Preprints of the
Max Planck Institute for
Research on Collective Goods
Bonn 2007/9

Switzerland and Euroland: European Monetary Union, Monetary Stability and Financial Stability

Martin Hellwig

MAX PLANCK SOCIETY

Preprints of the
Max Planck Institute
for Research on Collective Goods

Bonn 2007/9

Switzerland and Euroland: European Monetary Union, Monetary Stability and Financial Stability*

Martin Hellwig

July 2007

* This paper was written for the Centenary of the Swiss National Bank, and is published in: Swiss National Bank (ed.), The Swiss National Bank 1907 – 2007, Neue Zürcher Zeitung Publishing, Zürich 2007, 741 – 780. For helpful comments on an earlier draft, I am grateful to Ulrich Kohli and to the participants of the Gerzensee conference which prepared this volume. The usual disclaimer applies.

Max Planck Institute for Research on Collective Goods, Kurt-Schumacher-Str. 10, D-53113 Bonn
http://www.coll.mpg.de

Switzerland and Euroland: European Monetary Union, Monetary Stability and Financial Stability

Martin Hellwig

1. Introduction: Where Did We Come From?

1.1 Early Expectations of Instability from European Monetary Union

Sometime in the mid-nineties, when I was still teaching at the University of Basel, a friend there remarked that, if the European Monetary Union (EMU) was really going to come, Swiss monetary policy was going to be in for some difficult times. Market participants would interpret the coming of EMU as an end of the commitment to monetary stability in Frankfurt.[1] They would try to move into harder currencies, like the Swiss Franc, as they had done in past episodes of turbulence in foreign exchange markets. The Swiss National Bank would again be faced with the difficult choice of whether to accommodate the demand for Swiss Francs or to let the Swiss Franc appreciate. The first alternative would endanger price stability, the second would endanger the competitiveness of Swiss industry in international markets. The dilemma would be all the more serious because, by contrast to the crises of the seventies, the D-Mark would no longer be there to take some of the brunt of the speculation.

This prediction has not come to pass. The European Monetary Union did not bring with it a new era of monetary instability. The European Central Bank's commitment to monetary stability seems as firm as that of the Bundesbank ever was. The markets have not shown any signs that they consider the Euro to be less hard than the D-Mark, certainly not in relation to the Swiss Franc. In the years 1997 – 1999, when the European Monetary Union was put into place, the Swiss Franc was actually weaker than before. There has been nothing like a recurrence of the turbulences of the seventies, or of 1992, in foreign exchange markets, at least not in Europe and the United States. By comparison to the preceding two decades, monetary stability in Europe, both internal and external, has been remarkable.

1.2 Experience of Monetary Instability in the Seventies

However, at the time when the prediction was made, it reflected the experience of the preceding two decades. These decades had been marked by monetary instability and by disputes on the proper role of monetary policy in a world of flexible exchange rates. The demise of the Bretton Woods system of fixed exchange rates had eliminated the need to subordinate national monetary policies to the maintenance of exchange rates. In many countries, this freedom was used to greatly expand the money supply, partly in order to smooth over the effects of "shocks" like the 1974 oil price increase and partly in order to accommodate public-sector financing needs.[2] These policies greatly undermined monetary stability. They caused double-digit inflation for

1 Such an interpretation would certainly have been consistent with the predictions of German scholars opposed to EMU. See, for instance, the manifesto "Die Europäische Währungsunion führt zur Zerreißprobe" by 62 academic economists in Frankfurter Allgemeine Zeitung, June 11, 1992.

2 There is no need to disentangle the different motives – any policy of keeping interest rates from rising "too much" will effectively promote all of them. Any such policy will also promote the interests of important parties in the private sector, for instance, financial institutions whose financing costs are sensitive to interest rate changes, or the financial press whose advertising and subscription business depend on financial-sector activity.

quite some time in several OECD countries. Given the differences in monetary growth and inflation across countries, they also generated strong pressures for exchange rate adjustments.

During this period, we came to appreciate the importance of expectations, inflation expectations as a determinant of long-term nominal interest rates, exchange rate expectations as a determinant of portfolio adjustments in international exchanges, and, perhaps most importantly, expectations about the viability of a country's policy stance as a determinant of inflation and exchange rate expectations. Some of the turbulences in foreign exchanges must probably be explained by the way in which market participants came to appreciate the systemic nature of the relation between the various parts of economic policy, inflation and exchange rate movements and were trying to figure out how these systems were evolving in the different countries. Given that the policies and policy rules themselves were in flux, so must have been the market participants' perceptions of them. As changing perceptions translated into portfolio adjustments, expectations themselves became a major determinant of market movements, giving rise to runs and to overshooting phenomena.[3]

In the seventies, the problem of exchange rate adjustment was usually seen in terms of a need to revalue the D-Mark and, even more so, the Swiss Franc relative to most other currencies, most importantly, the US-Dollar, the Pound Sterling, the French Franc, and the Italian Lira. For some of the other countries, it looked as if the problem was due to the restrictiveness of German and Swiss monetary policy after 1974, rather than their own monetary ease. In countries with downward pressures on exchange rates, this caused a certain amount of resentment. For Germany and Switzerland, the ongoing revaluation pressures posed the problem, mentioned above, of how to avoid the contractionary impact of "excessive" currency appreciation without abandoning monetary stability?

1.3 The ERM Experiment

The initiative of Giscard d'Estaing and Schmidt that led to the creation of the "Ecu" and the European Exchange Rate Mechanism (ERM) in 1979 can be seen as a response to these perceived difficulties. For France, the ERM held the promise of reducing the Bundesbank's ability to pursue monetary stability without regard for the effects of its policies on France. For the German Chancellor, the ERM, with its bundling of "hard" and "soft" currencies provided a prospect of reducing exchange rate pressures on the D-Mark; in the wake of the 1980 election, he may also have been attracted by the idea of reducing the Bundesbank's ability to implement a restrictive monetary policy.[4]

---

3 A striking example of the autonomous role of expectations is provided by the increase in US long-term interest rates in January 1981, two months after the election and before the inauguration. This increase seems to have been caused by an appreciation that President Reagan would get his tax cut proposal through Congress and that this held promises for a significant debt burden in the future. See Branson (1987).

4 This is the view of Vaubel (1987, 2001). For a less critical view of the ERM initiative, see Neumann (1998), pp. 337 ff., and Bernholz (1998), pp. 797 ff..

Somewhat ironically, the problem of pessimism vis à vis the Dollar and the Pound disappeared around 1980, just after the ERM was created. For the Dollar, the proximate causes of the change in market perceptions seems to have been the 1979 turnaround in monetary policy and the outcome of the 1980 election, for the Pound the income from North Sea oil and the outcome of the 1979 election. Throughout the eighties (and nineties), the ERM had more to do with relations between currencies within the European Community than with their relations to outside currencies.

Within the ERM, there was an asymmetry in adjustment rules which put most of the burden of adjustment on central banks with currencies that were subject to devaluation pressures. Central banks with currencies subject to revaluation pressures were under much less of an obligation to change their policies. Whatever the intentions of the initiators may have been, the Bundesbank retained its ability to pursue the monetary policy of its choice.[5] The central banks of other participating countries were forced to adjust, at least, if they wanted to avoid an exchange rate realignment. In the governments of these countries, resentment of the Bundesbank's strength and "unreasonableness" grew apace. As for the central bankers, e.g. in Paris or Rome, they were perhaps not so unhappy to be able to tell their ministers that, much as they would like to accommodate their demands, doing so would endanger the position of the currency in the ERM and, surely, the minister would not want to induce the public perception of failure that goes with a devaluation.

1.4 From ERM to EMU

Against this background, in the late eighties and early nineties, the creation of the European Monetary Union could be seen and may indeed have been intended as yet another attempt to eliminate the independence and to reduce the power of the Bundesbank and to move to a regime that would provide for a more accommodating monetary policy.[6] The predictions from the early and mid-nineties that I cited above were based on precisely this interpretation. However, as in the case of the ERM, the development of EMU has taken a different turn. The European Central Bank today seems even farther removed from the political fray, perhaps even more independent, than the Bundesbank ever was. It certainly does not give the impression of putting any less weight on monetary stability.

From the perspective of Switzerland, it must be reassuring that the coming of EMU has not brought a return to the monetary instability of the seventies. However, one may wonder how robust the present arrangement is. One may also wonder about the challenges that the position of an island in Euroland is posing. In the following, I will first review developments in the Euro-

5 Von Hagen (1998), pp. 467 ff., suggests that the ERM actually reinforced the Bundesbank's commitment to monetary targeting. In an institutional setting where exchange rate commitments could undermine the autonomy of monetary policy, it was all the more important for the Bundesbank to extoll the objective of price stability, using monetary targeting as a transparent means to communicate its intentions to the markets and to its partners in the ERM.

6 For this interpretation, see Vaubel (2001), pp. 152 ff..

pean Monetary Union, with a focus on the sources of the commitment to monetary stability and on the robustness of this commitment. Thereafter, I will consider the challenges that arise for Switzerland and for Swiss monetary policy from its position as a small open economy in the middle of Euroland. Finally, I will consider some challenges which arise from Switzerland's position as an international financial center, home to two of the world's largest financial institutions.

2. How Firm is the Commitment to Monetary Stability in Euroland?

2.1 A Surprise for Mr. Lafontaine: Central-Bank Independence after Maastricht

Following the change of government in Germany in 1998, Oskar Lafontaine, the new Socialdemocratic Minister of Finance, indicated that he was fed up with the restrictive monetary policy of the Bundesbank and would see to it that this was changed. If they were not going to comply voluntarily, he might push for a change in the Bundesbank Law in order to reduce or eliminate the Bundesbank's independence. Threats of this sort had already been heard in the final months of the previous Socialdemocratic government in 1982. By contrast to 1982, however, in 1998, the Bundesbank's status was protected by the Maastricht Treaty and by the German Constitution. Moreover, the responsibility for monetary policy was about to shift to the European Central Bank (ECB), whose independence from government interference was also protected by the Maastricht Treaty. Mr. Lafontaine's threat against the Bundesbank thus proved to be an anachronism.

In the process of creating the European Monetary Union, the position of central banks relative to governments and legislatures has been significantly strengthened. In countries where central banks had been subordinated to governments before 1992 central-bank independence was introduced as a prerequisite for EMU participation. In Germany, where the Bundesbank had been independent since 1948, central-bank independence, together with an obligation to promote price stability, was raised from the status of an ordinary law to the level of a constitutional provision. Given the view, which was prominent among German economists before 1998, that EMU was a device to conquer the Bundesbank, there is a certain irony in observing that EMU itself ended up protecting the Bundesbank against the ambitions of Mr. Lafontaine – and against the impact of generation change, from those who had personally experienced the hyperinflations of the twenties and forties to those who had grown up on post-1968 visions of democratic engineering.

As the new institutions developed, central bankers all over Euroland became stakeholders in them. Enjoying the independence with which the Maastricht Treaty provides them, they see the creation and maintenance of monetary stability as their task. Whereas in the eighties and early nineties, the ERM was often discussed in terms of the Bundesbank imposing its will on everybody else, the policies of the ECB today are not identified with any one country. When Trichet followed Duisenberg as President, there was no intimation that this would mean a change in policy stance.

The change in institutions was made possible by a change in attitudes towards monetary policy and towards the role of the central bank. After almost two decades of instability, people were upset about high and variable inflation rates, and there was some appreciation that stability might also have its advantages. As institutional safeguards translated into greater credibility, lower inflation expectations, and lower nominal interest rates, even governments came to appreciate that such safeguards might have intrinsic merits although they cut into their own power; after all, the reductions in nominal interest rates greatly reduced their debt service obligations and made the deficit criteria of the Maastricht Treaty much easier to reach.[7]

One may be skeptical as to how long such insights will remain fresh. The evolution of the large Member States' attitudes towards public deficits and public debt over the past few years suggests that at least this lesson of the eighties has been unlearned right after the Euro was introduced. However, at this point, this is just a matter of fiscal policy. It undermines the Stability and Growth Pact, but not, at least not yet, the institutional framework for the determination of monetary policy. Even as the discussions about the German, French, etc. violations of the deficit criterion of the Stability and Growth Pact and about the need and scope for reforming the Pact have proceeded, there has not been much public political discussion of the European Central Bank's monetary policy.

2.2 Depoliticization of Monetary Policy

Public discussion of monetary policy has been strangely depoliticized. We have seen journalists reporting about exchange rate movements as if they were writing about sports events, treating the Euro's decline in 2000 relative to the US-Dollar as if the Euro was falling behind in some kind of race. We have also seen technical discussions on the appropriate level of transparency, on the two-pillar approach, or on the assessment of unanticipated growth in monetary aggregates at low inflation rates and low nominal interest rates. However, we have *not*, as yet, seen anything that might be compared to the massive attacks that Lafontaine and other German politicians had raised against the Bundesbank in a previous era.

One reason for this depoliticization lies in the supranational nature of the European Central Bank as opposed to the national character of politics. The finance minister or head of government of Germany, France or Italy may be unhappy about the European Central Bank's policy. However, he will find it difficult to make this dissatisfaction the subject of effective political discourse. Within official channels of communication, he is constrained by the statutes that guarantee the Central Bank's independence. Outside of official channels of communication, in public discussion, he is constrained by the fragmentation of political audiences. A Dutch or Finnish audience

7 For a summary of these developments, see Sapir et al. (2004), pp. 60 ff. Similar changes in attitudes and institutions also occurred in countries outside of Euroland. However, the Maastricht process was unique in that it provided Member States with well defined targets, to be reached in a predefined time span. Monitoring by the European Commission, the implicit threat of non-acceptance of treaty implementation by pre-1998 Germany, and the public visibility and prominence of the entire process provided strong incentives to try and reach the targets.

will hardly listen to the French President or the German Chancellor complaining about the ECB. Indeed, in any such discussion, these national office holders would be told that monetary policy must consider the needs of Euroland as a whole, the Netherlands and Finland, as well as Germany, France and Italy. The smaller countries, in particular, have emerged as strong supporters of the ECB's independence and commitment to monetary stability.[8]

Euroland as a whole is simply too large and too heterogeneous for any one Member State Government to be in a position to seriously challenge the ECB. Even the large Member States are reduced to introducing their substantive concerns through their personnel decisions, i.e., when they nominate members of the Executive Board or presidents of their own, national central banks. However, the scope for doing so is very limited. Any one Member State influences only a small number of personnel decisions; moreover, socialization among central bankers affects people's thinking even if, initially, they come with other ideas.

2.3 Is Independence Threatened by the European Commission?

At this point, effective threats to the independence of the European Central Bank are more likely to come from the European Commission than from the Member States. Being a supranational institution itself, the Commission can claim to be speaking for the European Union as a whole. Moreover, the Commission has a long history of using its monopoly on policy proposals to expand its own executive powers at the expense of other institutions. In the past, it has mostly done so at the expense of national institutions.[9] However, an expansion of competences at the expense of the ECB would also lie in the logic of the Commission's power aspirations.

In this context, it is of interest to note that, in the discussion about the Constitution for the European Union, in November 2003, Jean-Claude Trichet, the President of the European Central Bank, found it necessary to publicly protest to the President of the Council of Ministers of the European Union against a proposal, which he understood to have been made by the Commission, that would have simplified the procedure for changing Articles 10 - 12 of the Statute of the European System of Central Banks and the European Central Bank.[10] These Articles deal with the Governing Council and the Executive Board of the European Central Bank and with their responsibilities. Under existing rules, they can only be changed by a procedure that involves parliamentary ratification in all Member States. The contested proposal would have provided for the possibility of changing them by a unanimous vote of the Council of Ministers, acting upon a proposal by the Commission, after consultation of the European Parliament and the European Central Bank. Such matters as the Executive Board Members' term of office, limitation to one

8 In this context, it is of interest to recall that, already in the mid-seventies, the left-of-centre governments of Austria and the Netherlands deliberately chose to align their currencies with the D-Mark. Appreciating their own smallness, they felt that the benefits for the governance of national economic policy far exceeded the costs of losing the opportunity to carry out their own monetary policies.

9 A paradigmatic example is the elimination of national competences in the area of antitrust policy under the "modernization" provided by Regulation 01/2003.

10 European Central Bank (2003 b).

term, conditions of employment, and procedures for dismissal, all of them central to personal independence, would have become material for new legislation by the Commission and the Council of Ministers, without any effective control by any parliament whatsoever.

President Trichet's protest was successful. The contested proposal did not make it into the Constitution. Indeed, to the outsider, its status in the deliberations is unclear. It does not seem to have appeared in any official public document other than President Trichet's letter to the President of the Council of Ministers. The Commission's official comments on the draft constitution only mention that the rules for appointing members of the Executive Board of the ECB are one of the "clearcut cases where qualified majority voting should be introduced". The Commission also remarked that "the modus operandi of the Governing Council of the European Central Bank and the operational decision making framework for monetary policy should be reviewed to ensure that decisions remain effective in a eurozone that is set to expand."[11] The contested proposal is in line with these suggestions. The fact that it seems to have appeared outside, rather than inside, the official consultation process on the Constitution[12] is itself perhaps a testimony to the political stature of the ECB as a guarantor of monetary stability in the European Union.

2.4 How robust is the ECB's position?

The importance assigned to monetary stability and the stature of the ECB are also apparent in the fact that, like the EC Treaty, the final version of the Constitution names price stability as one of the Objectives of the European Union. The Constitutional Convention had dropped this objective, but, following the ECB's intervention, it was reinstated.[13]

Nevertheless, one must ask how robust the present constellation is. The consolidation of the ECB's stature that we have seen has been favoured by luck. By comparison to the seventies and eighties, inflation rates, as well as nominal interest rates, were low and have remained so; therefore, the choices that the ECB faced were less difficult – and less likely to raise political controversy – than the choices faced by the Bundesbank and the Swiss National Bank in 1974 or 1982 or by the Federal Reserve Bank in 1979 and 1989. The European Central Bank has also been lucky in that there has not been a major financial crisis in Europe. Whereas the economic downturn of the early nineties was in many countries accompanied by bank failures and banking crises, the burst of the stock market bubble and the economic downturn after 2000 did not cause a financial crisis that would have required an intervention by the lender of the last resort and that might have put the unclear relation of national banking supervision and supranational central

11 European Commission (2003), pp. 7 and 9.

12 President Trichet's letter pointedly noted that, under existing rules, it would be necessary to formally submit such a proposal to the ECB for consultation before determining the amendment to the Treaty that was to be made.

13 Points where the ECB was less successful involved matters of detail, emphasis, or legal clarity, hardly material for a clearcut discussion about central-bank independence and the commitment to price stability, see European Central Bank (2003 a).

banking to the test. It remains to be seen what happens if events put the ECB into a position where it must take difficult and controversial choices.

The ECB has also been lucky in that political attention in the past few years has been elsewhere. Economic policy debates in European countries have focussed on the implications of demographic change, on structural reforms and economic growth, on labour market reforms and social policy, i.e., on the real side of the economy. In part, this development reflects the withdrawal of monetary policy from the national policy domain. In part, it also reflects the urgency of these "real" problems and the recognition that they cannot be solved merely by easy money.

At some point in the medium term, however, we are likely to see a resurgence of the proposition that low growth in Europe is at least partly due to the strictness of monetary policy and that Europe needs a more growth-oriented monetary policy. I shouldn't be surprised if, sometime over the next few years, such a criticism of the European Central Bank was going to be raised by the European Commission, as well as the governments of the larger Member States. It certainly would provide the European Commission with an argument for more of a role for itself, alone or in combination with the Council of Ministers.

Even without any change in the Statute of the European System of Central Banks and the European Central Bank, a possible initiative might concern the competence for setting an inflation bound or inflation target. The Commission and Council might want to reserve this competence to themselves, along the lines of the UK model. After all, the Maastricht Treaty, which was written before the UK model was invented, is silent on the question of who is to define what "price stability" means. There is no clause saying that central-bank independence covers the competence to define "price stability", as well as the competence to monetary policy to attain price stability. Given the silence of the Treaty on this point, there is room for putting this question on the agenda without being perceived as openly calling for a change of regime. The outcome of the ensuing discussion is more likely to be a matter of political convenience than of legal interpretation of the Treaty.

However, even if the competence to define price stability were to be transferred to the Council, acting upon a proposal of the Commission, I would not expect this to have any dramatic effect. The inflation bound might be changed into an inflation target, its numerical value might be raised from 2 % to 3 %, but this is hardly dramatic. A more dramatic change, e.g., a move to an inflation target of 5 % or more, seems unlikely. Such a move would be hard to justify and hard to communicate in a framework where "price stability" is the central objective of monetary policy. After all, the reasons why some governments are tempted by the prospects of an easy monetary policy have a lot to do with the discretionary nature and the intransparency of the inflation tax and the difficulties of holding the government accountable for this tax. If an inflation target has to be openly announced, this temptation is much reduced. One may even speculate that such an arrangement might give the finance minister a bit more of a political stake in the pursuit of price stability and might reduce their tendency to criticize the central bank when interest rates are raised.

2.5 The Problem of Fiscal Instability

In the immediate future, however, the greatest question marks concern fiscal policy. From the conclusion of the Maastricht Treaty to the creation of the European Monetary Union, we have seen an enormous amount of fiscal consolidation. Since then, the trend has been reversed. The large Member States, in particular, have been running large deficits and have been building up debt again. The disciplining force of the prospect of Monetary Union is missing. The Stability and Growth Pact has not provided an effective substitute. Because the original rules of the pact were rather crude, some economists feel that the greater flexibility under the new rules is to be welcomed. However, beyond all questions of rules and rule interpretations, the key development has been the realization that the pact itself is a dead letter if one of the large Member States chooses not to abide by it.

The failure of the Stability and Growth Pact would not matter if the insulation of monetary policy from fiscal concerns was so well established that it could safely be predicted to persist even if a large Member State went into default on its Euro-denominated debts. In such a regime, fiscal policy and public indebtedness would be purely national concerns. Default on "domestic" sovereign debt would be a possibility, just like default on foreign sovereign debt. Fiscal discipline would be a matter of relations between the individual states and the financial system, i.e. the people and institutions that put up the money to finance the public deficits. A lack of fiscal discipline would induce the financial system to first impose a premium on the interest rates at which funds are provided and to eventually cease lending altogether. The workings of such a system are illustrated by the experiences of individual states in the US or of individual cantons in Switzerland.

The system works differently if there is some prospect that sovereign debts might be monetized. Monetization avoids default in a legal sense, but imposes a loss of value on the owners of securities that are denominated in that particular currency. If markets anticipate this possibility, they will again impose a premium on the interest rates at which they provide funds. Thus, in the seventies and eighties, governments with insufficient fiscal discipline had to cope with high nominal interest rates as markets were anticipating monetization of the debt and subsequent inflation. Foreign-exchange markets also took notice and signalled their views by putting pressure on the exchange rate. Both these market reactions provide some incentives for fiscal discipline even when monetization of debt is possible.

However, in a monetary union, these mechanisms are weakened. If monetization of national debts is a possibility, a country with insufficient fiscal discipline exerts an externality on the other members of the system. To the extent that markets anticipate the monetization of national debts, they raise nominal interest rates for *all* nominal securities. Foreign-exchange market reactions concern the monetary union as a whole, and *not* simply the Member State that is responsible. At least initially, therefore, a national government may find it more attractive than to avoid hard choices by running into debt. The penalties for such a policy are at least partly borne by the other members of the monetary union.

Underlying these concerns is a fundamental contradiction between the notion of supranational sovereignty over monetary policy and the notion of national sovereignty over fiscal policy when there is no hard and fast provision for what happens when the fiscal policy is not viable and monetization – or some other form of "supranationalization" of debt – is the only alternative to outright default. This contradiction is even deeper than the well-known traditional problems of sovereign borrowing in foreign currencies. Any sovereign borrowing raises the question of what enforcement mechanisms might be effective, but sovereign borrowing by the member of a monetary union raises the additional question of what are the roles of the union institutions and the other union members when the member state in question is unable to meet its obligations.

To be sure, in the context of the European Monetary Union, the Maastricht Treaty provides for a clear insulation of the ECB from pressures generated by the Member States' fiscal policies. However, in thinking about the issue, one must go beyond the existing legal texts and ask how the Union's political and legal institutions will react to a crisis when it arises. After all, this is not the first contradiction to arise in the context of European integration from a lack of clarity in the separation of responsibilities between national and supranational institutions. If it becomes virulent, it will be dealt with like others have been dealt with before, by a mixture of muddling through under existing rules and of rule adjustment. The benefits of being part of the venture altogether have always been felt to be so large that nobody was willing to break the system. I would therefore expect that, in a clutch, there will be some give-and-take involving the provision of some assistance to Member States that are in trouble in return for the installation of a more effective supranational control mechanism for fiscal discipline.

In the course of such dealings, the European Central Bank and its role are likely to be part of the negotiating mass. At that point, the institutional safeguards provided by the Maastricht Treaty can be less than airtight. As part of a larger package, negotiated between the Commission and the Member States, a revision of basic constitutional rules of the European Monetary Union may not be impossible, especially, if the revision goes along with a prospect of substantial improvements in the governance of fiscal policy. For such a package, which national parliaments have to approve wholesale or not at all, the requirement of parliamentary ratification in all Member States is rather less of a hurdle because most national parliaments will be afraid of blocking a package that will surely be announced as yet another major step in European integration.

Even if the Treaty is not changed, there may be a legal issue: Could it be that a court of justice asserts that, first, in the name of higher principles of civil law, any state is legally obliged to fulfil its obligations on its domestic debts even if this requires upending the central bank's independence, and, second, in the name of solidarity within the European Union, the European Central Bank is obliged to assist a Member State in avoiding default on its domestic, i.e., Euro-denominated, debts? Given the treatment of such questions by the Constitutional Court in Germany, I believe that this possibility cannot be altogether ruled out.

Up to now, financial markets hardly differentiate between the Member States of the European Monetary Union. Despite significant differences in debts and deficits, there are hardly any dif-

ferences in the interest rates that different Member States have to pay.[14] This might be due to market participants anticipating that, in the event of a crisis, some kind of "supranationalization" of debts will occur as a matter of course. They might also consider that the fiscal consolidation of the nineties is still providing so much of a buffer that the prospect of such a crisis is still quite remote. At this point, therefore, the question of what incentives for fiscal discipline the system provides to Member State Governments is very much up in the air.

2.6 The Role of the Central Bank in a Large, Heterogeneous Currency Area

Assuming that the current institutional setup is with us for some time, what are the implications for monetary policy? In the first place, the depoliticization that has taken place is likely to have its effects on the spirit in which monetary policy itself is being carried out. The Bundesbank had always been part of the German political system, posing as a paragon of stability and exhorting the other major players, the trade unions and the Federal Government, to show more discipline. It played this role most emphatically in the final, inflationary phases of a boom turning into a recession in 1974, 1982, and 1992. Given its own contributions to the preceding expansions and given the strictness of the ensuing monetary tightening, it thus strengthened the pro-cyclical elements in the overall macroeconomic policy regime and contributed to the sharpness of the recessions.[15] By contrast, the European Central Bank has no direct political counterparts. There is therefore perhaps less scope for such a demonstrative pursuit of stability. The ECB may be able to avoid some of the pro-cyclical features that the Bundesbank's monetary policy has had.

At the same time, the ECB may become less resistant to the notion that monetary-policy activism is not incompatible with monetary stability. As the US experience has shown,[16] once a central banker feels that the political battle over the basic objectives of monetary policy and the importance of monetary stability has been won, he may be himself be tempted towards an activist role in countering "adverse" developments. Under the chairmanship of Alan Greenspan, the Federal Reserve Bank has been far removed from traditional Keynesian interventionism. However, from the liquidity injection after the stock market crash of 1987 to the "correction" of inflationary pressures by monetary restraint in 1989, further on to the turnaround of 1990, which allowed commercial banks to re-establish their capital by playing the yield curve, and to the interest rate "shock" of 1994, …., the Federal Reserve Bank seems to have been driven by a belief in the fine tuning of policy interventions to solve problems as they were coming up. The notion that the fine-tuning policy intervention itself might be the source of the next problem does not seem to have played much of a role.[17]

---

14 For an empirical analysis of risk premia in European government bond markets, before and after EMU, see Bernoth *et al.* (2004).

15 For an account of the different players' roles in the earlier cycles, see Hellwig and Neumann (1987).

16 Or, for that matter, the Swiss experience, as documented in the other contributions to this volume.

17 Yet, one can argue that the inflationary pressures of 1988/89 were caused by the excessive liquidity injection after the crash, the solvency problems of US commercial banks in 1990 were caused by the interest rate shock of 1989, etc. For a general discussion of this issue, see White (2007).

2.7 Reduced Importance of Exchange Rates

A major change concerns the relative weights given to different variables that the central bank pays attention to. I expect the European Central Bank to pay ever less attention to exchange rate movements. In principle, of course, the ECB, has always focussed on inflation rates and monetary aggregates, just like the Bundesbank before it. In practice, however, in an environment in which the exchange rate is perceived to matter a great deal, the central bank is hardly able to avoid paying at least some attention to it. For all their insistence on monetary targeting, even the Bundesbank and the Swiss National Bank have always had an eye on the exchange rate.

Perceptions that the exchange rate is important may come from firms and industry associations that see the effects of exchange rate movements on competitive positions in their output markets. They may also come from the media trying to capture the public's attention as they portray exchange rate movements as evidence of good or bad performance by the government or the central bank or as they tell people about the implications of exchange rate movements for the purchasing power. When such discussions take place, politicians and governments will join in and try to get the central bank to take account of the concerns that are being voiced. The discussions in Switzerland that led to the temporary replacement of monetary targeting by exchange rate targeting in 1979 provide a paradigmatic example, as does the initiative of Giscard d'Estaing and Schmidt to create the ERM.

In Euroland, the perception that exchange rates matter seems to have, by and large, disappeared. Given that most "foreign" trade of firms in Euroland rests within Euroland, monetary union has dramatically reduced the dependence of firms' competitive positions on exchange rates. It has also reduced the immediate impact of exchange rate movements on consumers' purchasing power. Finally, it has eliminated the identification of the currency and its market valuation with any one country and with the performance of that country's government. In terms of public political discussion, therefore, the exchange rate has become a non-issue. This is bound to give the European Central Bank more leeway to treat the foreign sector and the exchange rate with benign neglect, as the Federal Reserve Bank has done for decades.

2.8 Euroland Prices and Inflation – Statistical Artefacts or Matters of Real-Life Experience?

An open question concerns the treatment of prices and inflation. As yet, one can hardly say that we have an integrated European economy in which deviations from the law of one price for any one commodity are the exception rather than the rule. Transaction costs, regulations, and other barriers impede the kind of arbitrage that would make for Europe-wide markets. Price adjustment is mostly a matter of national markets. Moreover, it is fraught with frictions. Therefore, there have been and there continue to be significant differences in the inflation rates of the different Member States. The Euroland inflation rate on which the European Central Bank focuses corresponds to a weighted average of inflation rates in the different Member States. The rele-

vance of this average for the real-life experiences of people in these Member States is unclear. In 2000, for instance, at respective inflation rates of 5.3 % and 1.4 %, people in Ireland worried about inflation, people in Germany about the possibility of deflation.

To be sure, this is not just a problem of the European Monetary Union. Any statistical measure of inflation is an average, across regions, as well as goods. However, in a homogeneous environment, in which markets are more closely interrelated, differences in price movements are likely to be less pronounced, and an average measure of inflation is likely to be closer to people's actual experiences. Thus, for 13 German Länder, the growth of consumer prices from January 2005 to January 2006 ranged between 1.4 % in Hessen and 2.5 % in Brandenburg, with a mean of 2.0 % and a cross-section standard deviation below 0.4 %.[18] By contrast, for the same period, consumer price inflation in Euroland ranged from 1.5 % in Austria to 4.2 % in Spain, with a mean of 2.3 % and a cross-section standard deviation above 0.7 %.[19] There no longer is an outlier like Ireland was in 2000, but even so: what meaning does a Euroland inflation rate of 2.3 % have for people in Austria or in Spain?

Ironically, this might be less of an issue if European central banks had been less successful in fighting inflation in the past. If inflation is high, everybody shares the impression that prices are going up and that nominal values are not to be trusted. The common experience that the value money is rapidly going down will dwarf the disparities across countries and regions even if the disparities themselves are sizeable. By contrast, at low average levels of inflation, there is less of a shared perception that inflation is a problem.

The problem is a natural consequence of monetary unification with insufficient economic integration. With time, it may go away because the increasing interdependence of monetary systems and markets lead to a homogenization of inflation across Euroland.[20] If the disparity of inflation rates and inflation experiences in different countries persists, it may end up undermining the legitimacy of the ECB's policy with the public, more precisely, with the different publics in the different Member States. In particular, grassroots support of the central bank as a guarantor of price stability is likely to be weaker if the policy concerns of the central bank do not resonate with people's experiences. For the Bundesbank, such grassroots support had been a reliable source of strength, providing a measure of protection against political attempts to subvert its institutional structure.

---

18 Inflation data for the different Länder, except Bremen, Hamburg, and Schleswig-Holstein, are available at http://www.statistik-portal.de/Statistik-Portal/de_inhalt21.asp. Averages here are calculated with weights assigned to the different Länder on the basis of 2003 consumption.

19 Inflation data and Member State weights are available at http://epp.eurostat.cec.eu.int/portal/page?_pageid=0,1136173,0_45570701&_dad=portal&_schema=PORTAL .

20 At 0.7 % the standard deviation of consumer price inflation across the Members of Euroland in 2005 was somewhat less than it had been in 2000 (0.8 %) when average inflation was actually lower (1.9 %). However, it is too early to tell whether this corresponds to a longer-term trend or merely to the fact that there is no longer an outlier like Ireland was in 2000.

2.9 Summary

To sum up, at this point, the European Monetary Union's commitment to monetary stability seems to be quite robust. Institutional arrangements, as well as the constellation of political interests, provide fairly strong support. The problem of effective governance for fiscal discipline has not been solved. Some further institutional change is to be expected if and when this problem becomes acute. However, I would not expect such change to concern the basic principles of central-bank independence and monetary stability.

In consequence, I also expect monetary policy to be as stable as anything that can be expected from an institution that is run by people. As people change, as people's perceptions of the problems and techniques of monetary policy change, there are bound to be changes in policy rules and in policies, with implications for market expectations and market prices. However, it seems unlikely that any of this should come close to the kind of subservience of monetary policy to fiscal needs etc. that was at issue in OECD countries in the seventies and eighties and that is still an issue in parts of the world today.

3. Switzerland as an Island in Euroland

3.1 Euro-ization of the Swiss Monetary System?

What are the implications of European Monetary Union for Switzerland as an island in Euroland? From the time when the prospect of European Monetary Union was beginning to loom on the horizon, I remember hearing questions as to whether Switzerland would be able to retain its own currency at all. Wouldn't the Ecu be so much the dominant currency that everybody would expect to be dealing in Ecus, leaving no room for transactions in Swiss Francs? What else could one conclude if only one took a look at a map showing continental Europe all occupied by the European Union, with only a small white spot in the centre?

I have always wondered why such questions were to be taken seriously. To be sure, a map with a small white spot in the centre of a large homogeneous land mass makes for a suggestive picture,[21] but this is no substitute for an argument. Analogies with Panama or Israel seemed beside the point. In both these countries, the dollarization of large transactions had more to do with institutions, policies, and inflation, rather than the relative smallness of these countries. The same is true of countries, e.g. in Latin America, that have dollarized their currencies without actually abandoning them. Institutions and policies in Switzerland seemed far from inducing anything similar.

To be sure, the tourist or businessman coming to Switzerland might be so much used to paying in Euros that he couldn't even conceive of foreign currency any more, at least not on the Euro-

21 The suggestiveness of the picture is reinforced by the fact that, for Europe in 1940, one might have drawn a similar map. The same is, however, true for Europe in 1640, when the Swiss Confederacy was the only state not involved in the Thirty-Years War. The map looks the same, but the underlying structure is different.

pean continent. However, the willingness and the desire to accommodate such a person's needs would not automatically be grounds for a Euro-ization of transactions in Switzerland. Having the internal payments system run on Swiss Francs and accommodating the careless foreigner's needs in Euros would actually seem like a wonderful mechanism for price discrimination.[22] Why should anyone want to give this up?

3.2 Dependence of the Economy on the Foreign Sector

Nevertheless, the question of what are the implications of the Euro for Swiss monetary policy is of substantial interest. For Switzerland as a small country, the "foreign sector", i.e. cross-border economic activities in trade and capital accounts are very important. To convey an idea of orders or magnitude: In 2004, exports and imports of goods each exceeded 30 % of GDP, exports and imports of tourism services and exports of banking services each were on the order of 3 % of GDP; net capital income from abroad amounted to roughly 11 % of GDP, net capital exports to roughly 17 % of GDP. By comparison to other countries, all these numbers are quite large. The foreign sector is significantly more important for Switzerland than for any one of the larger Member States of the European Union, let alone the European Union or Euroland as a whole.

Moreover, the foreign sector exhibits strong links to the Euro area. In their study "Optimal Currency Areas", Alesina, Barro, and Tenreyro (2002) suggest that Switzerland would actually be a natural candidate for membership in the European Monetary Union, more so than some of the actual members of EMU. Their suggestion is based on the observation that the share of Switzerland's trade with the Euro area is very high and that, already in the period 1960 – 1997, price and output movements have both been strongly correlated with price and output movements in Euroland, indeed significantly more strongly than with the United States or Japan. According to Alesina *et al*., the high trade share indicates that there is a significant potential for gains from further specialization under monetary union; the high price and output correlations indicate that there would not be much of a loss if the competence for macroeconomic stabilization policies were shifted from the national to the European supranational level. Given that Switzerland has not shown much of a taste for Keynesian stabilization policies, the latter concern is probably less relevant for Swiss policy makers than the notion that independence in monetary policy provides some protection against unwelcome changes in the overall monetary-policy stance of Euroland. However, the numbers of Alesina *et al.* do highlight that the Swiss economy is extraordinarily interrelated with the economies of the Euro area. The question of how the Swiss foreign sector might be affected by European Monetary Union is therefore of major importance.

In discussing this question, one must distinguish between the effects of European Monetary Union and the effects of Switzerland being a small country with a great sensitivity to the "foreign sector". The latter have played a role long before the European Monetary Union came into being

22 At the time of writing, machines selling tickets for local public transportation in the area of Berne do take Euros – at a rate that is some 5 % below its value in organized exchanges.

and would play a role today even if the European Monetary Union did not exist. For example, in Switzerland, there is a significant public awareness of the exchange rate as a key price variable. This awareness is due to the fact that so much of economic activity is seen as being affected by the exchange rate. To be sure, the interest rate also plays a central role, but then, as Swiss interest rates, real as well as nominal, are usually lower than interest rates elsewhere, the interest rate is usually not perceived as being offensive.[23] Wage rates, which play a central role in Germany, are not much perceived as macroeconomic variables because wage setting is quite decentralized.

In Switzerland, the exchange rate is the price variable that is most distinctly perceived as having a macroeconomic dimension and that gives rise to complaints about monetary policy. The virulence of such complaints does not depend on the existence of the European Monetary Union. Long before EMU, in the period 1971 – 1984, the Swiss Franc was the currency that exhibited the highest rate of appreciation and the third-highest volatility in the world, the latter behind the US Dollar and the English Pound.[24] Complaints about the exchange rate were such that, for a short while, in 1979 – 81, the SNB felt compelled to target the exchange rate rather than the money supply. In the twenty-five years since then, both the rate of appreciation and the volatility of the exchange rate have been lower. [25] However, the exchange rate has always played a central role in public discussion and in the thinking of the Swiss National Bank. [26]

3.3 Does EMU affect the Exchange Rate Exposure of Switzerland?

How does the European Monetary Union affect the interplay between exchange rates, the Swiss economy, and Swiss monetary policy. This question comes in three parts: First, in what sense are exchange rate movements affected by the European Monetary Union? Second, what does this imply for the Swiss economy? Third, what are the consequences for Swiss monetary policy, in normative, as well as political-economy terms?

In addressing the first subquestion, it is important to appreciate that exchange rate movements involve a significant element of randomness. Even without any remarkable disturbances in currency markets, turbulences, the past ten years have seen significant changes in market assessments and sizeable exchange rate fluctuations that defy theoretical explanation, on the order of five to ten percent up or down from one year to the next. In the post-Bretton Woods era, such exchange rate fluctuations have not been limited to short-run, day-to-day or month-to-month fluctuations, but have sometimes persisted over several years.[27] The appreciation of the dollar in the first half of the eighties is one example, its depreciation in the mid-nineties and then its appreciation around the year 2000 are others.

23 The period around 1990, when short-term rates were unusually high, was the major exception and was very much experienced as such.

24 See Danthine and Lambelet (1987), p. 155.

25 Still, the Swiss Franc was the currency that appreciated most over this period.

26 For contemporary contributions, see Buomberger and Capitelli (1990), Rich (1990), Schiltknecht (1990). A later account of this period is provided by Rich (2003).

27 For a recent survey, see Rogoff (2001).

The literature on excess volatility phenomena in asset markets suggests that such apparent randomness is a normal feature of any asset price; for exchange rates, this randomness may be reinforced by the fact that there is nothing like the calculation of discounted present values of asset returns which might serve as an anchor for expectations. Expectations are therefore more easily affected by the "story" of the day. The same people who revel in the marvels of US capitalism or the growth potential of the US economy on one day will fret about twin deficits the day thereafter – without ever doing the full analysis for either story.[28]

Does the Euro affect the vagaries of exchange rates? Three considerations seem relevant: First, the unification of currencies eliminates the diversification of nominal-exchange rate risks that is naturally present when one is dealing with multiple currencies. As long as price movements differ across Member States, there is still significant diversity in *real*-exchange-rate movements. However, to the extent that price movements in Euroland will become more synchronized, this diversification of real-exchange rate risks will disappear. There is some prospect, therefore, that over the medium run, the currency unification provided by EMU will provide Switzerland with a less highly diversified environment, for real, as well as nominal exchange rate risks.

Second, improvements in the governance of monetary policy and the commitment to monetary stability in Euroland have eliminated the prospect of turbulences of the sort that we have seen in past currency crises. This should perhaps not be attributed to European Monetary Union as such, but to the changes in attitude to monetary stability that I discussed above. However, it is difficult to separate these matters. To the extent that European Monetary Union has improved the institutional infrastructure, one may as well treat this as an effect of European Monetary Union.

Third, as was discussed above, it seems likely that the European Central Bank will simply pay less attention to the exchange rate and to other cross-border concerns than national central banks did previously. The term "benign neglect" may come to describe the European Central Bank's attitude to the foreign implications of its policies and operations just as it has described the attitude of the US Federal Reserve Bank for a long time. Changes in the monetary-policy stance taken in Frankfurt and the changes in interest rates and exchange rates that they induce may come to be more of a disturbing factor than they were at a time when the Swiss National Bank and the Bundesbank had parallel interests, at least *vis à vis* the US Dollar.

3.5 Implications for the Swiss Economy

Given these considerations, I expect that we shall see more of the sort of 5 % to 10 % swings from one year to the next in nominal exchange rates that we have seen over the past fifteen years, induced sometimes by "noise" or by changes in "stories" and expectations, sometimes by changes in the stance of monetary policy for one currency and by inflation differentials, and

28 Either way, the "story" of the day provides material for infotainment in the media that treat the daily advances and retreats of asset prices in currency exchanges or stock markets as if they were writing about football or baseball games and their impact on the annual league competition or pennant race.

sometimes by changes in economic activities. These swings are not nearly as dramatic as the currency crises of the seventies. However, their impact on the Swiss economy will be enhanced when price movements in Euroland become more synchronized and the reduction of diversification concerns real, as well as nominal, exchange rates.

A certain element of diversification will still be provided by the lack of synchronization between developments in the United States and developments in Euroland. This is important because, the foreign sector of the Swiss economy does have a lot to do with the US Dollar. The suggestion to the contrary in Alesina *et al*. (2002) is at least partly based on their looking only at the trade side of the foreign sector. For the capital account, the US Dollar is more important than the Euro, with some variation from year to year, but no discernable downward trend.[29]

Switzerland's acitivities as a financial centre, as an exporter of capital, and as a recipient of a substantial amount of capital income from abroad have more to do with the US Dollar than with the Euro.

Altogether, I do not see the European Monetary Union as having a major impact on the Swiss economy. Exposure to shocks coming from abroad should be roughly comparable to what it has been over the past fifteen years. The reduced diversification and the difference in monetary-policy institutions can have some effects on the details of the patterns of the shocks, but the differences are likely to be small. After the creation of EMU as before, Swiss firms have to live with the fact that every now and then, unforeseen events abroad have a substantial, adverse or favourable, effect on the conditions in which they are doing business. The Swiss National Bank has to live with the fact that, when such events occur, the economic sectors that are adversely affected will complain because, in their view, it is the National Bank's task to take care of the exchange rate and to insulate them from such shocks.

3.5 Implications for Swiss Monetary Policy

Should the National Bank take notice? Superficially, this question concerns the details of what variable should serve as short-run and intermediate targets of monetary policy, what instruments are available and how the instruments relate to the targets. According to an old prescription, the choice of intermediate target should depend on whether shocks to the economy are mainly nominal or real. With a prevalence of nominal shocks, in particular, shocks to money demand, it is preferable to have a price variable as an intermediate target, with a prevalence of real shocks, it is preferable to have a quantity measure of "the money stock" as an intermediate target. If we think of shocks coming from the "foreign sector" as being largely nominal, e.g. caused by shifting expectations in exchange markets, this prescription would call for a price variable as the appropriate intermediate target. In other words, the central bank should take notice of shocks com-

29 Thus, for 2004, the Swiss National Bank reports portfolio investments and bank loans of 51.4 billion Francs in US Dollars as opposed to 28.9 billion Francs in Euro; as for direct investments, in 2004, 13.5 billion Francs went to Euroland and 11.7 billion Francs to the Western hemisphere.

ing from abroad. The only question then would be what is the appropriate price variable or the appropriate mix of price variables to be concerned about.

However, how do we really know when shocks are purely nominal? Even if we have good reasons to believe that we have identified a shock as being nominal, could it not be correlated with a real shock that also needs to be taken into account? Recall the dilemma of Swiss Monetary Policy in 1990 and 1991. The high-interest rate policies pursued by the United States, the United Kingdom, and Germany put pressure on money markets and currency markets throughout the world, including the Swiss Franc. Was this a nominal shock, to be balanced by an apparently restrictive monetary policy attuned to the reduction in the rest of the world's demand for Swiss Francs? Or was this a real shock as the concomitant recession in the United States and the United Kingdom reduced – and the German unification boom increased – foreign demand for Swiss exports? I suspect that, at the time, the Swiss National Bank did not address the problem in these terms, preoccupied as it was with the domestic inflationary pressures that had resulted from its excessive liquidity creation in late 1987 and 1988.[30] However, even if one gave top priority to the need to restrain inflation, the question of how much restraint was already being imported from abroad should have been highly relevant.

By now, traditional notions of interest rates or exchange rate as appropriate price variables to be concerned about when there are nominal shocks have been replaced by the notion of inflation targeting or inflation forecasting as being closer to the ultimate concerns of a policy devoted to monetary stability. Conceptually, this is again a price variable, albeit one that is not identified with any one market. The basic problem of how to assess the implications of a given exchange rate shock and how to determine whether the central bank should react is relevant under inflation targeting as under any other regime and is as difficult to deal with.

3.6 Competitiveness Rhetoric and the Political Economy of Structural Change

In any case, one should beware of thinking about the problem solely in terms of what is the nature of shocks and what is the best technique for a stability-oriented central bank to be dealing with them. At a deeper level, the problem goes beyond these technical questions and concerns the overall governance of the Swiss economy, in particular, the mode of structural change.

For a long time, one of the most vociferous complainers has been the Swiss tourism industry. Too high a value of the Swiss franc, they say, ruins the industry's ability to compete with tourism industries elsewhere, particularly Austria. However, as is often the case when an industry complains about the lagging competitiveness of "the national economy" and refers primarily to itself, at least part of the story is a matter of shifting comparative advantage. The tourism indus-

30 According to Buomberger and Capitelli (1990), this excess liquidity creation itself was the result of a domestic nominal shock and might have been avoided if the National Bank had paid more attention to exchange rates and interest rates. The contrary view is maintained by Rich (1990). See also Rich's (2003, pp. 43 f.) reference to monetary policy tightening as a way of countering "the attack on the Swiss franc" in 1992.

try had initially owed some of its prosperity and growth to the availability of cheap labour in overpopulated mountain valleys. By now this labour is no longer cheap. A combination of increased mobility and economic progress in other sectors have provided labour with better opportunities elsewhere. The industry's need for adjustment is a natural consequence of this change, a result of competition with the Swiss banking, pharmaceutical, and engineering sectors. The point is that an industry's "competitiveness" is a matter of input as well as output markets. The success of the Swiss tourism industry depends not just on how it does relative to the Austrian tourism industry in competition for customers, but also on how it does in competition with other sectors of the Swiss economy in competition for labour. Its overall viability depends on the relation between pricing conditions in output markets and input markets. Exchange rate movements that worsen this relation for the tourism industry can be a consequence of shifting comparative advantage, induced by an increasing competitiveness of firms in other sectors of the Swiss economy.

In this context, there is some danger in treating the exchange rate as a political price. An exchange rate that is seen as being set by policy, rather than the market, will be the subject of politics. Firms whose competitive positions are strongly affected will complain about it without caring about such niceties as whether their experience reflects a nominal shock or a change in comparative advantage. If the complaints are effective, structural change can be impeded, at least in the short run; in the medium and long run, the adjustment will probably occur anyway as the more successful domestic industries bid input prices further up. The complainers' margins are then squeezed by wage increases, rather than the appreciation of the nominal exchange rate. When comparative advantage shifts from one sector to another, domestic inflation and the change in the real exchange rate that it induces can be as merciless a force for structural change as an appreciation of the nominal exchange rate. However, in the process, the economy suffers from the inflation.

Even more importantly, the economy would suffer from the development and possible entrenchment of attitudes assigning the responsibility for the economic successes and failures of individual firms and industries to the institutions of monetary policy or, more generally, to the government, rather than the parties in question. Such attitudes would undermine the notion of self-reliance as one of the mainsprings of economic prosperity.

3.7 Does Switzerland's Role as a Rentier affect the Political Economy of Structural Change?

By comparison to other countries, for Switzerland, the political economy of structural change in response to shifts in comparative advantage is complicated by the fact that, to some extent, the shift is due to returns on capital. Institutions and individuals from Switzerland are major investors in the rest of the world. The returns that they earn on their investment are a major item in the Swiss current account. At 11 % of GDP in 2004, net capital income from abroad is exceptionally

high – and likely to rise even more.[31] At 17 % of GDP, capital exports were still higher. However, unless Switzerland wants to make a free gift of goods and services to the rest of the world, there will have to be a time when capital exports fall short of net capital income from abroad. At that time, net capital income from abroad will at least partly be matched by a deficit in the trade balance, i.e., exports of goods and of labour-based services must fall short of imports. After all, capital exports and the net outflow of goods and services that they require represent just one side of an intertemporal exchange; the other side is represented by subsequent net capital income from abroad and by the net inflow of goods and services that this income provides for.[32]

When the other side of the intertemporal exchange involved in capital exports comes home to roost, some firms and industries in Switzerland will find that, at least in relative terms,[33] they are losing ground to foreign competitors. If they identify the exchange rate as a proximate cause of their difficulties, we can again expect them to complain. However, this is an instance of structural change induced by intertemporal exchange, with a shift in comparative advantage towards the earning of returns on capital, rather than any other active production. Political discussion about this change is likely to be quite different from previous instances. The "rentiers" who receive the net income from abroad may be just as hostile as any firm to seeing the currency appreciate. After all, an appreciation of the Swiss Franc relative to other currencies devalues their holdings abroad, which, for the most part, are not denominated in Swiss Francs. Even though these "rentiers" are more dispersed and presumably less well organized than an industrial lobby, we should not underestimate them as a potential political force. Given the immediate relevance of the exchange rate for their real incomes, they may well contribute to a public perception that the exchange rate is, or ought to be, a political price.

31 The long-term significance of this factor was already pointed out by Danthine and Lambelet (1987), p. 155. It is tempting to speculate that the long-term real appreciation of the Swiss Franc that we have seen, which seems to be in conflict with any theories of purchasing power parity or of (uncovered) interest parity, might be a reflection of this development.

32 See Bulow and Rogoff (1989). Under the assumption that expected present values of net capital exports and of net capital income from abroad over all future periods are finite, their argument implies that, if a country begins by exporting capital, there has to come a time when the expected present value of net capital exports over all future periods must be less than the expected present value of net capital income from abroad over all future periods. As shown by C. Hellwig and Lorenzoni (2003), the assumption that expected present values are finite is restrictive, but even if this condition breaks down, intertemporal exchange involves a *quid-pro-quo* under which periods of net resource flows in one direction are followed by net resource flows in the reverse direction.

33 In absolute terms, there need not be a decline. The high level of wealth that generates the desire to consume some of the net capital income from abroad could also support a high level of domestic demand. The argument is akin to Ohlin's critique of Keynes on the transfer problem.

4. Financial Stability and the Lender of the Last Resort: Does EMU Make a Difference?

A discussion of the implications of European Monetary Union would not be complete without a consideration of the role of the central bank as a lender of the last resort. Under the home-country principle, banking regulation and banking supervision are purely national concerns. The potential lender of the last resort, however, is a supranational institution. One may wonder how these things go together.

From the Swiss perspective, this question is important because the financial sector sector in Switzerland is large and transcends the national borders. Switzerland is the home of two of the world's largest financial institutions (they used to be three!); the country is also host to affiliates of practically all financial institutions that aspire to play an international role. Financial services are a major export industry. Financial institutions in Switzerland are very much interrelated with financial institutions elsewhere, in particular, with financial institutions in Euroland. Financial stability in Switzerland is thus closely tied to financial stability in Euroland.

4.1 Problems in Banking as a Potential Problem for the Economy

Given the size of the Swiss banking sector, difficulties in this sector are problems for the whole economy, even more so than in other countries. Switzerland has had a taste of such problems in the early nineties when high interest rates and an inverted yield curve combined with poor loan performance and a downturn in real-estate markets to put the banking sector into a difficult situation, including a full-fledged crisis of regional and cantonal banks with poorly diversified activities. The stagnation of the Swiss economy in these years, with GDP declining 1 % from 1990 to 1991 and then remaining constant for the next three years, must at least partly be ascribed to the fact that banks were not in a position to lend as freely as they had done in better years. Financial-sector employment shrank by more than 10000 people, some 5 % of the overall decline in employment.

Yet the banking crisis and the recession of the early nineties in Switzerland were comparatively mild. Open bankruptcies of banks could for the most part be avoided by having the failing banks taken over by one of the large banks.[34] The large banks were in a better position than the regional and cantonal banks because they were better diversified. High interest rates, poor loan performance and depressed real-estate markets caused problems for them as well, but they could compensate their losses in traditional banking activities in Switzerland by profits from their securities and trading activities internationally, in particular, in derivatives. These profits provided a buffer not just for the large banks, but for the banking system as a whole, which the large banks were able to support in a time of stress.

34 The exception was Spar- und Leihkasse Thun in 1990.

To get an idea for what a full-fledged banking crisis can mean for a small, highly developed economy, one must look at the experience of the Scandinavian countries in the early nineties. The recession of the late eighties/early nineties, which hit most OECD countries was particularly pronounced in the Scandinavian countries where it was accompanied by banking crises. Thus, in Sweden, unemployment went from 1.4 % in 1990 to 9.4 % in 1994. Real GDP declined by 5 % from 1991 to 1993.[35] Although, to some extent, this downturn can be attributed to the Riksbank's defending the currency by a policy involving exorbitant interest rates (with call money rates at 500 % p.a.), there is a consensus that the banking crisis played a major role as two out of five large banking institutions, as well as many finance companies, became insolvent and company lending was drastically reduced. Between 1990 and 1993, bank lending in Sweden declined by 21%, and private investment by 35 %.

From the Swiss perspective, it is instructive to look at orders of magnitude. Including provisions for future losses on loans that were still performing, total loan losses of Swedish banks amounted to 75 billion Swedish Kronors (SEK), roughly 5 % of GDP, in 1992. Cumulatively, over the period 1990 – 1993, they amounted to 17 % of total bank lending, or 165 billion SEK.[36] During this period, bank profits excluding loan losses were roughly constant at 25 to 30 billion SEK per year. When the Swedish government stepped in to save the banks (though not the banks' owners), it had to put up some 65 billion SEK, or 4 % of GDP, in additional funds; as a result, its overall deficit rose to 12 % of GDP in 1993. A significant part of this aid was later recovered through asset sales, dividends, and privatizations,[37] but in the short run, the support of the banks crippled the Swedish government's finances, eliminating any scope for active fiscal policy in what turned out to be the sharpest recession since the Great Depression.

Turning from Sweden to Switzerland, I note that, in 2004, GDP was 446 billion Swiss Francs, total government spending 53 billion Swiss Francs. In this year, UBS listed total assets of 1737 billion Swiss Francs, and Crédit Suisse total assets of 1089 billion Swiss Francs, i.e. these two institutions alone had total assets that were more than 500 % of GDP. As these institutions have pursued their diversification and internationalization strategies, the role of bank lending has been reduced, but even so, their total lending in 2004 amounted to 416 billion Swiss Francs. In relation to the Swiss economy and the Swiss government budgets, either one of these institutions is much larger than the largest Swedish banks were in the nineties.

If ever these institutions were to go through an experience like that of the Swedish banks in the early nineties, the government would find it that much more difficult and burdensome to try and save the country from the fallout of the crisis. Indeed, one may doubt whether a performance like that of the Swedish government would even be feasible. Where, so far, we are used to thinking of some banks as being "too big to fail", because the government is unwilling to face the conse-

35 The following account is based on Englund (1999).

36 According to Englund (1999), bank lending was at 354 billion SEK in 1985 and grew 174 % from 1985 to 1990.

37 Even, the final cost to the taxpayer is estimated at 35 billion SEK.

quences of letting them go under, the Swiss banks may in fact be *too big to be rescued* in the sense, even as it tries to rescue them, the government would be crippled by the task.

If one thinks of bank failures and banking crises as resulting from the reckless behaviour of bank managers, encouraged by explicit or implicit state guarantees, the discrepancy between the size of financial institutions in Switzerland and the size of the overall economy contains a reassuring element. The managers in charge of the major financial institutions are unlikely to have any illusions about the ability of their country to rescue these institutions in a crisis. Indeed, this awareness may have contributed to their being among the most advanced institutions in applying modern techniques of risk management and risk control.

4.2 Systemic Aspects of Risk in Banking and Finance

However, a bank's exposure to risks is not always due to recklessness motivated by a reliance on a too-big-to-fail policy of the government. Sometimes, there is recklessness motivated by individual incentives of a person in an organization, sometimes, the risks in question are underestimated, sometimes, it is not even possible to have a reliable estimate of what the risks might be. Underestimations of risks seem to have been important in the country lending of the late seventies and for small-firm and real-estate lending in the late eighties. They were probably reinforced by herding effects and their implications for personal incentives as even people who had misgivings may have refrained from speaking up for fear of being branded as outsiders who are not really "with it". Personal incentives play an even greater role when individual career prospects depend on delivering profits – and risk taking provides a prospect of earning large profits with some probability.[38]

Sometimes, however, even diligent risk managers will be unable to assess the risks to which their institutions are exposed. A major difficulty is posed by risk correlations, which are sometimes hard to measure because they can vary by the day or the week. Thus, for any risk-shifting contract, a major question is to what extent the counterparty credit risk is correlated with the underlying risk that the contract is ostensibly shifting to the counterparty. A bank that makes a fixed-interest loan and that uses an interest rate swap to hedge the interest rate risk is still exposed to the counterparty credit risk that its partner might be unable to perform if short-term rates go up and the counterparty should be paying a lot. In the Thai crisis of 1997, international banks that had made Dollar loans to Thai banks that made Dollar loans to Thai firms found that the risk of a devaluation of the Baht against the US Dollar was not effectively hedged: When the Baht was devalued, the firms whose customers in Thailand were paying in Baht found themselves unable

38 An example is provided by the old Union Bank of Switzerland, where Mr. Cabiallavetta rose to the top at least partly on the strength of profits from derivatives trading. In charge of risk control as well as trading, he had insufficient incentives closely enough at what his derivatives traders were doing; in the Asian crisis of 1997, the bank suffered the consequences when profits turned into losses amounting to more than 600 million Swiss Francs. See Schütz (1998).

to service their debts and went under – and so did the Thai banks whose loan clients had become insolvent.[39]

Correlations between counterparty credit risks and other risks are practically impossible to assess with any satisfactory degree of reliability. As illustrated by the Thai example, the position of one's own counterparty in turn depends on the counterparty's counterparties and so on, i.e. on the whole network of contracts. Examples like Baring Brothers or Orange County in the mid nineties show that any one of these counterparties' positions can change in a matter of days or weeks. Even for the parties that are involved, it seems hardly possible to assess these changes in a timely manner as they occur.

The problem is further complicated by the interrelation of institutions with asset markets. In the LTCM affair of 1998, the Federal Reserve Bank intervened mainly because it was afraid of domino effects that might occur if LTCM were forced to liquidate its assets, bond prices would drop, and the drop in bond prices would affect the solvency of other institutions.[40] From an *ex ante* perspective, the challenge for risk management would be to assess the risks of changes in market prices that might be caused by failing institutions, perhaps also to assess the counterparty credit risks that might arise because the parties with whom one is contracting might be exposed to such risks of changes in market prices that might be caused by failing institutions, and so on.

Given this level of complexity of counterparty credit risks in the financial system, one is bound to have some sympathy for the practitioner who claims that risks from systemic interdependence cannot be handled by risk management at the level of the individual institution, but must be left to be handled by the central bank as the lender of the last resort.[41]

4.3 Prerequisites of Timely, Effective, and Sustainable Policy Intervention

However, we should not think of the central bank as a *deus ex machina*, whose mere appearance on the scene is sufficient to put things right and avert a systemic crisis. To be successful, the central bank's intervention must be timely, effective, and sustainable. None of these properties can be taken for granted.

To be *timely*, the central-bank intervention must occur *before* a bank failure, or even the rumour of an impending failure, has put markets into a state of panic. However, the central bank must also beware of intervening prematurely, at a time when private solutions to existing problems are still available; otherwise, it risks raising the moral hazard that is associated with any too-big-to-fail doctrine. To be *effective*, the central-bank intervention must be attuned to the problem on hand. In some instances, it may be appropriate to intervene by trading in the open market, as was

39 For an account of this problem that predates the Asian crisis, see Hellwig (1995).

40 For an account of an instance where such domino effects through markets did occur, see Schnabel and Shin (2004).

41 Wuffli (1995).

the case in the United States in 1990, when the turnaround in monetary policy lowered interest rates and enabled commercial banks to re-build their equity by playing the yield curve. On other occasions, it may be necessary to target the intervention to a particular institution, as was the case for Continental Illinois in 1984 or LTCM in 1998.[42] To be *sustainable*, the intervention must be within the central bank's means and must be perceived as such. In 1931, in Germany, the Reichsbank continuing to provide rediscounting to the insolvent Danat Bank was not sustainable as, in the event of the run on the Reichsmark, the Reichsbank ran up against the legally mandated coverage requirements for its currency issue.[43] In the Swedish crisis of the early nineties, government intervention to rescue the banks would not have been possible if Sweden had been subject to the Stability and Growth Pact and if the Pact had been strictly enforced.

Timeliness, effectiveness, and sustainability of an intervention to avert a systemic crisis require a significant amount of cooperation and coordination among different institutions that are involved. In the first place, the central bank as lender of the last resort must be well informed about the situation. It must have a clear idea about the reality behind the numbers in the banks' books. It must also have some appreciation of the potential externalities of a bank's failure on other institutions and on markets. In most countries, this information tends to lie with the banking supervision authority and is available to the central bank only to the extent that the two institutions cooperate.

For effectiveness and sustainability, there must also be no question about the central bank's competence to intervene and about the allocation of the cost of intervention. This requires some agreement with the government, more precisely, the minister of finance. If the central bank wants to avoid losing control over its monetary policy, there must be some understanding that the monetary effects of the intervention will be sterilized and that the cost will be taken over by the government, as an explicit burden on the taxpayer, rather than an implicit one, through the inflation tax. If there is any disagreement – or even delay of agreement – on this point, the appropriate opportunity for intervention may be lost. Subsequent attempts to repair the damage may be less effective and more expensive.

For financial institutions that operate internationally, the problem of ensuring the timeliness, effectiveness, and sustainability of public intervention to avert a systemic risk concerns multiple central banks, multiple banking supervision authorities, and multiple ministers of finance. Their cooperation is needed to establish the requisite transparency as to what the state of the different financial institutions and the state of the financial system really is. Their cooperation is also needed to allocate responsibilities and to provide support to the institutions of any one country, lest there be any doubt in the market as to whether the country is able to handle its part of the crisis.

---

42 Whether the LTCM intervention should be treated as a central-bank intervention at all, is a matter of dispute. After all, the Fed's role was merely to get private institutions to provide a rescue package for LTCM. However, it is hard to imagine the Fed's having taken this role without at least an implicit commitment as to what it would do if systemic developments were to go against the parties whose cooperation it was mobilizing.

43 See Schnabel (2004).

4.4 Banking Supervision and Financial Crisis Management in Euroland

In Euroland, the problem of ensuring the timeliness, effectiveness, and sustainability of public intervention to avert a systemic risk is compounded by the fact that banking supervision and central banking have different geographic domains. Whereas central banking has become supranational, banking supervision remains in the domain of the Member States. Each financial institution is supervised by the supervisory authorities of its own "home country". Supervision takes place under national laws and regulations.

National laws and regulations must conform to the relevant European directives, which provide for some harmonization of rules, as well as a general principle of mutual recognition of "home country" regulation and supervision. European directives are proposed by the European Commission and approved by the Council. Once a directive has been approved, each Member State is legally bound to implement it. Within each Member State, responsibility rests with the minister of finance.

The actual organization of supervision differs across Member States; in some Member States, banking supervision is performed by the central bank, in others, it is performed by a special bank supervisor, in others yet, it is performed by an integrated financial-services supervisor. As a rule, bank supervisors are not independent and must take orders from their finance ministers, even in countries where banking supervision is done within the central bank.[44] The practical implications of this rule differ across countries, depending on the extent to which the country's political culture involves a tradition of respect for professionalism in specialized authorities.

Given the fragmentation of financial supervision in the European Union, the question of how to ensure the degree of co-ordination and co-operation among authorities that is needed for the Single European Market in banking and finance to work has been a matter of major concern. In two reports, one on financial stability and one on financial crisis management, the Economic and Financial Committee[45] (2000, 2001), has investigated this question and issued a number of recommendations. These reports were endorsed by the Council and formed the basis of two Memoranda of Understanding concerning co-operation in crisis situations, a first one concluded in 2003 that involved the different bank supervisors and central banks[46] and a second one concluded in 2005 that brought in the finance ministers as well. [47]

The Economic and Financial Committee's Report on Financial Crisis Management (2001) stressed the importance of having timely and sufficient information for identifying and handling financial crises, defined as situations in which one or more financial institutions are unable to

44 The independence that national central banks are given by the Maastricht Treaty covers only the functions they have in the European System of Central Banks.

45 Created by the Maastricht Treaty, the Economic and Financial Committee has the task of reviewing the economic and financial situation of the Member States and reporting regularly to the Council and the Commission (Art. 114). It consists of representatives of the Member States, of the Commission and of the ECB.

46 www.ecb.int/press/pr/date/2003/html/pr030310_3.en.html .

47 http://www.eu2005.lu/en/actualites/documents_travail/2005/05/14ecofin_mou/ .

meet their obligations, with possible repercussions for the rest of the financial system (p.9). The report also stresses the need to identify beforehand which authority is responsible for effective co-ordination and for decision making, arguing that, in the case of banks, securities firms, or insurance companies, it is natural to assign this role to the "supervisor who exercises consolidated supervision", and calling for an agreement on who is to fill this role in the case of a financial conglomerate (p. 17). Whereas private sector solutions are to be given precedence, the report recognizes that, sometimes, public-sector intervention may be necessary. In some cases, this may take the form of emergency liquidity assistance from the central bank. According to the report, emergency liquidity assistance in Euroland "is primarily a national responsibility and national arrangements continue to apply." "…mechanisms are in place to ensure that any potential liquidity impact … can be managed in a way consistent with the maintenance of the appropriate monetary policy stance" (p. 23). The report further recognizes that, in exceptional circumstances, more drastic support measures may be needed, from the support of deposit insurance funds to outright government intervention in restructuring and recapitalizing ailing institutions (p. 23). Winding down the troubled institution is of course also a relevant alternative; in this case, authorities are faced with the problem of minimizing the fallout on the rest of the financial system (p. 24)

According to the public announcements that were made,[48] the Memoranda of Understanding provide principles and procedures for co-operation between the participating institutions. In particular, they serve to identify the authorities responsible for crisis management, and they provide the basis for sharing information between authorities, specifying the required flows of information and the practical conditions for cross-border information flows, and setting up the logistical infrastructure to support this cross-border co-operation.

4.5 Concerns about the Viability of Arrangements in Euroland

The assignment of tasks between national supervisors, national central banks, and the ECB that is sketched in the preceding account reflects the different institutions' interests. As financial crises are identified with the difficulties of individual institutions and responsibilities are assigned to national supervisors, national central banks, and national governments, the ECB is moved to the background, if not kept out of the picture altogether. This arrangement preserves national prerogatives over banking supervision. It also has a potential for protecting the ECB from adverse incentive effects of private institutions taking support from the lender of the last resort for granted, as well as the danger of having monetary policy corrupted by the need to deal with developments in the financial sector where the ECB has no say.

However, I have serious doubts about the viability of the arrangement. The Report on Financial Crisis Management is silent on some issues that might mar the tidiness of the picture. Yet these

48 The Memoranda themselves are not public information.

very issues are at the centre of potential conflicts that may be a cause of frictions in the management of a crisis by the public-sector authorities that are involved.

First, the Report on Financial Crisis Management is silent on what is to happen if emergency liquidity assistance to a troubled institution transcends the capacity of a national central bank for independent action within the Eurosystem. The question whether emergency liquidity assistance might or should be a task for the ECB is thus avoided. However, if the financial institution in question is sufficiently large or if the institution's difficulties can spill over on other institutions, this is bound to become an issue. On assistance measures that go beyond the provision of support by a single central bank, the Report contains only the somewhat cryptic sentence: "In addition, in case of a general liquidity crisis, the instruments and procedures identified for the single monetary policy and payment systems will be available to the Eurosystem to cope with the situation."

This begs the question whether the crisis of a large institution that transcends the means of that institution's national central bank is deemed to be a "general liquidity crisis". If the issue ever arises, the ECB will find it difficult to resist a call for assistance. Could it be that the Report avoids this issue because an acknowledgement of the need to eventually rely on assistance from the ECB, as well as the national central bank, might generate a demand for greater involvement and more say at a prior stage? If so, isn't there a danger that the inherent conflict between national and supranational competence, which has not been resolved beforehand, might end up delaying the requisite supportive actions in a crisis? Having unresolved issue and an unresolved conflict seems like a poor basis for ensuring that central-bank intervention will be timely, as well as effective.

One might argue that some ambiguity about the prospects of central-bank intervention in a crisis is healthy because it induces participants to be more careful. This argument confuses the ambiguity that exists in the minds of market participants with the ambiguity that exists in reality because important issues surrounding the intervention have not been settled beforehand. Undoubtedly, there is some benefit to having market participants harbour some doubt whether the central bank will really bail them out in a crisis. However, the doubts should concern the central bank's strategy, rather than the central bank's capability. The central bank should have the capability to intervene in a timely, effective, and sustainable manner if it finds that the crisis is really dangerous. Impeding such an intervention by having an unresolved conflict seems like a poor way to induce healthy ambiguity, especially if one considers that, as explained above, at least some systemic risks transcend the risk management capabilities of individual institutions.

A second issue concerns the distinction between illiquid and insolvent banks. This distinction is crucial for the distinction, which is stressed in the Report (p. 22), between emergency liquidity assistance and the provision of new risk capital. However, experience tells us that in practice, it is often not possible to distinguish between an institution that is mere illiquid and an institution that is insolvent. For one thing, the value of the institution's assets can depend on whether they have liquidated or not. For another thing, the values, at which, e.g., loans are carried in a bank's

books, may not have been fully adjusted to recent adverse developments. The information that is required to assess whether an institution is solvent may not exist and, even if it exists, it may not be available. In practice, therefore, it will not be easy to properly draw the boundary between the provision of liquidity assistance by the central bank and the provision of new capital from public funds.

This question, too, stands at the centre of a potential political conflict. If a finance minister has an interest in reducing the budgetary burden of public intervention, he may want to hold on to the notion of a liquidity crisis for as long as possible, as king the system of central banks to provide liquidity assistance. This temptation is also present in a single country that has its own currency. In Euroland, however, it is enhanced by the fact that the costs of central-bank intervention in terms of increased inflation, or merely a changed monetary stance, are likely to be borne at least partly by the rest of Euroland. Moreover, the Stability and Growth Pact may strengthen the desire to avoid a fiscal crunch if at all possible.

Given the temptation to delay an acknowledgement of solvency problems, the finance minister, or political authorities more generally, may want to delay downward corrections of asset values in the portfolios of troubled institutions. A finance minister may even use his authority over bank supervisors for this purpose. If this happens, the information that is being shared between institutions may not be what is needed to properly deal with the situation. Lest it be thought that this is groundless speculation, we should recall that unrealistic valuations of assets in the portfolios of troubled institutions have been a hallmark of political dealings with the savings and loans sector in the United States in the early eighties, of the Japanese banking malaise since the early nineties, of Crédit Lyonnais, and, more recently, in 2003, the German finance minister's intervention exempting life insurers from the need to apply strict mark-to-market accounting to common stocks whose prices had drastically fallen. In this context, it is particularly disquieting to note that the public announcement of the 2005 Memorandum of Understanding bringing the finance ministries in is quite explicit about the fact that this is a non-legally binding document.

4.6 Implications for Switzerland

From the perspective of Switzerland, the international financial centre with close ties to financial institutions all over Euroland, these considerations are anything but reassuring. The manifold linkages of financial institutions in Switzerland with financial markets and financial institutions in other countries imply that any crisis of systemic dimensions in another country can have systemic repercussions for Switzerland. Switzerland thus has a natural interest in the viability of crisis prevention and crisis management elsewhere, in particular, in Euroland, its neighbour all around. If existing arrangements for financial crisis management leave doubts on this account, this must be a cause for worry.

Beyond the general concern that any weakness of financial crisis management in Euroland has negative externalities for other countries, there must also be practical concerns about coordina-

tion. Any financial crisis that affects financial institutions in Switzerland gives rise to a need for information exchange, coordination, and cooperation between the Swiss authorities, i.e. the Banking Commission and the SNB, and their counterparts across the border. If an intervention by the Swiss authorities is called for, the timeliness, effectiveness, and sustainability of the intervention are likely to depend on this.

Such cooperation is subject to frictions even when the partner across the border is a single country with national authority over central banking, as well as banking supervision. In the case of Euroland, there can be additional frictions: First, as explained above, national authorities may have an incentive to delay the acknowledgement of solvency problems. This impairs the reliability of information exchange, not just with EMU partners, but also with other countries. Second, in cases where the provision of liquidity assistance transcends the capacity of a Member State's central bank, the role of a lender of the last resort is up in the air. This raises the question of who is the proper partner for coordinating central-bank interventions in such a crisis. If the crisis transcends the capacity of a single Member State, the ECB would seem to be the only institution that could serve as a lender of the last resort. As yet, however, it is politically incorrect to think of the ECB in these terms. This makes me wonder about the viability of coordination of central-bank bank interventions in such a crisis, as well as the timeliness and effectiveness of the intervention itself.

5. References

Alesina, A., R.J. Barro, and S. Tenreyro (2002), Optimal Currency Areas, NBER Working Paper No. 9072.

Baltensperger, E. (1998), Geldpolitik bei wachsender Integration (1979 – 1996), in: Deutsche Bundesbank (ed.), Fünfzig Jahre Deutsche Bundesbank: Notenbank und Währung in Deutschland seit 1948, C.H. Beck, München, 475 – 559.

Bernholz, P. (1998), Die Deutsche Bundesbank und die Währungsintegration in Europa, in: Deutsche Bundesbank (ed.), Fünfzig Jahre Deutsche Bundesbank: Notenbank und Währung in Deutschland seit 1948, C.H. Beck, München, 773 – 831.

Bernoth, K., J. v. Hagen, and L. Schuknecht (2004), Sovereign Risk Premia in the European Government Bond Market, Working Paper No. 369, European Central Bank, Frankfurt.

Branson, W. (1987), Discussion of "Reaganomics" by O. J. Blanchard, *Economic Policy* 5, 48 – 52.

Bulow, J., and K. Rogoff (1989), Sovereign Debt: Is to Forgive to Forget?, American Economic Review 79, 43-50.

Buomberger, P., and R. Capitelli (1990), Zur Geldpolitik der achtziger Jahre: Einige grundsätzliche Überlegungen, Schweizerische Zeitschrift für Volkswirtschaft und Statistik/Swiss Journal of Economics and Statistics 126, 535 – 551.

Danthine, J.P., and J.C. Lambelet (1987), The Swiss Recipe: Conservative Policies Ain't Enough, Economic Policy 5, 147 – 179.

Economic and Financial Committee (2000), Report on Financial Stability, European Commission, Economic Paper No. 143, http://ec.europa.eu/economy_finance/publications/ economic_papers/economicpapers143_en.htm .

Economic and Financial Committee (2001), Report on Financial Crisis Management, European Commission, Economic Paper No. 156, http://ec.europa.eu/economy_finance/publications/ economic_papers/economicpapers156_en.htm.

Englund, P. (1999), The Swedish Banking Crisis: Roots and Consequences, Oxford Review of Economic Policy 15, 80 – 97.

European Central Bank (2003 a), Opinion of the European Central Bank of 19 September 2003 at the request of the Council of the European Union on the draft Treaty establishing a Constitution for Europe, Official Journal of the European Union 2003/C 229/04, http://europa.eu.int/constitution/futurum/documents/other/oth190903_2_en.pdf .

European Central Bank (2003 b), Letter of November 26 to the President of the Council of the European Union, on the introduction of a new article into the Constitution to allow for the amendment of the ESCB's basic constitutional rules by a simplified procedure, Press Release of November 27, 2003, http://www.ecb.int/press/pr/date2003/html/pr031127.en.html.

European Commission (2003), A Constitution for the Union, COM(2003) 548 final, Opinion of the Commission, pursuant to Article 48 of the Treaty of the European Union, on the Conference of representatives of the Member States' governments convened to revise the Treaties, http://europa.eu.int/constitution/futurum/documents/other/oth170903_2_en.pdf .

Von Hagen, J. (1998), Geldpolitik auf neuen Wegen (1971 – 1978), in: Deutsche Bundesbank (ed.), Fünfzig Jahre Deutsche Bundesbank: Notenbank und Währung in Deutschland seit 1948, C.H. Beck, München, 439 – 473.

Hellwig, C., and G. Lorenzoni (2003), Bubbles and Private Liquidity, mimeo, University of California at Los Angeles, http://www.econ.ucla.edu/people/papers/Hellwig/Hellwig229.pdf .

Hellwig, M., and M.J.M. Neumann (1987), Economic Policy in Germany: Was There a Turnaround?, Economic Policy 5, 105 – 140.

Hellwig, M.F. (1995), Systemic Aspects of Risk Management in Banking and Finance, Schweizerische Zeitschrift für Volkswirtschaft und Statistik/Swiss Journal of Economics and Statistics 131, 723 – 737.

Neumann, M.J.M. (1998), Geldpolitik in der Bundesrepublik Deutschland, in: Deutsche Bundesbank (ed.), Fünfzig Jahre Deutsche Bundesbank: Notenbank und Währung in Deutschland seit 1948, C.H. Beck, München, 309 – 438.

Rich, G. (1990), Capitelli – Buomberger zur schweizerischen Geldpolitik: Der Wechselkurs als Deus ex Machina?, Schweizerische Zeitschrift für Volkswirtschaft und Statistik 126, 553 – 565.

Rich, G. (2003), Swiss Monetary Targeting 1974 – 1996, Working Paper No. 236, European Central Bank, Frankfurt.

Rogoff, K. (2001), The Failure of Empirical Exchange Rate Models: No Longer New, but Still True, *Economic Policy Web Essay*, Issue 1, Volume 1, http://www.economic-policy.org/pdfs/responses/Kenneth-Rogoff.pdf .

Sapir, A., P. Aghion, G. Bertola, M. Hellwig, J. Pisani-Ferry, D. Rosati, J. Vinals, and H. Wallace (2004), An Agenda for a Growing Europe: The Sapir Report, Oxford University Press, Oxford.

Schiltknecht, K. (1990), Zur aktuellen Geldpolitik der Schweizerischen Nationalbank – Ein Overkill? BZ Trust, Aktiengesellschaft, Zürich.

Schnabel, I. (2004), The German Twin Crisis of 1931, Journal of Economic History 64, 822 – 871, 877 – 878.

Schnabel, I., and H. S. Shin (2004), Liquidity and Contagion: The Crisis of 1763, Journal of the European Economic Association 2 (2004), 929 – 968.

Schütz, D. (1998), Der Fall der UBS, Weltwoche-ABC-Verlag, Zürich.

Vaubel, R. (1987), Comment on M. Hellwig and M.J.M. Neumann, "Economic Policy in Germany: Was There a Turnaround?", Economic Policy 5, 141 – 143.

Vaubel, R. (2001), Europa-Chauvinismus: Der Hochmut der Institutionen, Universitas, München.

White, W. (2007), Is Price Stability Enough?, Swiss National Bank (ed.), The Swiss National Bank 1907 – 2007, Neue Zürcher Zeitung Publishing, Zürich 2007, 689 – 719.

Wuffli, P. (1995), Comment on the Paper by Professor Hellwig „Systemic Aspects of Risk Management in Banking and Finance", Schweizerische Zeitschrift für Volkswirtschaft und Statistik/Swiss Journal of Economics and Statistics 131, 139 – 140.