assets) always exactly equal zero. If one group saves less, another group is "forced" to save more and vice versa. With private households not saving at all, as in some developing countries, the savings of the company sector will compensate for the lack of genuine saving. This is the only way to explain the catching up of earlier emerging markets with current account surpluses (as in Japan or Germany in the 1950s), or the American experience of the 1990s. With falling savings of private households, the financial position of other sectors improved in the 1990s. The government budget moved into surplus and companies increased their profits as a result of rising demand. This led them to spend more money on investment in fixed capital.

(Schumpeterian) view, the existence of neoclassical savings does not foster the process of development, as the reliance on savings out of given real income would decelerate, not accelerate, the creation of capital through rising profits.[46] In Schumpeter's words, what is needed in these cases is not capital in the sense of realized and unconsumed income, but just money to prefinance a process in which capital is created by investment, and thus finally by the creation of real income.[47] This is the main reason, in my opinion, for the disastrous results of IMF's attempt to stimulate the creation of capital in the transforming economies by a policy of austerity and high real interest rates. It is exactly the opposite of the reasonable in the Schumpeterian view.[48]

X. CONCLUSION: THE IMPOSSIBLE DUALITY

The exchange rate is neither a domestic economic policy tool nor a reliable market price. Exchange rate changes should be the necessary concomitant of diverging inflation (or unit labour cost growth) rates. This is the only position on exchange rates consistent with the widespread conviction that inflation is neither necessary nor permanently exploitable in modern economies. It is the extent to which countries differ concerning their ability to avoid inflation – the change in the value of money over time – that they need changes in the value of money in space. This is not to repeat the outdated naive version of the purchasing power theory. It has never been true as a theory, that is, an explanation of floating exchange

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[46] However, already at a very early stage of economics as a science this problem was addressed and a preliminary solution found: the only way to finance additional investment and growth of the overall economy is by the artificial creation of additional money. According to many early writers, including Schumpeter in 1912 and Hayek in 1933, additional money would allow increasing investment without negative repercussions from the capital market. This idea found its expression in the phrase of "forced saving" – a subject of concern to many economists in the 1930s.

[47] The importance of money at the beginning of the twentieth century was clearly recognized by Schumpeter (1964) in his *Theory of Economic Development* of 1911. In Hayek's (1933) view too, only abundant money allows high growth rates and a quick development of nations. For Schumpeter it is explicitly a *potentially* inflationary policy which spurs economic development. Monetary policy has to "prefinance" the process of development, without any certainty that the additional money will be used for real growth. This explains why catching-up processes are usually endangered by inflationary acceleration. The whole process is potentially inflationary without becoming inflationary in the end. While a lot of studies deal with the microeconomics of Schumpeter's theory, the no less important subject of macroeconomics has been neglected.

[48] As money savings in the economy as a whole are necessarily zero, the notion of "savings" needed to "finance" investment is not useful at all. Investment is highly correlated with the dynamics of the overall economy; this, however, is stimulated and not depressed by a fall in the savings rate of private households. With a fall in the savings ratio of one group of the economy, at the end of all the adjustment processes – incorporated mainly in more investment and more imports – the whole output will, as a rule, be higher, not lower, than it would have otherwise been. The ratio of savings may be falling, with absolute savings (i.e. investment) rising. The savings of a single group of the economy may be zero or negative; the economy under consideration as a whole may have invested more in fixed capital in relation to output than ever before. The only form of meaningful "savings" for the overall economy is, in the least analysis, fixed investment. To stimulate real investment, increasing net imports of developing-country capital (increasing current account deficits or increased "saving" of other countries) is counter-productive, as this will diminish profits if other sectors of the economy do not dissave by the same amount (see Flassbeck, 1999b, for a further explanation).

rate changes in any relevant period of time. Exchange rate changes along the lines of PPP should be an economic policy target, just as low inflation rates are. If realized, this could bring about better allocation of resources and a smooth adjustment of financial flows between countries which, for one reason or the other, are not able to converge their inflation performances quickly.

Hence, floating the exchange rate should be a priori excluded from the economic policy agenda. The widespread fear of floating in emerging economies is fully justified. But it is not only justified as the result of the fear of financial fragility; fear of floating is justified by the fear of inflation, a notion nobody would question seriously today. Changing the exchange rate, however, between countries of diverging inflation trends without floating means economic policy cooperation. As the exchange rate of a country with free trade and an open capital account is, by definition, a multilateral phenomenon, it cannot be left to the unilateral decision of one country.

Fixing the exchange rate one way or the other does not create, but only reveals, the existing lack of monetary autonomy in a system of free capital and goods flows. There is no "impossible trinity", but rather an "impossible duality".[49] To open the capital account and to loose national monetary autonomy is not contingent on the exchange rate regime. Interest rate differentials not strictly covered and sterilized by the dominance of PPP are bound to distort any attempt to achieve successfully national monetary targets. This is true for small open economies as well as for large closed ones. The latter may only be large and closed enough to ignore the outcome on its external accounts.

It is one of the great errors of economics in the twentieth century to have suggested to politicians that there is such a thing as national sovereignty in economic policy, if a unilateral monetary system is installed which is "flexible" enough to buffer external shocks. There can be no such thing. The existing monetary systems are barely able to balance monetary disturbances without major friction, let alone real shocks. The worldwide crisis of 1997/8, in combination with the current euro crisis and the erratic movements of the dollar-yen rate, shows that national sovereignty in the sense of an effective insulation from such events does not exist. Every nation in the world is affected in some way. The loss of national sovereignty, the "impossible duality", is an immediate result of the opening of the goods and capital markets, not the result of an inappropriate monetary order. There is, therefore, no alternative to international cooperation in exchange rate policy, if free trade and largely free movement of capital are to be guaranteed.

The idea of a cooperative global monetary system is to preserve on a multilateral basis equal conditions for all parties concerned, much as multilateral trade rules apply to all parties in the same manner. That is why the main idea behind the foundation of the International Monetary Fund in the 1940s was to avoid competitive depreciations in a world without a multilateral solution for the currency problem. In a well-designed, global monetary system the need and the advantages of the depreciation of the currency of one country has to be balanced out against the disadvantages of others. As changes in the

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[49] Cooper (2000) reaches a similar judgement. Hicks (1968) had already taken the same stance.

exchange rate deviating from PPP affect international trade in exactly the same manner as changes in tariffs and export bounties do, it has to be the subject of multilateral negotiations. The reasons for the real depreciation and the necessary dimension have to be identified in multilateral negotiations. If such rules are applied, the real exchange rates of all parties involved will remain more or less constant, as strong arguments to create competitive advantages at the level of the nation state will hardly be found. Real appreciations which may have happened in one country due to overshooting wages may at best be compensated for by an adequate depreciation of the currency. Unjustified unilateral action will force retaliatory action by trading partners.

To unilaterally fix rates permanently, as realized in different currency board regimes all over the world, or in dollarization, may have its merits in providing a stable monetary framework for countries with per se unstable institutions. But fixed rates vis-à-vis large and stable as well as flourishing economies are a mixed blessing. To keep rates stable without destroying the production potential and job opportunities in these countries is an extremely ambitious and in many cases insolvable task. In Western Europe only the very highly developed countries have succeeded in fixing their exchange rates without major blows to the deutsche mark as anchor.[50] But even these countries could only succeed because they are part of a much wider multilateral institutional arrangements (the EMS and the European Union) in which they can seek orderly workouts in the event of a crisis, which is not the case for unilateral approaches like currency boards.

The only way out for high-inflation or high-growth countries not members of a monetary union is to resort to controls on short-term capital flows. If they are able to avoid destabilizing inflows and outflows either by taxing them or by directly limiting their size, the hardest choices and misallocations caused by erratic exchange rate changes can be avoided. But resort to controls does not replace the search for an appropriate exchange rate system. If a high-inflation or high-growth country opts – despite capital controls – for free trade of goods with its neighbours, it has to find ways to preserve its competitive position, i.e. how to devalue, or not to revalue, its currency.

In all respects this means returning – as in the Bretton Woods system – to a mix of adaptable exchange rates in combination with controls in the event of a crisis. Since the most problematic sector of the financial market "casino" is by far the foreign-exchange market, a "monitoring" and "early warning system" should be developed by the large industrial countries in cooperation with the emerging nations. The prompt adjustment of nominal exchange rates should prevent large imbalances in foreign trade and a cumulative build-up of foreign liabilities. Even in such a system, destabilizing capital movements cannot

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[50] In a recent paper Das (2000) argues that fixed rates "are difficult to sustain in a world of increasing capital mobility", as they may come under speculative attack. But, at the same time, he admits that a country with "significant policy autonomy" under flexible rates may "have trouble gaining credibility in international financial markets" (p. 19). Obviously, the same effects may apply in both systems. A fixed rate may not be credible, and neither may a policy with flexible rates. Speculation may test a commitment to defend a rate or lead to overshooting, and thereby harm the economic policy objectives of governments. This kind of argument leads nowhere if the interaction of prices, wages, interest rates and exchange rates are not explicitly analysed. For a broader analysis, see Flassbeck (1988).

be entirely excluded, but they are less likely to occur, because the markets have been given clear guidelines, and because untenable interest constellations and massive real under- or over-evaluation should be avoided. In such a case the system can minimize, though not fully avoid, surveillance and interference in the capital account.

Regional cooperation may be a temporary answer to the challenges coming up with globalization and liberalization if global solutions are out of reach. But regional monetary systems too do not prevent crisis and turmoil on the capital market. Given the insolvable conflicts in a world of different nation states in any monetary system put to the test since the Second World War, the Bretton Woods system and then the EMS in the 1980s and early 1990s, recurring crisis-like phenomena forcing governments and central banks to intervene have been unavoidable. Only with the creation of the EMU, have the European countries gone a step further than in the fixed exchange rate systems of the past, and have thereby finally done away with the speculation surrounding relative exchange-rate relations. This is an achievement for the global economy. But it cannot be copied easily by others as their political conditions may not be as favourable as in Europe. Nevertheless, multilateral efforts to lead the developing countries towards regional arrangements are inevitable as long as global progress seems to be out of reach.

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