

THE MARKETS VERSUS THE ECB, AND THE EURO'S PLUNGE

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Explanations for the euro's plunge have proliferated, many of which feature U.S. strength. This paper focuses more specifically on what caused Europe's weak economic growth relative to the United States and highlights some policy and exchange rate implications of this growth differential. The objective is to investigate the role of European monetary policy in this regard. It is argued that while the Bundesbank's policies preconditioned the euro's plunge, the European Central Bank's (ECB) policies acted as twofold propagation mechanisms.

The analysis presented is in the liquidity preference theoretical tradition [Bibow 1998, 2000]. This paper first analyzes the role of monetary policy and divergent monetary conditions in bringing about the economic situation at the euro's inauguration and then focuses on the ECB's ongoing communication problem, which has provoked market confusions and has encouraged market opposition. Finally, the paper analyzes the special time-inconsistency problem encountered by the ECB, which had the effect that the ECB's aggressive interest-rate tightening led to a weaker, not stronger, euro.

STARTING CONDITIONS: THE LOW-GROWTH LEGACIES OF THE 1990s AND LAST-MINUTE POLICY BLUNDERS

In spring 1998, the relevant European bodies attested that the economic convergence process, designed in the Maastricht Treaty in preparation for the launching of the common currency into a stable economic environment [Kenen 1995], had been sufficiently successful. The eleven European Union (EU) countries that decided to participate in stage 3 of Economic and Monetary Union (EMU) were thus declared fit to do so. In truth, however, strong forces of economic divergence and fragility were already at work at that time. And their very roots rested in the stability-oriented macroeconomic demand policies that were meant to bring about convergence and stability, rather than the opposite.

Diverging wage trends and differences in the degree and timing of fiscal tightening played some role. But the roots of economic divergence over 1998-99 were largely monetary in nature. The crises in the Exchange Rate Mechanism (ERM) of 1992-95

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marked the first key factor of divergent monetary conditions. Up to that point, Germany's monetary policy stance presented an even heavier burden to its neighbors than to the anchor country itself. Severely inappropriate monetary conditions caused the protracted recessionary conditions in large parts of Europe between 1990-93. Monetary conditions then eased significantly after September 1992, in particular in those countries that benefitted from the ensuing appreciation of the Deutsche mark (DM) within the ERM.

The group of euro area countries that became more competitive early in the decade consists of Finland, Ireland, Italy, Spain and Portugal because their currencies depreciated by around 20 percent or more against the DM. As economic theory would predict, growth in exports picked up markedly in all of these countries relative to Germany around 1993 and continued to grow faster than world trade over the decade; while Germany's exports grew at first below and later in line with world trade.

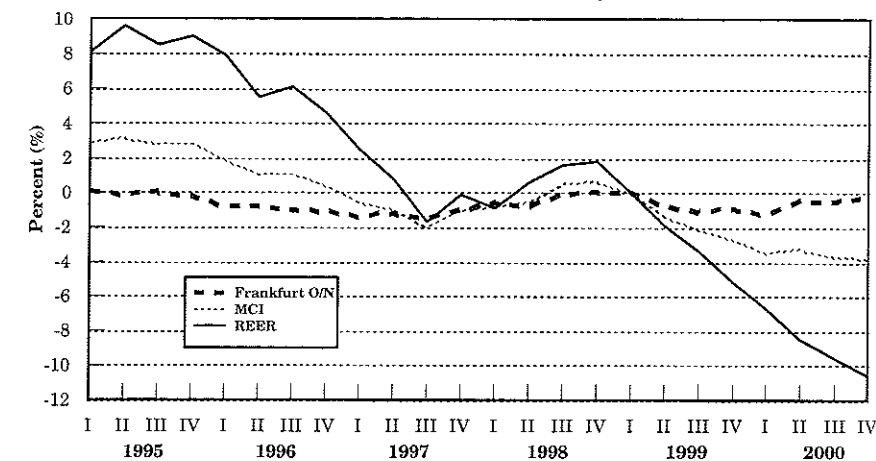
The process of interest rate convergence over 1996-98 provided the second driving factor behind divergent monetary conditions during the run-up to EMU. As financial market confidence about the prospects of an EMU start by 1999 began to improve after 1995, the fall in interest rates to the German level bestowed a strong domestic demand stimulus in these countries. Spreads in nominal short-term interest rates between Italy, Spain, and Portugal, for instance, and Germany fell from around six percent in 1995 to zero by 1998-99; while real interest rates fell toward or even below German levels.

The additional stimulus from interest rate easing coincided with growing employment arising from the earlier exchange depreciation, and, by 1997-98, these countries experienced buoyant domestic demand growth. Italy was the exception. An especially severe fiscal tightening compensated the interest rate easing process and the lira appreciated sharply in 1996, partly reversing the improvement in trade performance since the devaluation of September 1992.

However, Germany is central to the degree (or lack) of economic convergence in the euro area on the eve of the euro's launch. The situation in Germany diverged drastically from the EU over the whole decade. Starting with a strong expansion in domestic demand at the beginning of the decade, persistent stagnation of domestic demand then came to plague Germany until the decade's end. The fiscal U-turn that occurred at the onset of Germany's worst post-World War II recession in 1992-93, when Germany embarked on an inexplicably tight course of fiscal consolidation, provided one key ingredient to western Germany's dismally poor economic performance during the 1990s [Bibow, 2001b].

But monetary policy was key. Far from compensating, the contractionary effects of fiscal consolidation were aggravated by the extraordinary degree and duration of monetary tightness imposed by the Bundesbank between 1990 through 1995. (Monetary conditions established in early 1990 remained basically unchanged, as DM appreciation fully compensated the sluggish easing of interest rates since autumn 1992 [Bibow 2001c].) As theory would predict, six years of ultra-tight money had glaring real consequences: employment in western Germany continued to fall, and unemployment continued to soar, persisting until late 1997.

FIGURE 1
Preparing the Ground for the Euro's Plunge
Monetary Conditions in Germany, 1995-2000



Frankfurt overnight (O/N) interest rate (EONIA since 1999) deflated at CPI; REER based on deflator for total sales vis-à-vis 18 industrial countries; MCI based on a 3:1 weighting; base 1999:I. Sources: Statistisches Bundesamt, Deutsche Bundesbank

The protracted economic weakness and risk of fragility of the German economy caused by these severely deflationary policies had lasting implications for the external strength of the currency too. Starting in 1996, as the U.S. economy took off on its "new era" growth path, the DM fell from glory on currency markets. The later plunge of the euro essentially resumed the trend of DM weakness that began in 1996.

The monetary conditions index¹ of Figure 1 illustrates the evolution of monetary conditions from 1995 through 2000. It shows that the degree of monetary easing that arose through the interest rate channel after 1995 was rather limited, despite the fact that nominal short-term rates reached their historical record low of 3 percent in mid-1996. Grossly underutilized resources and still falling levels of employment continued to act as a drag on domestic demand. By contrast, a significant monetary easing arose through the exchange rate channel, accentuating the stimulative trade effects stemming from accelerating U.S. and world growth.

Currency weakness and export growth thus came to Germany's rescue. While other EU countries also benefitted from those other factors discussed earlier, the common export stimulus arising from outside the EU over 1996-97 was critical for most of them to meet the fiscal convergence criteria virtually in the last minute. Essentially, factors external to European policies and largely orchestrated by the markets, rather than stability-oriented policies in Europe, were key to (apparently) successful convergence by 1997-98.

But the smooth start of the new currency was spoiled by events in 1998 and last-minute policy blunders. Figure 1 also shows that the severe export demand shock that arose in the wake of the Asian and Russian crises in 1998 coincided with a significant *tightening* of monetary conditions in Germany.² Not only did the Bundesbank

take the purely discretionary decision *not* to cut interest rates, as had other, more balanced and rule-oriented central banks like the U.S. Fed and the Bank of England, but Bundesbank President Tietmeyer publicly professed his unshaken confidence in Euroland's stability in contrast to public statements that accompanied these other central banks' forward-looking policy responses. Given the prestige, reputation and much-praised credibility of the Bundesbank, such upbeat open mouth operations cannot be interpreted in any way other than as encouraging DM appreciation.

The Bundesbank's final acts thus prepared the ground for the euro's subsequent slide. In fact, by aggravating those divergent developments already underway, the events of 1998 put the ECB in a rather difficult position. In principle, the international crises of 1997-99 were symmetric shocks because all countries were affected in the same direction, which required a common policy response. Yet, because the situation within the euro area differed starkly in terms of strength of domestic demand and countries' exposure to the shock, the consequences were rather asymmetrically distributed. Whereas some countries experienced balanced and sustainable growth in 1998, others, and especially Germany, were solely relying on export demand to compensate for their depressed domestic demand conditions. Most remarkably, then, while the average level of interest rates in the euro area did fall over 1998 *due to convergence*³, the very country where relief was probably most urgent, Germany, faced both an especially sharp fall in export demand *and* a tightening of monetary conditions.

It is hard to escape the conclusion that the German authorities' stability-oriented policies that had led Germany up to the EMU starting line managed to place it in a remarkably poor starting position. The fragile shape of the German economy also soon became widely seen as a prime force behind the euro's plunge, as reflected by *The Economist's* [1999] headline on Germany as "the sick man of the euro".

THE ECB'S ONGOING COMMUNICATION PROBLEM

To an important extent the causes of euro weakness, and the problems this presented to the ECB in charge of the new currency's stability, had their roots in earlier developments. The low-growth legacies of stability-oriented policies of the 1990s had left the old continent stranded with a stark growth differential compared to the United States, and relative economic weakness was going to provide the deeper underlying cause of pronounced currency weakness. The precariousness of the overall situation was then raised by the Bundesbank's final blunder on the eve of EMU, setting the scene for things to come: the euro was launched from an "extremely high starting point" [Cottrell 2000, 77].⁴ At just that time it became generally apparent that the Bundesbank's stability proclamations, particularly in Germany's own case, had been far off the mark.

The euro thus started on a negative note. This factor alone is of considerable importance from the liquidity preference perspective, which emphasizes the role of (asset) "market play" and the institutional and psychological environment of financial markets. Certainly the fact that many investors found themselves severely wrong-footed left the market *technically* in a difficult position right from the start. As the euro immediately zoomed in on the DM's (only briefly interrupted) downward trend,

starting from bullish sentiments and a willingness to take open euro positions, market play quickly made for more defensive (or, worse, speculative) positioning against, rather than in support of, the new currency. And once market psychology and confidence took a turn for the worse, bearish sentiments became self-reinforcing.

Did the ECB's own conduct further propagate the euro's plunge? That the two key issues in monetary policy over 1999-2000 were pronounced euro weakness and the ECB's ongoing difficulties in communicating effectively and coherently with the outside world is not controversial. The point is that these two issues might have been more closely and more deeply interrelated than is generally acknowledged. I first focus on the ECB's policy strategy and the communication issue and then turn to the ECB's interest rate policies, examining particularly whether these might have been perceived as time inconsistent, and what the implications of a time-inconsistency problem for the exchange rate might be.

The ECB's two-pillar strategy features a quantitative "reference value" for M3 as one pillar, and the ECB's "broadly based assessment of the outlook for future price developments and risks to price stability in the euro area as a whole" [ECB, 1999] as the other. Policy surprises and confusions as regards M3 growth were not so much due to consistent overshooting of the reference value itself, but to the ECB's opportunistic handling of the first pillar and the often contradicting signals provided by the two pillars. However, because not many ECB observers seem to have been convinced of either the usefulness of the M3 reference value or its *systematic* role in the ECB's strategy anyway, I turn to the second pillar.

The ECB's broadly based assessment of the outlook for price stability in the medium term has been the primary source of communication problems throughout, particularly regarding the role of the exchange rate. The ECB's communication policy has seen some remarkable shifts on this issue indeed. At the start, the ECB emphasized that the task of focusing on maintaining price stability in the euro area is "facilitated" by the fact that the ECB's strategy did not embody any kind of exchange rate "target" for the euro [ECB, 1999]. During the first phase of the euro's decline (lasting until mid-1999) the ECB downplayed the relevance of this factor as well as its own concern about it. Clearly the ECB's publications did not clarify the issue in time, nor did Mr. Duisenberg's famous slip on the lack of an exchange rate policy ("For the time being there is neglect") help to address the then-emerging charges of "benign neglect" [OECD, 2000, note 36].

In truth, it became ever more apparent that the ECB was highly concerned about the euro's pronounced decline. And quite understandably: the new currency's image began to become seriously damaged in both the financial community's and the general public's view. The fact that an experienced central banker like Mr. Otmar Issing, the ECB's chief economist, caused a stir in the markets in late 1999 by "appearing to gloat that speculators had 'burnt their fingers' in the attempt to push the euro below parity" [*Financial Times*, 1999] illustrates well how unnerving these developments must have been for the ECB.

The euro then fell decisively below U.S. dollar parity in early 2000. Up to that point, the ECB had largely confined itself to using open-mouth operations, emphasizing the "potential upside" of the euro. Its already blemished market reputation was not helped when, after the U.S. Fed raised its fed funds target on 2 February 2000,

the ECB quickly followed suit the day after. A whole series of interest rate hikes followed between March and October 2000. Euro weakness became increasingly cited explicitly as a key factor underlying these moves. (That is, the ECB relied on the traditional interest rate weapon to vent off pressures in currency markets.) Finally, the ECB intervened in currency markets to bolster the sagging euro. The success of the concerted interventions on 22 September, in which the ECB was joined by the U.S. Fed and other G7 central banks, proved only temporary. For shortly afterwards Mr. Duisenberg committed another blunder when he chatted rather carelessly about the possibility of future interventions in an interview, which led to the most serious crisis in his presidency to that date [Barber 2000; *The Economist* 2000].

All in all, it seems hard to escape the impression that the ECB's confusing conduct has contributed more than some minor noise to the euro's plunge. The failure to preemptively clarify the role of the exchange rate represented a first-rate policy blunder in itself. Rather than anchoring market expectations, the markets were left with a wide range of possibilities to choose from, reaching from the appearance of benign neglect to the panicky response to exchange rate movements and interest rate decisions abroad [Spahn, 2000]. This vastly complicated the communication of its own interest rate policies. In addition, despite its huge foreign exchange reserves, the ECB seemed all along unable to establish a credible threat to intervene in currency markets, a threat that would break market psychology and end what apparently presented a one-way bet situation created by a lame and confusing central bank.

Of course, the verdict that the ECB's communication with the outside world features some scope for improvement is noncontroversial. Even Mr. Issing has admitted as much in his reply to outside criticism, suggesting that "the verdict among most, if not all, our 'watchers' seems to be that—broadly speaking—the ECB has done a good job but has not been very effective in presenting and explaining itself" [Issing, 1999].

I presume that Mr. Issing was more than just joking. The problem is, however, that his statement makes economic sense only if communication failures are of no consequence in establishing monetary stance. If that is the case, it would be hard to understand why so much attention is generally paid (not least by the ECB itself) to the issues of transparency, communication, credibility, and reputation in the first place. Either these issues are important to an effective monetary policy, or they are irrelevant and one might as well focus solely on interest rate decisions and take financial market perceptions as exogenous factors that were neither affected by, nor themselves affecting, monetary stance.

From a liquidity preference perspective, however, effective communication with financial market participants is an integral and critical part of monetary policy. Given the pivotal role of the financial system in transmitting monetary policy, policy success crucially hinges on how well the central bank guides market expectations and perceptions. In practice, central banks have little difficulty in controlling very short-term interest rates, while control over financial asset prices in general is neither direct nor does it rest on any secure basis. Essentially, central banks need to anchor expectations in line with their policy intentions. Those that fail to do so run the risk that inherently restless markets (not anchored by "fundamentals" either) might disrupt policy.

Analyzing the central bank's degree of control over long-term interest rates, Keynes [1936] identified the following time-inconsistency problem, featuring market participants' fears of financial losses that a future reversal of today's intended easing policy would inflict on them. If the central bank fails to steer long-term interest rate expectations sufficiently downwards, Keynes argued, market participants may increasingly prefer to reduce their bond market exposure and thereby counteract the central bank's liquidity-enlarging measures—possibly to the point of policy ineffectiveness. Essentially, market expectations of a future reversal of today's desired policy stance prevents that stance from being established in the first place [Bibow, 2000].

The Keynesian time-inconsistency problem⁵ arises if the central bank fails to convincingly communicate to the markets that its preferred stance implies a *sustainable* course of policy. Pursuing a non-credible policy, in the markets' perception, the central bank loses control over policy stance. Left without a policy anchor, market expectations and hence financial asset prices might move severely out of line with policy intentions.

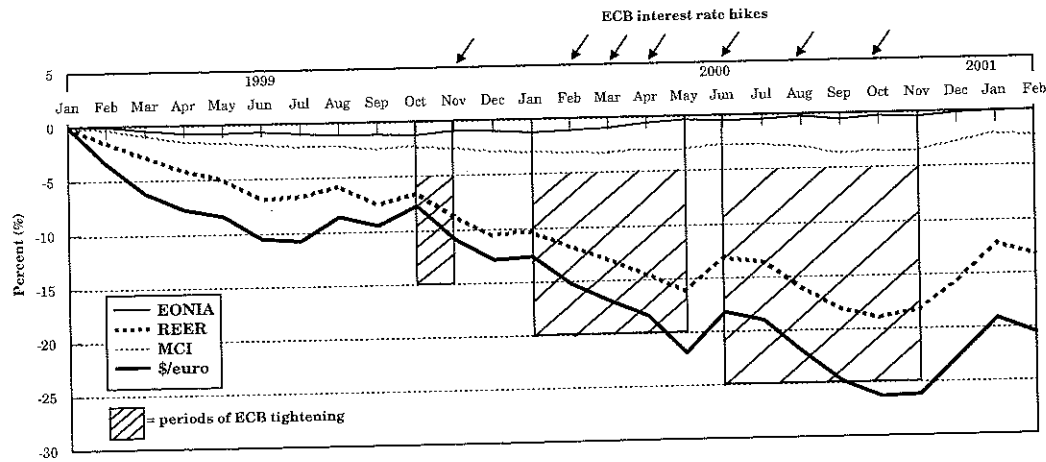
A somewhat obscure version of the "liquidity trap" has found its way into textbooks, but Keynes's penetrating insights into the phenomenon are much more far-reaching and apply to asset prices in general, including currency markets. In fact, effective communication of monetary policy to currency markets, and the prospects any policy heralds for future growth and inflation in the markets' view, seem especially crucial given that the exchange rate channel of monetary transmission features relatively short lags for both activity and prices. Accordingly, communication failures concentrated in currency markets might easily disrupt policy and impose a monetary stance different from the one intended by central bankers.

From a liquidity preference perspective, then, the idea that the ECB might have done a good job overall, making the right interest rate decisions in particular, despite its ongoing communication failures, does sound like a mere joke. A central bank that fails to make its policy understood (and also fails to persuade the markets that its policy is the right one) will find it hard to stay ahead and in charge of the markets. Note here that the liquidity preference emphasis on market play, expectations and perceptions, and the role of communication between the central bank and market players is inherently forward-looking, and hence dependent on what the focus of future prospects might be at any time. Monetary policy affects expectations about future growth and inflation and, hence, the expected future path of policy stance considered *sustainable* in the markets' perception. Especially in a climate of growth enthusiasm, the market's focus might be on the monetary policy repercussions on future growth.

CURRENCY MARKETS AND TIME INCONSISTENCY

But the ECB's incoherent communications have not merely caused continuous irritations in financial markets, irritations that, allegedly, had no further consequences. The ECB's ongoing communication problem has been intimately related to another, deeper layer of the relationship between the euro's plunge and the ECB's policy con-

FIGURE 2
Monetary Conditions in the Euro Zone and
the Dollar-Euro Exchange Rate



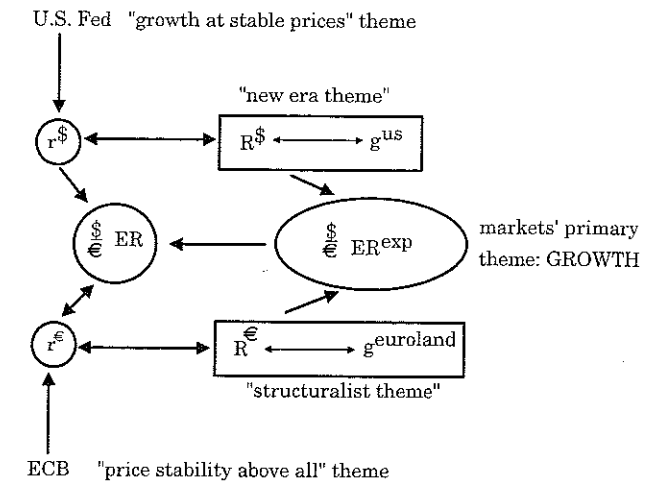
EONIA deflated at HICP; REER calculated on the basis of consumer prices for a broad group of countries; MCI based on 6:1 weighting. Base January 1999 = 0. Source: European Central Bank

duct. The stark growth differential between the United States and Germany that emerged by the mid-1990s had been behind the trend of DM weakness since 1996. It also provided the basis for the time-inconsistency problem that the ECB was going to run into. The point is that, ultimately, the sustainable level of interest in an economy depends on its rate of growth. Mainstream monetary theory postulates that in the long run monetary policy affects neither production and employment nor the real (or natural) rate of interest. From a liquidity preference perspective, by contrast, inappropriate monetary policies can indeed *lastingly* constrain economic activity, and hence the sustainable level of interest in an economy as well.⁶

This key insight has some critical policy implications. By offering higher prospective financial returns the faster growing economy's currency will attract international finance, and tend to appreciate. This provides some welcome disinflationary relief to the high-growth economy. By contrast, while benefitting from the export demand stimuli, the low-growth economy may find the inflationary pressures arising through currency weakness less desirable. Ironically, interest rate hikes intended to fight inflation may expedite further currency weakness and hence inflation.

Clearly growth has been the "primary theme" in financial markets over recent years [De Grauwe, 2000].⁷ Acting in this "pro growth" environment, the ECB has failed to grasp the following time-inconsistency problem: attempts to support the euro by narrowing the interest rate differential relative to the U.S. dollar may be counterproductive if the narrowing of the *current* interest rate differential is perceived as risking a widening (rather than narrowing) of the growth differential ultimately underlying any *sustainable* path of *future* interest rate differential. If aggressive interest rate hikes are perceived as risking the euro area's growth prospect, the traditional

FIGURE 3
Time Inconsistency and
the Breakdown of the Traditional Interest-Rate Weapon



weapon to defend the currency might prove ineffective. In fact, interest rate hikes might then weaken rather than strengthen the currency—and *vice versa* in a monetary policy easing scenario. This hypothesis offers an explanation for the paradox that interest rate hikes by the U.S. Fed tended to be good news, while those of the ECB bad news, for the euro.

After its initial slide at the start of 1999 the euro's external value stabilized between June and October, as the euro area's growth prospects brightened up (see Figure 2). During this phase of euro stability the short-term interest rate differential relative to the U.S. dollar widened (as the U.S. Fed, after its quick easing in 1998 in response to growth risks, started to tighten again), while euro bond yields rose and the long-term interest rate differential shrank. A reversal then occurred in November 1999 with the ECB's 50 basis point hike. The short-term spread relative to the U.S. dollar fell, but euro bond yields stabilized and the long-term interest rate spread widened again. The euro resumed its decline.

In 2000, the same pattern became even clearer with the ECB's 25 basis-point hikes in February, March, and April. The short-term interest rate spread was kept in check, as the Fed also continued its tightening. But, if anything, the euro's downward drag seemed to have gained new force from these hikes, with euro bond yields being set on a declining trend.⁸

The Fed's 50 basis point hike of 16 May 2000, followed by weak U.S. data, which dampened market perceptions of U.S. strength underlying the dollar and implied that U.S. interest rates had peaked, presented a great opportunity for the euro. The ECB missed the chance by refusing to stop playing against the markets' primary theme, following suit with a 50 basis point hike on 8 June 2000. The euro was soon to resume its decline. Most remarkable, the ECB even continued tightening (two 25 basis point hikes followed on 31 August and 5 October) as evidence was mounting

which indicated that euro area growth had already peaked too, while M3 growth was slowing markedly.

Figure 3 summarizes the time-inconsistency hypothesis, featuring the variables of the familiar (uncovered) interest-parity theorem, together with its more unfamiliar and complex underpinnings. Short-term dollar and euro interest rates (r) are controlled by the U.S. Fed and ECB, respectively, conducting independent, nationally-oriented monetary policies. Faced with euro weakness, the ECB applied the traditional interest-rate weapon to safeguard the currency, focusing on the current short-term interest rate differential.

However, the markets' collective thinking was more complex and less myopic, and at this juncture, was driven by the dominant growth theme and the overall perception that Fed policies were growth friendly. By contrast, the markets perceived the ECB's "price stability above all else" theme underlying its aggressive tightening as risking Euroland's growth prospects (g). Market expectations were left without anchor when the ECB failed to convince the markets that tighter money represented a sustainable course of policy.

The point is that worsening growth prospects undermine the sustainable level of future interest rates and prospective asset returns in general (R) and—through diminished attractiveness to global finance—the expected future exchange rate (ER^{exp}) as well. Downward revisions in these variables backfire directly on the current exchange rate (ER), (that is, it falls). What may at first seem perverse behavior from a mainstream viewpoint (ignoring that inappropriate monetary policies can lastingly constrain economic activity), represents straight-forward market discipline enforced upon poor policies.⁹ Interestingly, overall monetary conditions might even become easier rather than tighter when the markets take over (as apparently was the case until October 2000).

In line with the time-inconsistency hypothesis proposed here, it took confirmation of U.S. weakening to reverse the euro's decline in November 2000. By the turn of the year the euro had strengthened significantly. But by early 2001, the time-inconsistency scenario simply shifted into reverse gear. With U.S. economic slowdown turning into global slowdown, the U.S. Fed's fast easing was increasingly perceived as more appropriate than the ECB's wait-and-see approach. The Fed's interest rate cuts proved good news for the dollar, while the ECB's failure to cut was bad news for the euro. Finally, by March 2001, the situation reached its perversely logical conclusion: bad economic news on Euroland became good news for the euro because the markets' perception was that this would add pressure on the ECB to cut.

Remarkably, despite Euroland's relatively more favorable *short-term* outlook, the ECB once again mobilized market forces unanimously against itself by continuing to jeopardize Euroland's *long-term* growth prospects. Among other things, the ECB's peculiar conduct even backfired on its primary objective (or, obsession?) of price stability, by now running well *above* two percent for the better part of a year; and, arguably, quite unnecessarily so.¹⁰

CONCLUSIONS

The euro's plunge over 1999-2000 had important earlier roots. The convergence process of the 1990s caused protracted fragility, especially in Germany, together with significant divergence within Euroland. In 1998, the Bundesbank's final policy blunders in response to international crises heightened the precariousness of the economic situation on the eve of EMU, and encouraged what was quickly perceived as a rather high starting value for the new currency. These legacies preconditioned the euro's slump.

The ECB then made things worse by acting as a twofold propagation mechanism. First, the ECB's ongoing communication problem brought market psychology up against the euro and created conditions akin to a one-way bet situation. Second, misinterpreting its pro-growth environment, the ECB ran into a time-inconsistency problem: its aggressive interest rate hikes weakened rather than strengthened the currency as they were perceived as jeopardizing Euroland's growth prospects and, hence, the sustainability of tighter money in the future (while overall monetary conditions eased rather than tightened, spurring growth in the short run). Euro weakness pushed up inflation—above two percent.

NOTES

Based on a theme developed in Bibow [2001a] and presented at the Eastern Economic Association Meeting, 23-5 February 2001. The author is grateful for comments from the participants (particularly Stephanie Bell and Ajit Zacharias) at the EEA session, an anonymous referee, and the editors, and wishes to thank Rae Moore for computational assistance.

1. A "monetary conditions index" (MCI) combines the two key indicators of monetary stance, a short-term interest rate and the effective exchange rate, the two factors being weighted according to their relative role in the transmission mechanism in their effects on aggregate demand and economic activity. A 3:1 weighting means that a one percentage point increase in real interest rates or a three percent appreciation of the real effective exchange rate (REER) are treated as having equivalent effects on aggregate demand. The absolute value of the MCI does not represent a measure of monetary stance. The MCI merely indicates whether stance has become more or less restrictive relative to some base. Similarly, a negative reading for the interest rate component does not mean that real short-term rates were necessarily negative. In fact, German real short-term rates (briefly) eased by little more than one percentage point relative to the (1999:1) base level of 2.7 percent over the period under review here.
2. In October 1997, the Bundesbank managed to—at least temporarily—arrest the DM's plunge by a surprise 30 basis points interest rate hike accompanied by hawkish gestures and justified by perceived inflationary risks. While this is evidence of the Bundesbank's credibility and ability to achieve its aims, it should be noted that wage inflation was running at less than two percent at that time, a huge negative output gap existed, and demand growth was spurred mainly by exports. Inflation stayed below two percent in 1997, and fell toward (and temporarily even below) zero over the subsequent two years. A policy may be inappropriate but credible in the markets' perception.
3. In December 1998, a belated interest rate cut of 30 basis points occurred which from a German perspective just about compensated for falling inflation, but which allowed European short-term interest rates to converge to the new floor of 3 percent.
4. The concept of some long-run or equilibrium value of the euro is of no concern here. (See Shaikh and Antonopoulos [1998] for an overview.) The point is that the euro's starting value was quickly perceived as unsustainable by the markets. The exchange rate is an asset price. From a liquidity preference perspective the psychological and conventional nature of the exchange rate is similar to the rate

- of interest, its "actual value [being] largely governed by the prevailing view as to what its value is expected to be" [Keynes, 1936, 203].
5. An influential literature mainly inspired by Barro and Gordon [1983] champions a time-inconsistency problem of another sort, allegedly arising in labor markets as policymakers are postulated to target an unemployment rate below the natural rate. This peculiar New Classical vision of monetary policy finds no room for financial markets and the communication issue under discussion here: inflation surprises engineered by imaginary "discretionary" policymakers are somehow directly and immediately transmitted to labor markets. By contrast, the liquidity preference vision of monetary policy espoused here denies any scope for the New Classical time-inconsistency fiction as real world central banks do not possess any inflation surprise instrument in the first place [Bibow 2001d]. Instead, to deliberately manage the economy, real world central banks must first of all "sell their policy" to the markets. Needless to say, even successful communication is no guarantee for desirable economic outcomes, as central banks may also lead the markets astray—if they lead at all.
 6. Some implications of long-run non-neutrality of money concerning labor markets and human capital are discussed under the heading of "hysteresis" [Blanchard and Summers, 1986; Ball, 1997; 1999].
 7. Others have emphasized the (actual/prospective) growth differential (rather, U.S. strength) as underlying euro weakness, most prominently Corsetti and Pesenti [1999]. However, it should not be overlooked that Euroland's fragility (i.e. the Bundesbank's legacies) and ECB policies played an independent part as preconditioning and propagating, respectively, the euro's plunge. Furthermore, while De Grauwe [2000, 23] is right to emphasize the role of (changing) market perceptions, he is wrong to conclude that the markets' growth theme "reduces the effectiveness of monetary policies aimed at controlling inflation"—unless central bankers misread the situation. Its vague mandate certainly grants to ECB all the discretion it needs to take a more proactive attitude toward growth, as this would have facilitated, not hampered, the maintenance of price stability—over both the medium and short term.
 8. U.S. long-term rates were falling even faster at times and the U.S. yield curve inverted (which was however not generally viewed as heralding recession but attributed to public debt redemptions). Importantly, share prices and prospective yields on direct investments too are relevant here. There are numerous explanations for the "puzzling phenomenon" [De Grauwe 2000, 20] of a negative correlation between the euro-dollar exchange rate and the relative stock market index between October 1999 and March 2000. Note that monetary conditions eased rather than tightened while the euro's plunge spurred Euroland exporters' profits. In a sense, Eichengreen's [2000, 357] observation that "a weak euro was the market's way of pricing European goods into international markets" applies to European assets as well.
 9. The standard orthodox rationalization of currency crises as recurrently hitting LDCs—where it has often been observed that hiking interest rates may fail to stem capital outflows [Pakko 2000]. Similarly, a rationalization of the ERM crises along New Classical time-inconsistency lines argues that interest rate hikes lacked credibility (if undertaken by governments rather than independent central banks) because the markets were anticipating the inevitable subsequent easing in monetary policy in view of recessionary conditions and high unemployment [Eichengreen and Wyplosz, 1993]. We offer a more general rationalization along Keynesian liquidity preference theoretical lines which is also applicable to the flexible exchange-rate arrangements of a large and developed country like Euroland. The highlighted role of the ECB, the world's most independent central bank, has rather devastating implications for the New Classical time-inconsistency story.
 10. So there is a common element with the New Classical time-inconsistency problem here after all depicting "discretionary" monetary policy as causing an inflationary bias. Yet, the Keynesian time-inconsistency problem yields inflation exactly as a result of a deflationary (anti-growth) bias in monetary policy. I emphasize that there is no presumption here that financial markets have any clear conception of some fundamental equilibrium of the economy. The market-imposed outcome results from a perceived policy inconsistency, but may lead to new inconsistencies in the future. Of course market perceptions and market themes may change too—sometimes swiftly.

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