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Stephan von Cramon-Taubadel and Holger Thiele*

EU Agriculture: Reduced Protection from Exchange Rate Instability

In the past, the protection of agriculture in the EU from exchange rate instability was accomplished at the cost of confusing regulations, welfare losses and the discrimination of other sectors. Will the 1993 reform of the Agri-Monetary System, combined with wide 15% European Monetary System margins and the recent GATT agreement, lead to more efficiency in European agriculture?

Since the Common Agricultural Policy (CAP) was established, the so-called Agri-Monetary System (AMS) has protected EU agriculture from the effects of exchange rate fluctuations. Recently, due to the completion of the common market in 1993 and renewed currency instability in the early 1990s, the AMS has been reformed. This reform has reduced the insulation afforded agriculture and, as a result, developments on foreign exchange markets have become more important for agricultural producers, processors and traders. It remains unclear, however, whether these changes will reduce the economic distortions caused by the AMS. At the same time, the recent GATT agreement has increased the influence of the value of the US Dollar on EU agriculture. Here too, it is unclear whether this will lead to reduced inefficiency; it is likely that policymakers in the EU will react to the new environment by turning to new forms of intervention.

In this article, the increased influence on EU agriculture of exchange rate fluctuations both inside and outside the Union is presented and discussed. We consider whether recent changes will tend to reduce or increase the many inefficiencies that have been associated with the AMS in particular and the CAP in general.

The history of the AMS is long and complex. Its basis are the green rates, special exchange rates between national

currencies and the ECU that are only valid in agriculture. Green rates are used to convert common CAP prices from ECU into national currency terms. By appropriate manipulation of the green rates, it is possible to shield agricultural prices denominated in national currencies from the effects of exchange rate fluctuations. Without green rates, the effect of a revaluation of the German Mark (DM), for example, would be to reduce CAP prices in Germany since a fixed amount of ECU buys less DM after the revaluation than before. Under the AMS, this price reduction is avoided by maintaining a DM/ECU green rate that is equal to the pre-revaluation DM exchange rate. Of course, in this example, CAP prices in Germany will increase relative to the rest of the EU; as seen by farmers in other member states, German farmers receive the same number of DM per tonne of produce as before the revaluation, but these DM have become more valuable in terms of other EU currencies.

Hence, when green rates were first introduced in 1969, the EU effectively abandoned common agricultural prices. AMS-induced price differences between the member states were maintained by so-called monetary compensatory amounts (MCAs), a set of taxes and subsidies on intra-EU agricultural trade. At times, these MCAs became quite large; in the 1970s, the difference between CAP prices in Germany and the UK at times reached 50%.

Green rates and MCAs protected agriculture, especially in strong currency countries that would otherwise have suffered from revaluation-induced CAP price reductions. However, this protection was only temporary. According to

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an agreement between the member states, gaps between green and market rates had to be dismantled in the long run. In other words, Germany could delay but not completely avoid CAP price reductions by allowing the gap between its green and market rates to grow. In order to provide farmers in strong currency countries with more lasting protection, the AMS was modified in 1984 by the addition of the so-called Switchover System (SoS).

Under the SoS, CAP prices are effectively denominated in DM.¹ Since 1984, DM revaluations no longer lead to a larger gap between Germany's green and market rates and, hence, to larger German MCAs. Instead, DM revaluations lead – hidden behind a baffling set of calculations – to automatic increases in the ECU value of CAP prices. Since no new gaps and MCAs are created for the DM under the SoS, the need to reduce German prices, even in the long run, is eliminated. Of course, with CAP prices effectively denominated in DM, the scope for price increases in all other member states is increased. Whenever the DM revalues, CAP prices expressed in other EU currencies can increase. Other member states may delay these increases by maintaining overvalued green rates for a while, but eventually they will devalue their green rates and increase domestic prices. Hence, the SoS is fundamentally inflationary and protectionist; it allows all member states to increase their agricultural prices in line with the DM instead of forcing a balance between price increases and decreases around a weaker ECU.

In the course of the 1980s, exchange rates in Europe became increasingly stable. European Monetary System (EMS) parity changes became increasingly infrequent and policymakers began to plan a complete monetary union. Exchange rate stability ushered in a quiet time for the AMS. Since new MCAs only result from EMS parity changes,² and these did not happen often, policymakers could focus their attention on dismantling existing MCAs. Hence, by the beginning of the 1990s, almost all MCAs had been dismantled and observers were predicting the demise of the AMS. A complete overhaul of the AMS was due anyhow since the completion of the common market on January 1, 1993 was about to eliminate border controls and preclude the application of MCA subsidies and taxes.

Reform of the Agri-Monetary System

In response to these developments, a thorough reform of the AMS was implemented in early 1993. The key to this reform is a mechanism that automatically adjusts green rates to keep them in line with market exchange rates. This

mechanism is complex: generally speaking, a country's green rate is adjusted whenever the average gap between it and the corresponding market rate exceeds 2% over a ten-day period. The creation of new MCAs becomes unnecessary because it is assumed that gaps of up to 2% – and, hence, bilateral differences between CAP prices in different member states of up to 4% – will not lead to disruptive trade flows. Along with this change, the 1993 reform also weakened the SoS. Under the reform, 25% of any SoS-induced increase in CAP prices must be offset by a corresponding reduction at the beginning of the following marketing year.

The 1993 AMS reform was based on the assumption that exchange rate stability in the EU would continue and lead to monetary union in the foreseeable future. In the course of 1992, however, EMS parities came under growing speculative pressure. Increased exchange rate instability, coupled with the new automatic green rate adjustment mechanism, led to frequent green rate and CAP price changes in the member states of the EU: In the first 5 months of 1993 alone, 16 such changes were triggered.³

In early August 1993, the EU's Finance Ministers and Central Bank Presidents increased the EMS margins of fluctuation from $\pm 2\%$ and $\pm 6\%$ to $\pm 15\%$. In consequence, the EU's currencies effectively entered a free float. This change, together with the 1993 AMS reform had important implications for the CAP, especially in strong currency countries such as Germany. As long as the EMS kept DM fluctuations within a $\pm 2\%$ band, the automatic green rate adjustment mechanism could only lead to relatively small – if frequent and disruptive – DM price changes. The move to $\pm 15\%$ bands, however, means that much larger DM fluctuations, and corresponding CAP price changes are now possible.

From a German perspective, the move to $\pm 15\%$ bands has had the even graver consequence of effectively deactivating the SoS. The SoS-mechanism, which increases CAP prices in ECU following DM revaluations, is only triggered by official EMS realignments. However, the DM can now revalue by up to 15% *without* causing such realignments. Hence, automatic green rate adjustments could now cause up to 15% reductions in Germany's CAP prices that would not be compensated by the SoS.

Of course, German officials were alarmed by the prospect of such large farm price reductions. German

¹ More precisely, they are linked to the strongest currency in the Union, which, so far, has always been the DM.

² This is a generalisation. Different arrangements have applied for member states such as the UK. See *Agra Europe* (continuously updated), CAP Monitor, Tunbridge Wells, UK.

³ See *Agra Europe* (weekly): No. 1543 (21. 5. 93); No. 1544 (28. 5. 93); No. 1545 (4. 6. 93).

agricultural policymakers have argued that the EMS is not an official component of EU policy, but merely an agreement between the EU's central banks. Hence, they consider it unacceptable that a fundamental aspect of the CAP—the protection of agriculture against exchange rate-induced price reductions – should be eliminated by an EMS decision taken without the consultation of the Council of Agricultural Ministers.

For this reason, Germany and the Netherlands are demanding that the SoS be modified so that it can also be activated by exchange rate fluctuations that occur in the absence of official parity changes. The EC Commission – which had tried unsuccessfully to have the SoS completely eliminated as part of the 1993 AMS reform package – along with member states such as the UK, is strictly against this proposal. Nevertheless, Germany and the Netherlands were able to obtain a temporary suspension of the automatic green rate adjustment mechanism in September of 1993. In this way, automatic revaluations of the green DM and guilder that had become necessary were pre-empted. At the end of December 1993, the automatic mechanism was reactivated, but in a modified form that allows for total gaps of up to 5% between CAP prices in the member states. Under the current system, for example, strong currency countries such as Germany can maintain green rates that are undervalued by 4.5% provided the corresponding overvaluation of green rates in weak currency countries is limited to 0.5%.

The fundamental dilemma facing EU policymakers is that exchange rate instability has returned, but the elimination of border controls has made it impossible to implement the MCAs that were once used to neutralise this instability. At the same time, the disciplines imposed on internal support and export subsidisation by the new GATT agreement make it very difficult to re-institute a mechanism such as the SoS that would make the EU's agricultural price level a function of unpredictable and uncontrollable currency fluctuations. The current AMS arrangements are slated for review in late 1994.

AMS Changes and German Competitiveness

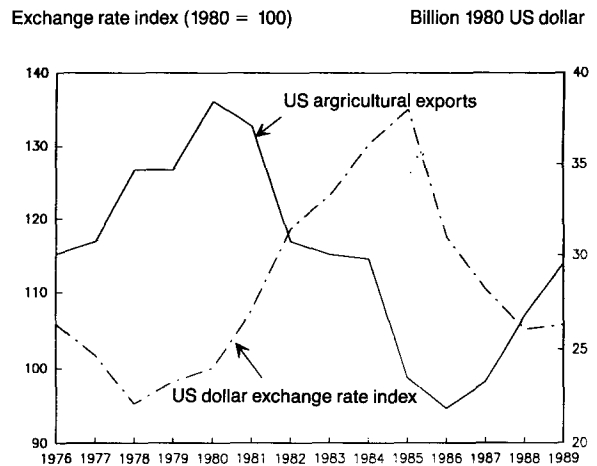
Do the changes in the AMS since 1993 necessarily discriminate against German agriculture? The answer to this question lies in part in considering the justification for the special protection that German agriculture received prior to these changes. Agricultural terms of trade are a function not only of product prices but also of input prices and the cost of living. While German farmers must endure reduced product prices as a consequence of DM revaluations, they also benefit from the associated

reductions in input prices and lower inflation rates relative to their competitors in other member states. Due to the strength of the DM, the prices of imported inputs such as feedstuffs, fertiliser and fuel have increased less rapidly in Germany than elsewhere in the EU.

Of course, it cannot be expected that exchange rate movements in the EU will exactly maintain relative agricultural terms of trade between the member states. Whether or not German agriculture has been over- or under-compensated by exchange rate trends over time is an empirical question. In any event, it makes little sense to consider the German agricultural sector as a whole in this respect since differences in input/output combinations between farms will be associated with different terms of trade.

For the sake of argument, however, let us assume that some parts of German agriculture do suffer from a systematic exchange rate-induced bias. The next question is whether the old AMS and, in particular, the SoS are appropriate policy responses. As discussed above, the SoS precludes CAP price reductions in Germany while increasing the scope for price increases in other member states. With the SoS, for example, German CAP prices remain constant when the DM revalues by 2% while CAP prices elsewhere in the Union increase by 2%. Without the SoS, prices fall 2% in Germany and remain constant elsewhere. Hence, it is not clear that the SoS improves the relative situation of German agriculture vis-à-vis the competition within the EU. However, it can be expected

Figure 1
The Relation between US Dollar Exchange Rates and US Agricultural Exports



Source: M. D. Shane: Exchange Rates and U.S. Agricultural Trade, USDA ERS Agricultural Information Bulletin No. 585, Washington D.C., January 1990.

that domestic price reductions put German farmers under more immediate pressure than foreign price increases, all other things being equal.

Furthermore, it is difficult to say how the DM will evolve in the coming months and years. It is not inconceivable that the DM could, perhaps temporarily, relinquish its role as the strongest currency in the EU. DM devaluations might then result in CAP price increases for German farmers. With the German farm lobby currently demanding compensation for exchange rate-induced price reductions, one is tempted to ask whether Germany's farmers would be prepared to reimburse the EU budget in the event of a DM devaluation.

Finally, the SoS and the AMS provide agriculture with unique protection against exchange rate movements. While there may be political reasons for granting agriculture this special status, it is difficult to objectively argue that agriculture is especially exposed to exchange rate fluctuations. All German producers of tradable products have to deal with price reductions as a consequence of DM revaluations. When the AMS protects farmers from price reductions, agriculture does not adjust and respond to exchange rate developments as other sectors must. The result is, *ceteris paribus*, higher revaluations and greater adjustments outside of agriculture than would otherwise be the case. There are a variety of less interventionist alternatives to the AMS – for example, the introduction of hitherto forbidden commodity futures markets – that could help German agriculture deal

with exchange rate instability while reducing current distortions.

The US Dollar and World Agriculture

The EU is the world's largest importer and second largest exporter of agricultural products. Therefore, exchange rates vis-à-vis third country currencies are also of great importance for the CAP. The strength of the US dollar in particular has had significant implications for the CAP in the past, and there are indications that the importance of the US dollar will increase in the future.

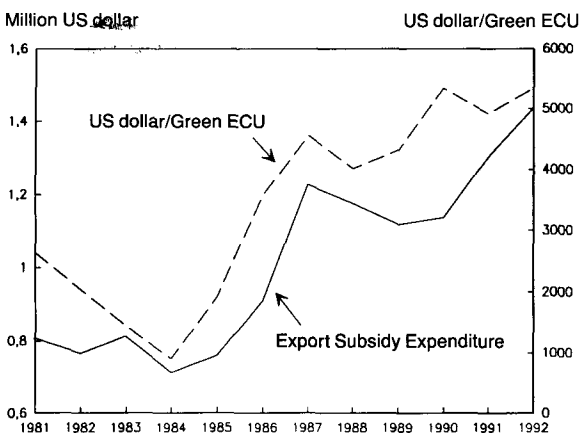
Fluctuations in the strength of the US dollar cause changes in both world market prices and trade of agricultural commodities. How agricultural importing nations respond to changes in the value of the US dollar is depicted in Figure 1. In Figure 1, a trade-weighted US dollar exchange rate index is juxtaposed with the volume of US agricultural exports for the years 1976 to 1989. Increases in the value of the US dollar up to the mid-1980s are associated with declining agricultural export volume, while the ensuing devaluation of the US dollar after 1985 is correlated with increasing export volume.

EU Agriculture: Decoupled from the US Dollar?

In view of Figure 1, one might expect that farmers in the EU would benefit from higher export prices and volumes when the US dollar is strong and suffer lower export prices and volumes when the US dollar weakens. In fact, however, the CAP has insulated EU agriculture from the effects of the US dollar on world markets. If, for example, world market prices of grain increase due to a strengthening US dollar, farmers in the EU are not affected because producer prices for grain in the EU are determined by support (so-called intervention) prices that are not related to world market prices. The only implication of a stronger US dollar is a reduction in the gap between intervention and world market prices.

To make exports possible, the EU provides exporters with subsidies that bridge this gap. Thus, the only immediate implication of a stronger US dollar is a reduction in the export subsidies that have to be paid per tonne of produce and, *ceteris paribus*, a reduction in CAP expenditures. The relation between the strength of the US dollar and export subsidy spending is illustrated for grain in Figure 2. At the beginning of the 1980s, the strength of the US dollar with respect to the ECU⁴ reduced EU

Figure 2
The Relation between US dollar Exchange Rates and EU Export Subsidy Expenditures for Grain



Sources: Commission of the European Communities: The Situation of Agriculture in the Community; Deutsche Bundesbank: Monatsberichte der Deutschen Bundesbank, Reihe 5: Die Währungen der Welt, various issues; own calculations.

⁴ In this connection we must use a US dollar/ECU exchange rate that accounts for the inflationary influence of the SoS. By 1993, the so-called "green ECU" was, due to its link to the DM, some 21% stronger than the normal ECU.

expenditure for grain export subsidies; between 1984 and 1992, the progressive weakening of the US dollar was associated with increasing outlays for grain exports.

Hence, the CAP shields farmers in the EU from the immediate impacts of changes in the strength of the US dollar. Nevertheless, this shield is not perfect. First, persistent weakening of the US dollar puts the EU budget under considerable strain and increases the pressure for lower prices and reform. It is likely that the strength of the US dollar in the early 1980s relieved the pressure for CAP reform, just as its later weakness contributed to the reforms that were implemented in 1989 and 1992.

Second, the CAP has not decoupled all agricultural markets in the EU from the rest of the world. The EU imports large amounts of oilseeds such as soybeans as well as feedstuffs such as tapioca and corn-gluten-feed. Due to an agreement reached under the GATT in the 1960s, these imports are only subject to very low or zero duties. Many of these products originate in the US and become more expensive from an EU perspective as the US dollar revalues. Thus, EU livestock producers feel the direct impact of US dollar fluctuations, even though prices for their final products are decoupled. Since the by-products of feed processing (such as soybean oil) compete with other agricultural products (such as butter and olive oil) the strength of the US dollar also has indirect effects on the markets for these products. US dollar devaluations lead to lower prices for soybeans and, via

cheaper margarine, to pressure on butter and milk prices in the EU.

The 1992 reform of the CAP and the GATT agreement reached in 1993 will increase the importance of the US dollar for EU agriculture. As a result of the 1992 reform, EU grain prices are being reduced by 30% over three years and a mandatory 15% acreage set-aside for larger farms has been implemented. These measures will reduce EU grain production and lower the gap between EU and world market prices for grain. Both reductions will reduce the EU's grain export subsidy expenditures which, at first glance, would seem to reduce the EU's exposure to US dollar fluctuations.

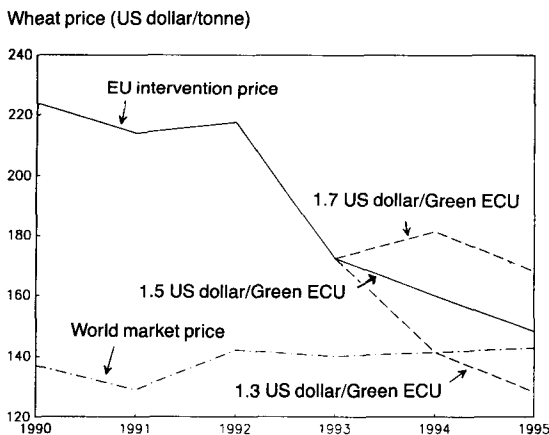
At the same time, however, the recent GATT agreement contains a number of commitments that are very sensitive to the value of the US dollar. The new agreement calls for a progressive reduction of subsidised export quantities (21%) and export subsidy expenditures (36%) by the year 2000. These reductions will have different effects on different commodities in the EU. To meet these commitments for grains, for example, the EU will have to reduce its subsidised grain exports from roughly 32 to 23.5 million tonnes (Mt) and cut export subsidy expenditure from roughly 4 to 1.7 billion ECU by the year 2000.⁵

Dirigistic Intervention

Whether or not these restrictions are binding for the EU will depend, inter alia, on the future development of the US dollar. In Figure 3, the EU intervention price for wheat is compared to world market prices for wheat under a variety of US dollar/ECU exchange rates for the years 1990 to 1995. Current world market prices are approximately US dollar 140/t and the applicable US dollar/ECU rate is in the range of 1.4 to 1.5.⁶ If these figures do not change, the gap between EU intervention and world market prices will be very small in 1995. The EU will still have to subsidise its wheat exports, but the required subsidy will be negligible.

Should the US dollar weaken, for example by 15% to a rate of roughly 1.7 US dollar/ECU, then the EU will, ceteris paribus, have to pay export subsidies of roughly 15 ECU/t. Larger devaluations of the US dollar and/or falling world market prices would increase these subsidies. Under such circumstances, the GATT agreement on export subsidisation could become binding. Beyond a fixed amount of exports – roughly 19 Mt of wheat in 1995 and

Figure 3
The influence of the US dollar on EC Wheat Markets under the New GATT Agreement



Sources: A. Toepfer: Die Getreidemarktordnung der EG, various issues; USDA ERS: Grain Market Situation and Outlook, various issues; Deutsche Bundesbank: Monatsberichte der Deutschen Bundesbank, Reihe 5: Die Währungen der Welt, various issues; own calculations.

⁵ These reductions are based on actual exports and expenditures in 1991/92. They exceed the 21 and 36% referred to above because these percentages are based on a 1986-1990 reference period. By 1991/92, actual exports and expenditures had grown relative to the reference period.

⁶ The so-called green ECU is applicable here; see footnote 4.

13.4 Mt in the year 2000 – the EU would no longer be permitted to subsidise exports. In this case, policymakers might attempt to reduce exports by increasing set-aside, implementing quotas or turning to even more restrictive policy measures. As an alternative, some exports might have to move without the benefit of subsidies. This would put EC wheat prices under considerable pressure, as well as fueling conflicts between the member states over the distribution of limited subsidised export opportunities.

Figure 3 also illustrates what would happen should the US dollar strengthen with respect to the ECU. In this case, EU wheat prices would be lower than world market prices and the EU could export wheat without limit.

Of course, Agricultural Ministers in the EU hope that the 1992 reform of the CAP will lower grain surpluses so much that no conflict with the GATT can result, irrespective of the US dollar. It is still too early to say whether this will be the case. However, there is reason to believe that initial estimates of the surplus reduction were too optimistic. Regardless, GATT disciplines on subsidised exports apply to all agricultural products including those that – unlike grains and beef – were not affected by the 1992 reform. The EU remains highly dependent on subsidies to dispose of its sugar and milk surpluses and, despite the 1992 reform, recent concerns over BSE in the EU have lead to a rapid increase in the exportable beef surplus. For these products, scenarios that are similar to those depicted in Figure 3, but without the intervention price reductions that apply to grain, can be imagined. It therefore seems inevitable that there will be conflicts between the CAP and the GATT, the intensity of which will depend on the future course of the US dollar.⁷ How EU policymakers respond to such conflicts remains to be seen. In view of the history of the CAP, however, it is likely that policymakers will respond with dirigistic measures such as quotas and other quantitative restrictions that increase distortions within the EU and generate conflicts between the member states.

Conclusions and Outlook

Since agriculture produces tradable goods, both the level and stability of agricultural prices are influenced by developments on international currency markets. Policymakers in the EU have attempted, since the founding of the CAP, to protect their farmers from exchange rate-induced changes in price levels and stability. Economists have

repeatedly called for a fundamental liberalisation of the AMS, but this can hardly be expected of EU policymakers. Indeed, past steps towards a more liberal AMS have generally been forced upon the CAP by factors from outside agriculture, such as the completion of the common market or the move to wider EMS bands.

Future steps will be facilitated by the fact that the 1992 reform of the CAP has reduced the importance of price support on some agricultural markets. If this trend continues, the need for an AMS to insulate support prices from exchange rate movements may disappear. As support prices lose their importance, however, producer prices themselves become more susceptible to exchange rate instability. Thus, it is likely that EU policymakers will seek some alternative to the old AMS in the months and years to come.

For example, the 1993 AMS reform does contain provisions for decoupled compensation for farmers that suffer income losses due to exchange rate movements. This compensation is to be of limited duration. However, experience suggests that such measures, once initiated, take on lives of their own: German farmers still benefit from “temporary” compensation payments that were originally granted when the SoS was first implemented in 1984. It is hard to imagine that any new agri-monetary schemes that EU policymakers develop will be less distortive than the old AMS was.

The stability of the US dollar can also be expected to play an important role in EU agriculture in the future. In the past, the impact of the US dollar was mainly felt on the EU budget, and on the markets for oilseeds and feedstuffs. In the future, the US dollar will have an important influence on the EU’s ability to conform to the agricultural provisions of the new GATT agreement. It is already becoming clear that conforming with the GATT will require a reform of the 1992 reform. The weaker the US dollar in the coming months and years, the more dirigistic this reform is likely to be. It is somewhat of a paradox that the GATT agreement, which will certainly lead to a less distorted pattern of agricultural trade *between* the major trading nations, will probably accomplish this at the cost of increased intervention *within* these nations.

In summary, CAP reform, the 1993 AMS reform, and the GATT agreement are leading to a shift in the way EU agricultural policymakers deal with exchange rate instability. Extremely distortive measures such as the old AMS – with its emphasis on taxes and subsidies on intra-EU trade – have been dismantled. While this is certainly a positive development, there is reason to expect that policymakers in the Union will replace old forms of intervention with new ones.

⁷ The GATT agreement also contains provisions for minimum import requirements and the tariffication of barriers to trade such as import quotas. However, the US and the EU were able to agree on a generous set of safeguard clauses that should guarantee the EU a continued redundant margin of protection, independent of the strength of the US dollar.