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A plan C for the euro

THOMAS MAYER

- There are, broadly speaking, three options available to fix EMU:
  - Plan A: The continuation of the muddling through in response to upcoming dangers and challenges as it has been pursued since the start of the Euro Crisis in 2010.
  - Plan B: The institutionalization of the soft budget constraints for public and private entities that have allowed EMU to function so far through the establishment of a "Transfer Union".
  - Plan C: The reestablishment of the euro as a common currency in a monetary union with hard budget constraints for public and private entities.
- Although Plan C would offer the only realistic prospect for a durable EMU it is also the least likely to be followed.

Against the background of rising anti-European populism, which culminated in the exit of the United Kingdom from the European Union, there is wide-spread agreement among mainstream political forces that a new effort at reviving the idea of European integration is needed. President Macron wants to join forces with Chancellor Merkel to launch a Franco-German initiative to this end. However, any effort at developing the EU further needs to begin with fixing existing structures where they are in disrepair. Apart from migration policy this affects in particular European Monetary Union. There are, broadly speaking, three options available to fix EMU:

Plan A: The continuation of the muddling through in response to upcoming dangers and challenges as it has been pursued since the start of the Euro Crisis in 2010.

Plan B: The institutionalization of the soft budget constraints for public and private entities that have allowed EMU to function so far through the establishment of a "Transfer Union".

Plan C: The reestablishment of the euro as a common currency in a monetary union with hard budget constraints for public and private entities.

Although ad hoc policy responses to upcoming problems have so far held EMU together, pursuit of Plan A is unlikely to prevent eventual failure. This is why a number of policy makers and economists favor Plan B. Establishment of a Transfer Union can certainly improve the mechanics of EMU and in this way raise its chance for survival. But it also strengthens centrifugal political forces that could eventually force its dissolution. Hence, in my view, Plan C would offer the only realistic prospect for a durable EMU. But the political obstacles against Plan C are formidable so that the chance for its implementation is slim.

The unfinished currency

The euro owes its existence to an accord between France and Germany in 1989: France would support the reunification of Germany if Germany proved its commitment to Europe by giving up the D-Mark in favor of a European currency.[1] The two countries have had a different understanding of the role of policy and this difference has led to many poor compromises in the construction of European Monetary Union. In post-war Germany, classic liberalism, which is rooted in the thinking of British liberal philosophers and its reception in Germany by Immanuel Kant and Wilhelm von Humboldt, was revived by the successful economic policy of Ludwig Erhard, who derived his concept of the Social Market Economy from it. For classic liberals, freedom of the individual is the highest value, but it can only be attained when the freedom of one person does not impinge on that of another. Consequently, free individuals need to find and observe rules of conduct to live together in an orderly way. In the society of free individuals, rules that have evolved through trial and error over time, and which no single person could have designed, ensure the maximum possible freedom for each member. Society cannot pursue any ends by itself but ensures that its members can pursue their own ends. A key function of the state is to make sure that the rules are observed.[2] In line with Friedrich von Hayek I shall call this view of society, policy, and the role of the state critical rationalism.

Against this stands the Cartesian philosophy, which has had an important influence on the understanding of society, policy and the role of the state in France. There, the state is seen as an expression of the organization of a society that pursues ends of its own. Legitimized by democratic elections, the government regards itself as mandated for the implementation of the will of the people. Law is the instrument to enforce compliance of the citizens with the government's program. With reference to the rationalist philosopher Rene Descartes I shall call this view rational constructivism.

The two opposing views have important implications for the order of money. From the viewpoint of critical rationalism (or liberalism), money is a means of exchange agreed upon by social consensus. There is no need for a state. Where people not related to each other in any way engage in economic transactions among each other, some good will be chosen "spontaneously" (i.e., without conscious planning) to serve as a means of exchange. No state organization is needed for money to fulfill its function. It would even work in anarchies. By contrast, from the vantage point of rational constructivists, money is a social instrument consciously designed by the state on behalf of society. It is employed by the state to achieve policy objectives, from the funding of government finances to the central management of the economy (including the smoothing of the business cycle and the continuous depreciation of money at a fixed rate

[1] See Thomas Mayer, Europe's Unfinished Currency. Anthem Press (London) 2012.

[2] See Friedrich von Hayek, Law, Legislation and Liberty. Routledge (London) 2013.

through inflation). Consequently, money is issued under a state monopoly as "legal tender".

In the construction of EMU these two opposing views of the role of the state created continuing conflicts. While the German side aimed at enshrining rules for the conduct of monetary policy in binding contracts, the French side emphasized the primacy of policy discretion over rules. In many instances, compromises were found by phrasing rules in an ambiguous way or attaching escape clauses to rules. As a result, the euro was created with a Janus face. On the one side it was designed as the private means of exchange favored by the liberals, on the other side it was given the characteristics of a policy instrument in the hands of the state championed by the rational constructivists. The euro could afford having a Janus face as long as the rules were not tested in adverse circumstances.

The launch of EMU in 1999 came only a short time before the inflation of the Great Credit Bubble of 2002-2007. Hence, through most of the first decade of its existence, the euro benefitted from very easy access of both public and private entities to cheap credit. On paper, the euro was established as a hard currency that would impose hard budget constraints on economic agents in the currency union. Companies and even states unable to observe hard budget constraints were expected to suffer bankruptcy. Many observers had expected serious problems due to the inability of a large part of the inhabitants of the euro area to live with hard budget constraints. In the past, they had been able to rely on monetary policy to soften budget constraints for them when they were unable to survive economically and financially.

The concept of the soft budget constraint was introduced by the Hungarian economist Janos Kornai in the early 1980s to describe the circumstances in which companies operated in the socialist economy.[3] Since these companies were not supposed to disappear, financing of their costs was secured by the socialist government, even when they produced goods that nobody wanted in the most inefficient way. The presence of soft budget constraints was a key reason why socialism eventually failed. Against this, companies in the capitalist economy are supposed to face a hard budget constraint in the sense that they have to get their unit costs down below the price their products fetch in the market. Inability to do so leads to their bankruptcy and disappearance. However, a significant number of countries joining EMU had developed a soft-budget-constraint mentality and hence was expected to be unable to live with hard budget constraints. EMU was therefore expected to fail soon after its launch.

But developments seemed to refute the expectations of these skeptics. Germany, the country most insistent on establishing a hard currency regime, was dubbed the sick man of Europe in the early 2000s while some others in the north and south of the monetary union were regarded as Europe's "Tiger countries". Reality, however, was different. Easy access to cheap credit allowed public and private entities to continue operating under soft budget constrains as they were used to do before they entered EMU. In fact, EMU membership was seen as raising their credit worthiness so that their access to credit even improved.

Cheap credit held EMU together during most of the first decade of its existence, and EMU came unglued when the era of cheap credit disappeared with the burst of the Great Credit Bubble. In 2007-08, when massive defaults of US mortgage loans triggered the first wave of the Great Financial Crisis, the euro area appeared to remain a sanctuary from the consequences of

[3] See Janos Kornai, Economics of Shortage. North-Holland 1980.

American follies. Only German banks suffered, because they had helped to fund the U.S. mortgage bubble. But things changed, when it could no longer be swept under the carpet that also euro area public and private entities had recklessly borrowed. Greece was the proverbial "canary in the coal mine", which was in danger of going bankrupt when it became known that the country had forged data to hide its reckless borrowing.

Confronted with the choice of sticking to the agreed rule of not bailing out countries in self-inflicted difficulties and letting the markets enforce adjustment or replacing private funding with public funding, euro area governments chose the latter. Of course, the choice did not come easy. At first, fear of the consequences of forced adjustment by the markets led to a bail-out of Greece in 2010. Then, shock created by this "fall of man" led to efforts for a return to rules in 2011. Greek public debt was restructured and "Grexit" contemplated. But "contagion" from Greece to other countries in 2012 eventually moved the balance from "no" to "full" bail-out of states and (to a somewhat lesser degree) banks in financial distress, administered in part by the community of EMU member states but much more so by the ECB in the form of monetary funding of debt that could not be placed in the market. The political will of keeping the project of the single European currency alive dominated the agreed rules and treaties. Instead of a project under the law EMU became a project above the law. The euro lost its face as a private means of exchange and became the "state money" cherished by the rational constructivists.

In 2012 ECB President Mario Draghi singlehandedly rescued the euro by committing the ECB to do whatever it takes to hold EMU together. This episode showed the importance of the central bank for keeping indebted private and public entities alive as going concerns. Indeed, while some EUR 347 billion of financial support for countries and banks in distress was routed through the European Stability Mechanism and its predecessor (the EFSF, EFSM and bilateral loans), almost EUR 1.1 trillion of credit was extended by four countries (Germany, the Netherlands, Finland and Luxembourg) through the Eurosystem's interbank payment system Target2 to financially weaker euro area countries.[4] Official credit through this system has replaced private credit to banks (and credit to governments through the banks) in these countries as domestic and international creditors fled out of concern for the safety of their claims.

However, the monetization of doubtful euro area government and bank debt shunned by private investors works only as long as money created to fund this debt is trusted as a means of exchange and store of value by the general public. Monetization of government debt is akin to a debt equity swap, whereby redeemable government debt is replaced by non-redeemable equity in the form of central bank money. Like equity investors confronted with new equity issuance by a company, the general public will hold the book money of banks created against the newly issued central bank money only if they have trust in the economic strength of the state issuing the money. In the case of the euro, this trust is shaky, because it is unclear which state is backing it. To appreciate this point, consider the hypothetical case that the German Bundesbank would suspend its participation in Target2 and the German government

[4] See Ifo Institute, „Die Finanzhilfen für Euroländer und der Haftungsanteil Deutschlands". (München) Juni 2017. While the credits from European institutions and governments were extended with fixed maturities, positive interest rates, and under conditions for economic policy, the credits under Target 2 are created automatically without any conditions, have no fixed maturity and carry the interest rate of the ECB's refinancing facility, which is zero at present.

would cap its exposure to other euro area countries through the ESM. Most likely, this would deal a very serious blow to the appreciation of the euro by both international investors and euro area residents.

For now, commitment by the stronger countries to EMU and the lack of inflation is underpinning the acceptance of the euro in foreign exchanges and by euro area residents. However, money issuance by the ECB can no longer be maintained at its present pace when inflation expectations start to increase. At the same time, a reduction of monetary funding of financially weak public and private entities could trigger another financial crisis in the euro area. Thus, the present stance of policy does not appear to be sustainable in the long-run. What is to be done? I see mainly three ways going forward.

Plan A: Continue muddling through

Although the deficiencies in the architecture of EMU were well known before the euro crisis, authorities were unable to take precautionary action. They only reacted when the burst of the Great Credit Bubble endangered the existence of the euro. Most of the measures were taken ad hoc under great pressure and only later transformed into more durable arrangements for the governance of EMU. Without participation of the ECB, the rescue would probably have failed.

Past experience would suggest that little will be done to prepare for another crisis. Yet, another crisis may well occur when the economy falls into a serious recession. As before, help by the central bank would probably be of the essence to avoid bankruptcies of public and private entities, especially because most euro states at present have more debt than before the last euro crisis and have made little effort at reducing it. However, more help from the ECB cannot be taken for granted as the bank's statutes cannot be stretched infinitely. Should it be withheld, highly indebted entities may be in danger of going bankrupt. Some governments could see no other escape from bankruptcy than leaving the euro and re-introducing their own national currencies. This could end in a break-up of EMU and disappearance of the euro. I call this scenario plan A.1.

Presumably, most national currencies would depreciate against a new German currency, the "new D-Mark", after redenomination. In the countries with depreciating currencies, the foreign currency value of redenominated liabilities would fall while the domestic currency value of redenominated foreign assets would rise. This would be equivalent to a partial foreign debt relief, and the net international investment position of these countries would improve. The opposite would occur in Germany (and any other country pegging their new currency to the new D-Mark). The new D-Mark value of claims on other former EMU partner countries would fall while liabilities would remain the same as they were redenominated from the former euro to the new D-Mark at an exchange rate of 1:1. This would create problems for entities with big new D-Mark liabilities, i.e., mostly monetary and financial institutions (MFIs), pension funds and insurance companies, the Bundesbank, and the German government.

To stabilize the balance sheets of MFIs, pension funds and insurance companies, so-called equalization claims on the government could be issued. These claims would be indexed to the exchange rate of the new D-Mark against the weighted average of the successor currencies to the euro, with the weights determined by the currency composition of the liabilities of the respective entity at the time of currency conversion. Thus, in the unlikely event that the exchange rate of the new D-Mark would remain unchanged against the weighted average of the

successor currencies to the euro, the value of the equalization claim would be zero. In the more likely case that the new D-Mark appreciated—by, say, 25 percent against the weighted average of the other currencies—the value of the equalization claim would rise to 25 percent of the value of the assets at the time of currency conversion. Hence, the equalization claims would offset any effect from exchange rate changes of the new D-Mark against the weighted average of the other successor currencies to the euro.

At the time of EMU breakup and the disappearance of the euro the claims of the Bundesbank against the Eurosystem in the Target2 interbank payment system (presently some € 860 billion) could be converted into the successor currencies of the euro according to the capital weights of the former EMU member countries in the Eurosystem.[5] Assuming again that the weighted average exchange rate of the new D-Mark would appreciate by 25 percent, the claims of the Bundesbank would decline in new D-Mark terms by a fourth or € 215 billion. Consequently, the balance sheet of the Bundesbank would show a significant negative equity position. However, a negative equity position of a central bank is not a problem requiring immediate attention. A number of central banks have operated with negative equity for years, until profits from seigniorage have allowed them to rebuild their equity.

In the case of the Bundesbank, the rebuilding of equity could come from both seigniorage and profits from foreign exchange intervention. Assuming that there would be upward pressure on the exchange rate of the new D-Mark, the Bundesbank could stretch the appreciation over time—and thus mitigate its real economic effects—by introducing a crawling peg against the successor currencies of the euro. The foreign exchange accumulated through intervention could be invested in a global equity portfolio. The rise in value of the equity portfolio would over time help to rebuild the Bundesbank's equity.

The German government would suffer a loss on its share of the loans extended by the European Stability Mechanism and its predecessors to financially distressed countries. Assuming that these countries would repay their debt in redenominated currency and that the new D-Mark would appreciate by 25 percent against the weighted average of the successor currencies, the German government would have to write off some € 25 billion (based on the exposure of the German government of about € 100 billion as calculated by the Ifo-Institute). In addition, the German government's liabilities would increase by the equalization claims allocated to MFIs, pension funds and insurance companies.

Table 1 gives a tentative estimate of the first-round losses to Germany in case of an EMU break-up and a permanent 25 percent appreciation of Germany's new currency. There could also be second-round losses due to a weakening of the economy in response to the disruption created by an EMU break-up, which are not included in Table 1. The estimate of the equalization claims allocated to banks is based on

[5] Technically, the Bundesbank holds claims against the Eurosystem and would share in any losses of the Eurosystem according to its capital contribution to the ECB (26 percent of the total). Thus, assuming a loss of 25 percent on the claims of the Eurosystem on Eurosystem central banks in the amount of some 1 trillion Euros under Target 2, the Bundesbank theoretically would be allocated only EUR 65 billion from a total loss of EUR 250 billion. As a result, the other central banks holding claims on the Eurosystem of only some EUR 150 billion, on which the losses would amount to EUR 37.5 billion, would be allocated losses of EUR 185 billion. It is highly unlikely that these central banks would pay a bill so much higher than the losses resulting from their own claims against the Eurosystem. Moreover, it is doubtful whether the loss sharing mechanism of the Eurosystem could be still enforced when the system has ceased to exist.

Table 1. Estimated financial loss to the German taxpayer from EMU breakup

	Financial loss (billion EUR)
German government - ESM et al.	25
- Equalization claims to banks	100
- Equalization claims to pension funds and insurances	215
Bundesbank - Target 2	215
Total	555 (18 % of GDP)

Source: Own calculations (Flossbach von Storch Research Institute).

banks' net cross-border claims in euros as reported by the BIS (the new currency value of which would be reduced by 25 percent). The estimate of the equalization claims for insurances and pension funds is based on the investment of these entities in debt certificates and investment funds (as reported by the Bundesbank), under the assumption that all these investments are within the euro area and those outside of Germany allocated to France, Italy and Spain according to the market capitalization of government bond markets in these countries relative to the total market capitalization of the euro area government bond market. Based on these assumptions, the financial loss to the German taxpayer would amount to EUR 555 billion (or 18 percent of 2016 GDP). Part of this loss could be recouped by gains on the global equity portfolio of the Bundesbank acquired in the context of foreign exchange intervention.

Alternatively, in a scenario I name plan A.2, the ECB could immediately monetize all financial gaps created by recession. As mentioned above, this would be equivalent to an extension of the "debt-equity-swap" used to stabilize EMU in the first euro crisis. But there are limits for a "debt-equity swap" in the form of monetization of debt by the central bank. When the general public regards new equity issued (i.e., new money created to replace maturing debt) as no longer backed by the real equity available it will shun it. Thus, another round of debt monetization could lead to a sudden loss of confidence in the euro, triggering a plunge in its exchange rate against more valuable alternatives (ie., goods and other assets).

Whether the euro will survive unscathed under these circumstances would largely depend on the willingness of the German population to accept a decaying currency. History would argue against this. At the same time, however, history would also argue against a German government taking a decision to leave EMU, or even allowing a public referendum on this question. Hence, while a debased euro would officially remain legal tender in Germany, the population could elect another currency as a means of exchange and store of value. This could be a more valuable foreign currency (e.g., the Swiss franc or the US Dollar, gold, or privately supplied crypto

currencies). With the euro no longer fulfilling the functions of money in Germany, the German government could eventually scrap its status as legal tender. As the euro would continue to exist and be used in other countries, balance sheets in Germany would be gradually shifted to the alternative currencies. The government would not dare to ban conversion when a critical mass of voters chose to abandon the euro. A "spontaneous" change of currency would of course create winners and losers. Those converting early to the most popular alternative currency would win, those converting late would lose.

Plan B: Institutionalize the soft budget constraint

Forward looking institutions, such as the European Commission, clearly see the danger of a potential future loss of monetary financing of financially distressed public and private entities. The ECB's asset purchase programs cannot be maintained forever. As the economy recovers and inflation expectations rise, the ECB may have no other choice than to scale down and eventually terminate its programs. But this would leave public and private entities relying on ECB buying of their debt out on a limb. In anticipation of the winding down of the ECB's financing facilities, the EU Commission has proposed the creation of more common funding facilities.

In its "reflection paper" on the future development of the EU and the euro area, the Commission envisages more "risk sharing" through, for example, a common bank deposit insurance scheme and a fiscal backstop to the Single Resolution Fund (for bank resolution).[6] "Macroeconomic stabilization funds" in the form of a European unemployment reinsurance scheme, a "rainy day fund", and / or a budget for the euro area, rounded off with a euro area finance minister, should increase the capacity of the center for macroeconomic stabilization policy. To increase economic convergence among EMU member states, financial incentives for reforms should be given either by a dedicated new fund or through existing structural and investment funds. "Sovereign bond-backed securities" are seen as a means to increase market access at more favorable terms for countries with lower credit quality. A European Monetary Fund could replace the combination of the European Stability Mechanism, the EU Commission, the ECB and the International Monetary Fund in adjustment funding and management. Presumably, the Commission expects more leniency in adjustment management from an EMF than the IMF has shown during the euro crisis.

Proposals to replace the ECB funding by funding from other sources without strict conditions amounts to the institutionalization of the soft budget constraint for public and private entities, which has held EMU together during its first decade of existence. Plan B (as I call it here) would eliminate the fractures in EMU emanating from hard budget constraints. Consequently, EMU would stand on a much firmer financial basis. At the same time, however, communitization of financial liabilities most likely would strengthen centrifugal political forces.

As the example of Germany shows, a scheme for the redistribution of tax revenue among local governments leads to the strengthening of the political center. After a long period of quarrels among German federal states over financial transfers, a law was passed in early 2017 giving the German federal government a greater role in distributing funds and more political competences. A greater degree of communitization of finances in the euro area would probably also shift the power from nation states to European

[6] EU Commission, "Reflection Paper on the deepening of the Economic and Monetary Union". (Brussels) May 2017.

bodies at the center. However, without merging the countries participating in EMU into a political union in the form of a federal state, the European center would lack democratic legitimacy and hence acceptance by peoples of the nation states. Political movements for the secession of nation states from an illegitimate union would most likely be the result. The formation of such movements would of course take time. Hence, plan B may well succeed in extending the life of EMU, but it will probably not safe it.

Plan C: Return to hard budget constraints

The only honest course of action—namely to return to the agreed principles of EMU after they were broken during the crisis—is also the least likely to be taken. Too many countries have accepted these principles in the expectation that they will not have to follow them. Nevertheless, in the following I shall sketch a scenario for the creation of a hard currency union with hard budget constraints for public and private entities as originally agreed in the European Treaties.

In the first step, monetary union would need to be completed by making bank deposits as interchangeable as banknotes issued by different member central banks of the Eurosystem. At present, bank deposits represent private liabilities of banks created by them through credit extension. Contrary to a widespread prejudice, banks do not collect deposits to fund credit, but they create deposits when credit is extended. Hence, bank deposits, and as a result all book money, are only as good as the quality of banks' credit portfolios and the ability of governments to bail-out banks when they suffer credit losses greater than their equity capital. Since the quality of banks' credit portfolios and the ability of national governments to bail out ailing banks in their jurisdiction are different among euro area member countries, bank deposits are not fully interchangeable. Presently, EMU is a cash union, but no monetary union. This is the reason, why many economists insist that a common deposit insurance scheme is needed.

To make banks' sight deposits (which are very close substitutes to cash) as interchangeable as banknotes across EMU, sight deposits would need to be fully backed by reserve money held at the ECB. Like cash, the "safe deposits" would exist independently of the existence of the bank where they are held. If the bank failed, the central bank would simply assign the reserve money to another bank and instruct it to recreate the safe deposits that were held at the failed bank.

To build up safe deposits, the ECB would continue with asset purchase programs until the central bank money reserves of banks would be equal to the money aggregate M1 minus cash in circulation at the time of the start of the transition. Through its asset purchase programs the ECB already has increased the monetary base (consisting of cash and central bank reserve money of banks, and amounting to EUR 2.9 trn at the end of May 2017) to 39 percent of M1 (EUR 7.5 trn). Another EUR 4.6 trn of asset purchases would be needed to back M1 fully with central bank reserves. This would be equivalent to about 37 percent of outstanding euro area government debt.[7] Central bank money used to back safe deposits should be kept in a separate deposit facility at the ECB, neither paying nor charging any interest. Like cash, safe deposits should be free of nominal returns and costs.

[7] The ECB would hold this government debt permanently to back M1. Thus, the backing of M1 with central bank money would also allow a significant reduction of government debt outstanding in the market. This feature of a 100 percent money system has already been explained by the authors of the Chicago Plan of 1933 (see Irving Fisher, 100% Money and the Public Debt. Economic Forum, Spring Number, April-June 1936, pp. 406-42).

After safe deposits have reached their targeted size, they would have to be increased at a fixed rate reflecting the expected nominal growth of the economy in the long-term. The rate of growth of M1 would be similar to the "reference value" for the growth of M3, with the difference that the growth of M1 would be determined by the allocation of new reserve money to banks and could only be altered with a two-thirds majority of the members of the ECB's Governing Council when significant structural changes of the economy would change its expected long-term growth rate.

Initially, traditional bank deposits could be exchanged into safe deposits at parity. Banks would simply sell credit they have extended (primarily government bonds) to the ECB against central bank money to back safe deposits demanded by their customers. When the initial target value of M1 has been reached, the ECB would cease buying credit and instead allocate new reserve money to banks to grow M1 as planned. It would require banks to pay book money created against these reserves into customers' accounts as a "money dividend". Thus, seigniorage of new money creation would go to citizens instead of governments.

It is possible that there would be more demand for safe deposits than supply, which is restricted by the planned expansion of M1. In this case, traditional bank deposits would no longer be exchanged at par into safe deposits. They would be tradable like any other bank debt, with the discount equilibrating the demand for safe deposits to their exogenously fixed supply. The prospect of an eventually variable exchange rate between safe deposits and bank deposits would probably give bank customers an incentive for early conversion. Thus, a run out of bank into safe deposits at the time of a financial crisis could be avoided.

When banks cease to extend credit to create book money they are reduced to intermediators between savers and borrowers as (presently mistakenly) described in economic text books. From the savers' point of view, the difference between a bank and a credit investment fund would be that the former would offer a first-loss-insurance in the form of its equity capital buffer. The savings rates banks would have to offer to attract savers would depend on the quality of their loan books and the size of their equity cushions. Rating agencies could help savers assess the quality of banks. Thus, the necessary restructuring of the banking sector and cleaning of banks' balance sheets would be driven by market forces instead of official supervisors with more limited knowledge and subject to political influences.

In the second step a European Monetary Fund would have to be created to give governments of fundamentally financially sound states in temporary financial difficulties limited adjustment help.[8] As it is genuinely difficult to differentiate liquidity from solvency crises at the beginning, the size and duration of financial assistance would have to be limited.[9] If the difficulties of the respective government persisted after limited adjustment funding, the EMF would have to arrange debt restructuring. As explained earlier, a mechanism modelled on the successful experience with the Brady bonds could be employed.[10] Should the government after debt restructuring still be unable to access the market, all assistance would end, but the respective state could introduce its own currency parallel to the euro to fund budget deficits

[8] For an earlier proposal see Daniel Gros and Thomas Mayer, „How to deal with sovereign default in Europe: Create the European Monetary Fund now!", CEPS Policy Brief No. 202 / February 2010 (updated 17 May 2010).

[9] For instance, duration and size of the financial assistance could be limited to three years and to somewhere between 10% and 20% of GDP (consistent with the present funding capacity of the ESM).

[10] See Gros and Mayer (2010).

and pay maturing debt with currency created by itself. A national currency of this type would be similar to the stamp script used in certain regions alongside the euro. It would facilitate local transactions but would of course not be used as a store of value, because it is set to depreciate against the euro over time.

In addition to national parallel currencies with the character of stamp script, euro area authorities would also need to allow other private currencies, most likely in the form of crypto currencies, to circulate alongside and to compete with the euro. Currency competition would help to focus euro central bankers on their task of creating money useful for the user and not as a policy instrument for the ruling political class. Some economists will of course deplore the loss of monetary policy as a result. However, given the track record of monetary policy, I would regard this loss as welfare enhancing. Other economists will warn against the deflationary dangers of a rigid monetary regime. However, I see more benefit than harm in a controlled and moderate deflation when book money is no longer created as private debt money by banks.[11] The rate of deflation would determine the real interest rate on the safe deposit, which would be the only safe asset in EMU.

Summary and conclusion

Table 2 gives a summary of the various scenarios discussed in the preceding section. Combinations of plan A and B are conceivable, simultaneously or sequentially, but they would be as unsustainable in the long-term as the plans themselves. Plan C seems to me the only viable scenario for a stable future of the euro. But it is also the least likely scenario for the future as most European governments shun the political cost of accepting hard budget constraints in their jurisdiction. They draw their political power from the clienteles that support them. These clienteles expect from them protection of their interests in return. Protection is achieved by establishing soft budget constraints in the hope that the costs can be shifted to the EU or EMU level. Hence, it seems inevitable that EMU suffers from the Tragedy of the Commons.[12] And like the commons from overgrazing EMU is likely to be destroyed by the lack of responsibility of the participants.

[11] In the existing credit money system inflation is welcome as it reduces the real value of banks' book money so that the risk of defaults of banks on their monetary liabilities is reduced.

[12] See Philipp Bagus, The Tragedy of the Euro. Ludwig von Mises Institute (Auburn) 2012.

Table 2. Overview of the various scenarios for the future of EMU

Plan A: Continue with muddling through	Plan A.1: Break-up of EMU: • Allocate equalization claims indexed to the exchange rate to MFIs, insurances, and pension funds in countries with appreciating currencies • Central bank to intervene in the fx market to manage currency appreciation, with fx reserves invested in global equity portfolio to repair central bank balance sheet	Plan A.2: Debasement of the € • ECB intervention to prevent mass bankruptcies leads to loss of confidence in the € • While governments are unable to act, populations elect other instruments as means of exchange and store of value (foreign currencies, gold, crypto currencies)
Plan B: Institutionalize the soft budget constraint	• As EMU is transformed into a "transfer union", funding of economically unviable entities becomes easier • The political power moves to the center to organize the transfers • The center lacks democratic legitimacy • Secession movements gain strength and EMU breaks up by centrifugal political forces	
Plan C: Return to hard budget constraint	• Complete monetary union by making bank deposits interchangeable through introduction of a safe deposit, i.e., a bank deposit fully backed by central bank reserves • Create a European Monetary Fund with the task of giving limited adjustment funding, arranging sovereign debt restructuring, and allowing countries from EMU unable to establish sound public finances to introduce own currencies in parallel to the euro	

Source: Own elaboration (Flossbach von Storch Research Institute)

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