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When the Euro Falls Apart

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Abstract

This paper recounts some well-known problems confronting European monetary union (EMU), such as withstanding asymmetric shocks and maintaining domestic political support. It then examines how a speculative attack could damage a target country's banking system, and how the basic structure of EMU could facilitate its break-up. On the basis of this analysis, one might reasonably conclude that there is a significant chance – over one in ten – that EMU may break up in whole or in part.

The paper then focuses primarily on two significant problems related to a break-up. First, a country seeking to leave EMU, particularly after the transition period, may have difficulty re-establishing its national currency unilaterally, as its economy is likely to have become thoroughly 'euroized'. Second, any break-up accompanied by re-denomination of existing euro obligations, including government bonds, will create great legal uncertainty and costly litigation. There are no continuity of contract rules for exiting EMU equivalent to those for entering. Both problems require co-operative and deliberative solutions and will be difficult and costly to solve. If such problems are properly taken into account, which has not previously been the case, a euro break-up in the foreseeable future, particularly after transition, is considerably less likely than the above estimate of one in ten.

I. Introduction

European monetary union (EMU) creates a new single currency, the euro, initially for eleven European Union (EU) member states. There has been wide debate as to whether EMU will succeed, in the sense that all entrants will choose to remain participants, or whether one or more will choose to withdraw.

Whereas this paper does not revisit in detail the nature of the economic and political threats to EMU sustainability, it does examine how speculation on the ability of a country to remain in EMU could destabilize the target country's banking system, thereby creating pressure for its withdrawal from EMU. Contrary to some prior analysis, however, this outcome does not depend on the mechanics of the euro payment systems or the build-up of an unacceptable level of claims on the central bank of the target country by other EMU central banks.

While EMU has not designed an explicit break-up process,[1] four structural features of EMU may serve to facilitate a break-up:

1 delayed introduction of euro banknotes and the failure to issue pure euro coins;
2 preservation of national payment systems;
3 preservation of national central banks and national debt instruments;
4 limited pooling of foreign exchange reserves.

It is as if the EMU countries have hedged their bets on the success of the euro by leaving in place the key institutions for a return to national monetary systems. The availability of the hedge may make exit more likely. On the basis of this analysis, as well as the standard economic and political problems, one might reasonably conclude that there is a significant chance – over one in ten – that EMU may break up in whole or in part.

This paper then focuses primarily on two substantial problems posed by a break-up: re-establishing national currencies – an especially severe problem in a partial break-up – and continuity of contract. Given the nature of these two problems, a break-up will require considerable coordination among EMU members, and is therefore very unlikely to be a sudden event. Countries desiring to leave EMU, or to have others leave, will only be able to achieve their objectives through careful planning and extensive cooperation, and even then solutions to these problems will be difficult and costly. If such problems are properly taken into account, which has not previously been the case, a euro break-up in the foreseeable future, particularly after transition, is considerably less likely than the one in ten estimate above.

[1]This paper refers interchangeably to the break-up of the euro and EMU. Break-up of either is meant to refer to the possibility that some or all of the participants in EMU may re-establish national currencies.

Many informed Europeans do not want to discuss the matter of a euro break-up because they are deeply committed to EMU's success and believe such discussion will itself undermine EMU. On the other hand, the very question of whether the euro will or will not fall apart could well be affected by a better understanding of the problems that might arise in its break-up.

Section II of this paper briefly recounts the euro timetable. Section III summarizes the arguments for and against the success of the euro, and includes an analysis of the problem of speculative attack. Section IV discusses why there is no plan for break-up, and shows how the basic design of EMU may facilitate it. Section V focuses on the key economic and legal problems that a break-up will have to confront. Finally, section VI states the conclusions.

II. The Euro Timetable

Under EMU, 11 members of the EU (Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, The Netherlands, Portugal and Spain) will enter into a monetary union on 1 January 1999, involving the creation of a common currency, the euro. Four EU members are not participating at this time (Denmark, Greece, Sweden and the United Kingdom). From 1 January 1999 to 1 January 2002 (Stage III), financial accounts and instruments can be denominated in either the euro or national currencies which have fixed irrevocable conversion rates against each other and the euro. During Stage III, banknotes and coins will only be national currencies, again at fixed irrevocable exchange rates against the banknotes and coins of other EMU participants. As of 1 January 2002, the euro will replace national currencies on all financial accounts and instruments, and from 1 January 2002 to 1 July 2002, new euro banknotes and coins will be substituted for national ones.

During Stage III, new tradable government debt of the EMU countries must be denominated in euros and all governments have opted to re-denominate their existing public debt into euros in the early part of Stage III (some on the first business day). Given the lack of fiscal union, government debt will continue to be national. Thus, for example, new or old euro-denominated debt issued by France will be France's and only France's obligation to repay. The fact that some euro debt is issued by France and other euro debt by Germany will be reflected in the price and non-price terms of the securities. Until 2002, private obligations will be permitted to be denominated in euro or national currencies. Outstanding private tradable debt can be re-denominated from a national currency into euros once there is a re-denomination of public debt.

The timetable for the euro fixes a delay of three years before national currencies are entirely eliminated. This may not only result from the practical considerations involved in conversion – it may also reflect a deliberate decision of EMU countries to provide for a test period of monetary union before national currencies are entirely discarded.

III. Will EMU Work?

There is a substantial economic literature examining whether EMU makes sense.[2] Bankers have also recently questioned whether the euro will succeed.[3] It is not the purpose of this paper to analyse these arguments or take sides. The paper does assume that the future success of EMU is not assured and that the risk of break-up is substantial enough to be taken seriously.

A. The Basic Problems

One basic problem with EMU is that the participating countries will have one monetary policy set by the new European Central Bank (ECB), but will pursue individual fiscal policies – spending, taxation and issuance of government debt. If some countries run an excessive fiscal deficit, for example Italy,[4] this may contribute to an increase in the general level of inflation in the EMU countries which will need to be offset by ECB monetary policy in the form of higher interest rates. Low-deficit countries such as Germany may object to bearing the cost of inflation created by high-deficit countries.

Under the Stability and Growth Pact, any EMU country that runs a fiscal deficit greater than 3% of GDP annually will be required to remedy the situation within ten months. If a country fails to do so, it will be required to make a non-interest-bearing deposit with the EU and if it does not remedy the condition within two years, it may be required to pay a fine of up to 0.5% of GDP, if voted by two-thirds of the EMU countries. Also, a country with a decline in GDP of over 2% within the previous four quarters may generally be exempted from these penalties. It is far from certain that this pact will discipline excessive deficit-spenders, given creative accounting in calculating fiscal deficits and the possibility that politics will prevent fines from being imposed or, if imposed, being paid.

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[2]For example, Carré and Johnson (1991), Currie (1997), De Grauwe (1992), and Feldstein (1992).

[3]Arrowsmith (1998), Bulchandani (1998), Eltis (1997), Lamedica (1998), Record (1997), and Wattret (1997).

[4]I often use Italy as an example of a country that may want to withdraw from EMU or that other countries may want to withdraw. I recognize that Italy's present primary budget surplus may make this scenario less likely than would otherwise be the case.

EMU does not permit national monetary policies to respond to asymmetric economic shocks to particular countries (Obstfeld and Peri 1998). This is a well-known problem with any monetary union. This problem is arguably compounded by the lack of an EU redistributive transfer mechanism, like the US federal tax, in which higher tax receipts in more rapidly growing EMU countries are transferred to EMU countries in recession. The lack of such a mechanism results in an inability to cushion the impact of tight monetary policy in poor performing economies. This may, in turn, lead to the unpopularity of the euro in recession countries, or result in pressure for the creation of new redistribution mechanisms, making the euro unpopular in subsidizing countries. Also, lack of labour mobility among EMU countries limits market adjustment to regional performance disparities.

Finally, nationalist feelings among voters about preserving sovereignty may result in political pressure on leaders to get out of the arrangement. It is questionable even now whether EMU has majority support in Germany. Further, most German households will not directly be affected by the euro until 2002 when the Deutschmark cash and bank accounts disappear. Political opposition may increase as the reality of the end of the Deutschmark takes hold.

B. Speculation Against Potentially 'Weak' Currencies

If there is doubt about whether a country will remain in EMU, and a belief that such country would have a weaker currency than the euro if it did leave, speculation on the country's withdrawal could take place and such speculation could itself cause EMU to break up. Speculation is unlikely, at least initially, to take the form of attacking the fixed rates of exchange between the euro and the national currencies, given the obligation of the central banks of all EMU countries to defend these fixed rates. Of more immediate concern would be the decisions of private transactors to move out of bank accounts in potentially 'weak' currency countries (Brookes 1998).

Suppose one thought, for whatever reason, that Italy was the most likely country to leave EMU during the 1999–2002 period and that if Italy did leave EMU, Italy would issue a 'new lira' to replace the existing lira and the euro (at least in Italy). Suppose also that one thought this 'new lira' would trade at a discount, from the fixed rate of the existing lira, against the euro or dollar. These suppositions might lead transactors to divest themselves of existing lira and euro-denominated claims on Italian banks, which could result in a run on Italian banks. It is far from clear that higher interest rates on such assets could stem such a run, or if they did, whether Italian banks, could remain solvent paying such rates. The resulting Italian banking crisis could cause Italy to leave EMU.

Brookes argues that such speculation could result in a mounting accumulation of euro claims of the Bundesbank on the Banca d'Italia. This might lead the Bundesbank to pull the plug on the euro as its credit risk on the Banca d'Italia became astronomical. As explained below, these concerns, while quite serious, may be somewhat overstated, given the operation of the euro payment systems.

Suppose depositors converted their lira accounts at Italian banks to euros or Deutschmarks and transferred these balances to German banks. Such transfers could take place over the Trans-European Automated Real-time Gross Settlement Express Transfer System, TARGET, the scenario assumed by those giving most credence to the dangers of speculative attack (Brookes 1998; Garber 1998). TARGET is a euro payment system established by the European System of Central Banks (ESCB) that links the existing real-time gross settlement systems (RTGS) of the national central banks of EMU countries. Each transfer is processed separately on a gross basis; there is no netting. TARGET is not itself a RTGS system because, unlike national RTGS systems, it provides no facility for the settlement of payments. TARGET transfers from Italian to German banks will be settled by correspondent accounts between the Banca d'Italia and the Bundesbank. The Bundesbank will have a 'due to' balance at the Banca d'Italia.

Such exposures are common in international transfers among central banks. Transfers from the Banca d'Italia to the Bundesbank or from the Banca d'Italia to the New York Federal Reserve Bank have traditionally been dealt with by use of correspondent accounts. But, unlike traditional arrangements, intra-central bank balances resulting from TARGET can result from payments between private national banks. Also, while the Banca d'Italia could meet lira claims, if necessary, by printing lira, it cannot meet euro claims by printing euros; this is prohibited under EMU. The ECB could settle TARGET transfers by debiting and crediting central bank accounts on the ECB's books. This would give central banks claims on the ECB rather than on other central banks and lower exposure risks.

The problem of intra-central bank claims is not as serious, however, as some believe. It is up to the Bundesbank and Banca d'Italia to establish the conditions under which the Bundesbank can have access to its Banca d'Italia account. The Bundesbank could insist on a Banca d'Italia demand deposit account with immediate access. This would permit the Bundesbank, at any time, to transfer its funds in payment for assets with less risk, such as US Treasury securities.

A complication might arise from the signalling effect of the Bundesbank's drawdown of its accounts. A drawdown would indicate that the Bundesbank was concerned about its credit exposure to the Banca d'Italia, thus possibly setting off further panic and flight of deposits from the Italian banking system.

This could only be avoided by the Bundesbank establishing in advance a routine procedure for the management of its balances.

The scenario above assumes that Italian banks access TARGET through their 'home' country central bank. While that may normally be the case, it need not always be. Italian banks could route payments to German banks through their branches in other countries, through a French branch for example. This would create a claim by the Bundesbank on the Banque de France rather than the Banca d'Italia and the build-up of the Bundesbank claims on Banca d'Italia would be alleviated. It is unclear to what extent the Bundesbank could protect its exposure to Banca d'Italia by insisting that TARGET payments take alternative routes once its claims on Banca d'Italia became, or threatened to become, excessive.

The scenario also assumes that cross-border payments will always involve TARGET. This also need not be the case. There are a variety of euro payment systems that will compete with TARGET. For example, the Clearing House Automated Payment System (CHAPS) euro system allows Italian banks to make transfers to German banks that would be settled by debits and credits to the banks' balances at the Bank of England. There are other alternatives, as well, including the French Transferts Banque de France (TBF), the German Elektronische Abrechnung Frankfurt (EAF), and the Euro Bankers' Association (EBA) systems. The German and EBA systems might be particularly attractive alternatives to TARGET since they settle on a net basis at the end of the day rather than on a transaction-by-transaction gross basis. Use of any of these systems will alleviate the concentration of claims of the Bundesbank on the Banca d'Italia resulting from cross-border payment transfers from Italy to Germany.

This is not to say, however, that outflows of great magnitude from the Italian banking system could not lead to a breakup of EMU. Even if the concern with an excessive build-up of Bundesbank claims on the Banca d'Italia might be overrated, these outflows could well create an Italian banking crisis which itself could undermine EMU.

IV. Break-up – Plan and Structure

There are various scenarios as to how the euro might fall apart. Single countries could withdraw or be expelled, while the rest remained, or the arrangement could be terminated entirely. If France or Germany withdraw, it is safe to assume that the entire arrangement will end. Withdrawals or termination of EMU could occur before, during or after the end of Stage III.

This section argues that there is no plan for break-up because it would be too complicated to provide a plan that was of any value. It also argues that the structure of EMU may make break-up more easy than it might at first appear.

A. No Break-up Plan

The EU has devised no plan for the break-up of EMU in the Maastricht Treaty or in subsequent regulations. This is not surprising. After all, there is no plan in the Treaty of Rome for the break-up of the EU customs union, nor a plan in the US Constitution for the break-up of the United States (Kirgis 1993). One might take note, however, of the Vienna Convention on the Law of Treaties, which entered into force on 27 January 1980. Article 56 of the Convention provides:

> Denunciation of or Withdrawal From a Treaty Containing No Provision Regarding Termination, Denunciation or Withdrawal
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> 1. A treaty which contains no provision regarding its termination and which does not provide for denunciation or withdrawal is not subject to denunciation or withdrawal unless:
>   (a) It is established that the parties intended to admit the possibility of denunciation or withdrawal; or
>   (b) A right or denunciation or withdrawal may be implied by the nature of the treaty.
>   A party shall not give less than twelve months' notice of its intention to denounce or withdraw from a treaty under paragraph 1.

Of the 11 EMU countries, three are not parties to the Convention – France, Ireland and Portugal. However, the Convention would apply in the case of withdrawal of the eight countries who are parties. Furthermore, it is widely believed that the Convention merely codifies customary international law which could apply to the withdrawal of any of the countries.

Read literally, paragraph 1 could prevent any withdrawal. Nonetheless, it could be argued that the parties to the Maastricht Treaty 'intended to admit the possibility' of withdrawal even though not specifically providing for it. Furthermore, a withdrawing country could invoke Article 62 of the Convention which allows withdrawal where there is a 'fundamental change of circumstances' since the conclusion of the treaty in question. Herdegen (1998) argues that 'unilateral withdrawal of a participating state would only be permissible under circumstances so exceptional that they would render continued membership insupportable' (p. 2), but fails to cite any authority for this proposition. If he has the Vienna Convention in mind, the reality is that a country contemplating withdrawing from EMU is not likely to be deterred by the Vienna Convention, nor would there be an effective enforcement mechanism to compel adherence to the Convention if a country was determined to withdraw. Indeed, Herdegen makes reference to the 1993 decision of the German

Federal Constitutional Court which observed that Germany could leave the monetary union should the goal of stability not be attained.

Why are there no provisions in the Maastricht Treaty, or many other international treaties or domestic constitutions, dealing with break-up? One answer is that any provision for break-up would make it appear that the EMU participants were less committed to EMU than might actually be the case. On the other hand, the history of monetary arrangements is strewn with unsuccessful monetary unions. In this light, planning for break-up would be easily understood. Despite the best of intentions it could happen. To draw an analogy, while prenuptial agreements in first marriages might cast doubt on the commitment of the parties, there is an entirely different attitude in second and subsequent marriages. Europe has had several monetary unions that have fallen apart.

Another possible reason why no express provision for break-up was made is the belief that providing for break-up would make it more likely to happen. This is based on the theory of fear of the unknown – such dire consequences may attend break-up that everyone will stay on board. However, it is unlikely that this would be a significant deterrent. There is much history about how countries have dealt with the dissolution of monetary unions – history cannot be kept secret. Also, one could argue that countries may actually think that the consequences of withdrawal were less severe than actually would be the case – the theory of rose-coloured glasses. Thus, if the real dire consequences of break-up had been spelt out in the Maastricht Treaty, countries might be less prepared to withdraw.

A third, more plausible, possibility is that the consequences of break-up were not specified because the participants could not easily provide a plan that would fit the multiple and complicated break-up scenarios one could envision, such as one or multiple countries withdrawing, before or after 2002, and if a single country, whether it withdraws voluntarily or is expelled.

B. Structural Arrangements Easing Break-up

There are a number of features of EMU that make it relatively easy to break up, particularly during the transition period. I do not contend that all of these features were designed to ease a breakup, although it is possible some may have been.

i. No euro banknotes for three years and no pure euro coins

National currencies will be preserved until 1 January 2002, for three years after EMU begins, thus making it easier to withdraw during this period than later. It is unlikely to take three years to print new banknotes, and the replacement process will only take six months, from January to June 2002. Countries may simply not have wanted to replace banknotes until they had lived with EMU for a three-year period.

With respect to coins, one side of all euro coins will indicate the country that issued the coins by incorporating a national symbol. It has been estimated that there are 70 billion national coins now circulating in the EMU countries that will have to be replaced with euro coins. France alone is producing 10 billion coins at the cost of $800 million. If a country withdraws from EMU it could, at least temporarily, adopt its own euro coins as its new national coins. For example, Italy could declare that euro coins with the Italian national symbol were new lira coins. This would be substantially easier than minting new coins, a process that would take time and be expensive. It is significant that euro banknotes do not have a national symbol side. If they did, it would be even easier to pull out of the EMU after the end of the transition period.

ii. National payment systems linked together

Every country with its own currency has a payment system that facilitates the transfer of value among transactors. At the wholesale level, these payment systems are wire transfer systems and are generally operated by central banks. Operation of these systems is quite complicated, and involves substantial investment in hardware, software and trained personnel. Under EMU, both during and after the three-year transition, each country will retain its own payment system. These national systems will be 'linked' to each other through the new payment system of the ESCB, TARGET, but they will not disappear. Many argued before the Maastricht Treaty that the entire euro system should be new and run by the European Central Bank, but that was not done. As a result, if a country leaves EMU, it can simply uncouple the link and still have its own national payment system. This further mitigates withdrawal costs.

iii. National central banks and national government debt instruments

Under EMU, the existence of each national central bank is preserved. Monetary policy is set and directed by the ECB but actual operations such as buying and selling of government debt or imposition of reserve requirements, are carried out by national central banks. Some have analogized this to the operation of the Federal Reserve in the USA but the analogy is incorrect. Monetary policy is set by the Federal Open Market Committee and executed by the Federal Reserve Bank of New York, not by all of the reserve banks. Obviously, the preservation of national central banks makes it easier for countries to withdraw from EMU. In addition, each country continues to issue its own debt instruments under EMU, albeit denominated in euros. If a country withdraws from EMU, it can simply re-denominate government debt into its new national currency and thereby have the major tool of monetary policy, the buying and selling of government debt, available. If debt had been centrally issued by the EU or the ECB, this would not have been the case. The ability to preserve the tools of monetary policy makes it easier for countries to withdraw from EMU.

iv. Limited pooling of foreign-exchange reserves

As of July 1998, EMU participating countries had a total of $341.8 billion in foreign-exchange reserves. Under ESCB Statute (Article 30), national central banks must endow the ECB with currency reserves up to an amount of ECU 50 billion, about $59 billion, or 16% of total reserves. Only central banks participating in EMU contribute to reserves, and the contribution of each bank is based on its share of capital in the ECB. Since national central banks participating in EMU account for only about 78.9% of the total capital of the ECB, the initial contributions to reserves are about ECU 39.5 billion. The national central banks will retain ownership of the balance of their reserves, although management of these reserves will be entrusted to the ECB in furtherance of its responsibility to manage foreign exchange-rates. In fact, it appears that at first the actual management of the reserves will remain with the national central banks under the direction of the ECB. Thus, if a country withdraws from EMU, it will still have its own foreign-exchange reserves (assuming it can retrieve them from the ECB). Again, this eases the cost of withdrawal.

These aspects of EMU might be explained by the principle of subsidiarity, leaving to the countries' institutions operations that they can themselves carry out, rather than centralizing everything in the ECB. But what is the basis of subsidiarity? It is often justified on the grounds of economic efficiency – decentralized management is better than centralized management. However, it may also represent a hedge against the failure of EMU. The EMU countries are not ready at this time to give up their central banks, monetary instruments and reserves. They will be needed if the euro falls apart. Preservation of these institutions may say much more about what the countries really think about the success of the euro than would any plan for break-up.

V. Key Economic and Legal Break-up Problems

Any break-up of the euro would entail sacrifice of some of the benefits claimed for instituting the euro in the first place. Benefits to transactors generally, such as the transaction cost savings of using a single currency and the elimination of exchange-rate volatility between EMU members, would be given up, and the promise of curtailing inflation in withdrawing countries would have to be sacrificed. However, one of the benefits of EMU, increased integration of capital and banking markets, might well survive the return to more national currencies.

The break-up of the euro would not merely return countries and markets to the status quo ante prior to the adoption of the euro. Two key new problems would have to be faced: the difficulty of re-establishing a national currency and legal uncertainty attending the re-denomination of existing contracts in a new currency.

A. Re-establishing National Currencies

If the euro falls apart, countries will want to replace the euro with their own national currencies. The difficulties of the replacement process will depend on whether the euro survives for some countries or whether it dissolves entirely.

i. Partial break-up

Assume that Italy leaves EMU and desires to re-establish the lira while the other ten EMU countries continue to use the euro. Italy could well experience substantial difficulties in re-establishing the lira as the national currency and these difficulties would exist whether the break-up occurs before or after the disappearance of the existing lira. This paper focuses initially on the case where Italy seeks to replace the euro with the new lira after the existing lira has gone out of existence, that is, after 2002.

One's initial reaction to this situation might be that Gresham's law would permit Italy to replace the euro, assuming the new lira was worth less against the dollar or other external currencies than was the euro. The new lira would be the 'bad money' driving the euro out of Italy. This is unlikely to happen for a number of reasons.

First, as shown by Hayek (1990), Gresham's law has no applicability except where there is a fixed rate of exchange, in this case between the euro and the new lira. If such rate were not fixed, the reverse of Gresham's law would be true, good money would drive out bad. However, it is possible that Italy might try to re-establish the lira with a fixed exchange rate against the euro.

Second, there is substantial doubt whether Gresham's law has any validity beyond metallic coinage cases. Under the original formulation of Gresham's law, where two types of coins, for example gold and silver coins, circulate within a jurisdiction and both can be used as payment, the coin whose commodity value is highest will be hoarded and the other used as payment. Thus, if a gold coin with a face value of 100 was worth \$1.50 and a silver coin with the same face value of 100 was worth \$1.00, the gold coin would be hoarded and the silver coin used to make payments. This would be true even if only gold coins were legal tender, as long as there was no law prohibiting payment in silver coins. The issue in the Italian case involves two paper currencies (with no metallic backing) whose commodity value in terms of paper is the same. Thus, the issue of new lira by Italy would not by itself drive out the euro from Italy.

Third, there is substantial doubt whether Gresham's law was valid even in metallic coinage cases. Rolnick and Weber (1986) found that two currencies can circulate side by side, with one trading at a premium to another. Thus, in the gold and silver coin examples, transactors would value the gold coin at a 50% premium over its 100 par value, and trade the same amount of goods for 67 gold or 100 silver. The author argues that this may not occur only if the transaction costs of dealing in the non-par currency were substantial, as might be the case when using small-denomination currency, but that is a minor matter. As Selgin (1996) has pointed out, Rolnick and Weber assume that a country's legal tender law does not penalize or prohibit the use of the more valuable currency, gold in this example. Italy could possibly re-establish the new lira by preventing use of the euro in Italy, but this would require the imposition of exchange controls which would isolate Italy's financial system and economy from the rest of Europe.

Italy could try to force exchanges of existing euro cash or bank accounts in Italy for Italian lira, but such forced exchanges would seem extremely problematic. What would be the rationale for forcing Italians to give up euros for new lira, as compared to dollars for new lira? Both dollars and euro would remain as major international currencies. How would such forced exchanges be accomplished?

As for cash, Italy could seal its borders for some short period and order that all euros in Italy be surrendered for new lira (a typical measure where monetary unions suffer total break-up), or in the short term require all euros held by Italian citizens (or even foreigners in Italy) to be stamped with a new lira symbol. But people would hold euro cash back and take it out of Italy as soon as the borders were reopened. Further, the moment the borders were reopened the preferred euro currency would come flowing back into Italy.

As for bank accounts, Italy could order all euro bank accounts of Italian citizens to be re-denominated into the new lira, but what would this accomplish? It would not ensure that such accounts remained in new lira. Depositors would take their losses and get into some other currency outside Italy as soon as possible. This result could only be forestalled by imposition of foreign-exchange controls for some substantial period of time, again isolating Italy financially and economically from the rest of Europe.

Once the euro becomes the currency of Italy, it may prove very difficult for Italy to re-establish the lira and thereby get control of its own monetary policy. Italy may become 'euroized' in the same way that countries in Latin America have become dollarized. Transactors will want to hold euros because they are likely to be more valuable than lira, and dual pricing of euros and the new lira will allow transactors to contract and pay in euros. This problem might be less severe if Italy sought to exit from EMU before 2002, when the existing lira was still in circulation and before the euro was fully established as a currency. On the other hand, withdrawal from EMU might signal such an inflationary future that Italians and others would try to exit from lira holdings as quickly as possible.

There is very little experience with how a country deals with breaking away from a monetary union where the currency of the union survives. Cohen (1993) reviewed the history of six monetary unions, three of which still exist: Belgium–Luxembourg (1922), CFA Franc Zone (1959) and the East Caribbean Currency Area (1965). The three monetary unions that broke up, did so entirely: East African Community (1967–1977), Latin Monetary Union (1865–World War I) and Scandinavian Monetary Union (1873–World War I), although the latter two took some years to effect the final break-up. Garber and Spencer (1994) did an extensive study of the break-up of the Austro–Hungarian Monetary Union which spanned the 1867–1919 period, again where there was an entire break-up as the former empire was split into several new states. They also describe the Czechoslovakian break-up of 1993 which was also a complete break-up, as both the Czech and Slovak Republics together abandoned the old Czechoslovak crown.

The break-up of the rouble of the Soviet Union was a partial break-up, since Russia and some former Soviet republics retained the rouble, while other former republics, Estonia, Latvia, Lithuania, the Ukraine and the Kyrgyz Republic, adopted their own currencies. But the scenario was the reverse from the one envisioned in our hypotheticals. Russia was rapidly inflating and the breakaway states, and their citizens, wanted more stable currencies. They were happy to see the rouble go. It is possible that a country could pull out of EMU to re-establish a national currency that was stronger than the euro. If this were to occur, such country would not have difficulty doing so.

ii. Complete break-up

Complete break-up makes it easier for the withdrawing countries, even those whose new currencies would be perceived as 'weak', to re-establish national currencies. However attractive the common currency might be compared to the new national currencies, it will disappear. This is not to say that such a process will be easy. If national currencies are replaced over a period of time, some of the problems of partial break-up could well exist for those countries going first. The experience with the Austro–Hungarian break-up demonstrates that countries must generally close their borders for some period of time to stamp old currencies or swap old currencies for new ones, and such border closings will not be totally effective.

In a complete break-up, each country will set a conversion rate for euros into new national currencies. If, based on the new conversion rates, the euro will have more real value (in terms of purchasing power) in one country rather than another, transactors will try to exchange the euro in those countries where it will have more value. This will lead to hold backs from exchange in countries where new currencies will be relatively less valuable and movement of currencies to countries with better value. For example, if an Italian thought he could get more real value by exchanging euros in Germany, he would hold back from exchanging euros in Italy. If the last country to make a conversion, say Germany, has a strong new currency, it may find that a large portion of outstanding euros will be held back from exchanges in other countries for later exchange in Germany. This could result in inflationary pressures as the last converting country is forced to expand the currency money supply. These problems, however, are temporary, and can be greatly minimized by a degree of coordinated action.

iii. The need for collective action

This paper argues that a partial withdrawal from a continuing monetary union is unlikely because a withdrawing country would find it exceedingly difficult to re-establish control over its money supply. If Italy, in our example, could not achieve this objective through withdrawal, it would have little incentive to withdraw. It would have to coordinate its withdrawal with the other countries in a way that would permit it to establish its own currency. This would require a high degree of cooperation from the remaining countries. Indeed, the only sure way this could be accomplished would be relatively simultaneously to adopt a new euro for the remaining countries and a new lira for Italy.

Suppose that EMU countries wished to expel Italy from EMU. It is unclear how this could be accomplished without Italy's cooperation. Without the use of force by the other members, Italy could just stay and accumulate higher deficits. Again, expulsion might only be accomplished by simultaneously adopting a new euro and a new lira, again necessitating cooperation among all of the member states.

B. Continuity of Contract

The second significant break-up problem concerns the enforceability of re-denominated contracts between debtors of withdrawing countries and their creditors, particularly foreign creditors. Before examining this question in the context of a euro break-up, it is useful to recall how this issue has been handled in the adoption of the euro.

i. Euro adoption

The issue in adopting the euro was whether courts would enforce contracts that were issued in national currencies that are subsequently re-denominated in euros. As previously stated, this will be an immediate issue for government bonds which are to be re-denominated on 1 January 1999.

Rather than rely on general principles of law dealing with this issue, the EU in 1997 promulgated the so-called 235 Regulation which provides in Article 3:

> The introduction of the euro shall not have the effect of altering any term of a legal instrument or of discharging or excusing performance under any legal instrument, nor give a party the right unilaterally to alter or terminate such an instrument. This provision is subject to anything which parties may have agreed.

The effect of this provision, which is effective in the entire European Union, not just in the EMU participant countries, is to ensure that euro contracts are enforceable, if there is no agreement to the contrary. Also, there can be no legal issue within the EU as to whether contracts can be re-denominated from national currencies to the euro, as this is clearly provided for in the Regulation of 3 May 1998.

Of course, European law was not automatically operative outside the EU, and thus there was an issue of whether non-EU countries would enforce the re-denominated contracts. Several jurisdictions have adopted laws dealing with this question. For example, on 29 July 1997, New York enacted such a law. New York General Obligations Law, 5-1602 (1)(a) provides that contracts can be re-denominated in euros:

> If a subject or medium of payment of a contract, security or instruments is a currency that has been substituted or replaced by the euro, the euro will be a commercially reasonable substitute and substantial equivalent that may be either: (I) used in determining the value of such currency; or (ii) tendered, in each case of the conversion rate specified in, and otherwise calculated in accordance with, the regulations adopted by the council of the European Union.

Section 5-1602(2) of the New York law provides that the introduction of the euro does not trigger the application of doctrines such as frustration and impossibility:

> None of: (a) the introduction of the euro; (b) the tendering of euros in connection with any obligation in compliance with paragraph (a) or (b)[dealing with the Ecu] of subdivision one of this section; (c) the

> determining of the value of any obligation in compliance with paragraph (a) or (b) of subdivision one of this section; or (d) the calculating or determining of the subject of the medium of payment of a contract, security or instrument with reference to interest rate or other basis that has been substituted or replaced due to the introduction of the euro and that is a commercially reasonable substitute and substantial equivalent, shall either have the effect of discharging or excusing performance under any contract, security or instrument, or give a party the right to unilaterally alter or terminate any contract, security or instrument.

The New York law, as well as the law of other US jurisdictions that have addressed this problem, such as Illinois and California, are one-way streets. They ensure continuity going from national currencies to the euro. They do not generally deal with changes of currencies or particularly with the possibility of going from the euro to national currencies.

ii. Replacement of the euro with national currencies

If Italy, or any other EMU member, were to withdraw from EMU and re-denominate euro-denominated contracts, such as government bonds, loans or commercial contracts, with the new lira or other new national currency, the courts of the re-denominating country would almost certainly enforce that re-denomination – they would be bound to do so by the laws providing for the re-denomination. The issue would be much more complicated if the re-denomination were put at issue in a foreign court.

Foreign courts would normally determine whether the re-denomination was effective by reference to *lex monetae*, the law of the currency issuer (Mann 1959; Nussbaum 1950). Thus, when Germany replaced the Mark with the Reichsmark in the 1920s, courts of other countries enforced re-denominated contracts because they resolved the matter under German law, the *lex monetae*. However, this default principle is not easily applied to national currency re-denomination of euro contracts. What is the *lex monetae*? If Italy re-denominated euro contracts, Italy is the issuer of the replacement currency, the new lira, but may not be regarded as the issuer of the replaced currency, the euro. Where a monetary union is involved, all of the participating countries are joint issuers of a currency under a common legal arrangement and EU law could be regarded as the *lex monetae*. As Mann argues, *lex monetae* would be of no avail in such a case for the ‘very question is which of two competing laws of the currency shall prevail’ (Mann 1959, p. 261). Note that if reference was made to EU law as *lex monetae*, the Italian re-denomination would be ineffective. Whatever Italy did, EU law would continue to provide that all contracts issued in Italy, once denominated in euros, would continue to be denominated in euros.

Mann argues that in such a case, courts should apply the proper law of the contract, that is apply the law specified in the contract. For many obligations, for example Italian government bonds, this would be Italian law. Under Italian law, government bonds issued in Italy are 'titoli del debito publico' – public debt securities which are assumed to be governed by Italian law. On the other hand, Italian government bonds issued outside of Italy can provide for Italian or foreign law. This is provided for in Article 9 on 'Issuance of government bonds in foreign currency'[5] of Decree Law No. 149 of 20 May 1993. In practice, however, all present issues of Italian debt are subject to Italian law. This means that under the proper law of the contract approach, courts would uphold the re-denomination of Italian bonds. However, with respect to other obligations, such as private debt, foreign law might apply if it were specified in the contract. If no explicit choice of law is made in the contract, the foreign court would apply its own conflict of law rules – the rules the foreign court uses to decide what law applies to a contract where no explicit choice has been made in the contract itself. This could lead the court to the law of Italy or a foreign law.

Would foreign law, if applicable, such as the law of the United States or Germany, enforce the re-denomination or provide instead that the contracts must be honoured in euros or are breached if not honoured in euros? This is far from clear given the lack of precedents. There are no court cases involving the withdrawal of a country from a surviving monetary union. If foreign law would apply to a substantial number of outstanding contracts, there could be severe economic disruption attending a partial withdrawal as parties seek to resolve the legal uncertainties.

If EMU broke up entirely, the legal problems would also be severe. Although the *lex monetae* could no longer be that of the EU, given the end of the euro, it would be unclear whether the *lex monetae* was the law of one or the other of the exiting states. All of the EMU countries would be re-denominating contracts, and conflicts could easily arise among the terms of their re-denomination laws. For example, suppose Germany provided that any debt obligations of a German creditor, e.g. loans by German banks, were to be re-denominated in new Deutschmarks, while Italy provided that all loans of Italian debtors, including loans from German banks, were to be re-denominated in new lira. Similar problems were experienced when Germany was divided into two states in 1948 (Mann 1959, p. 268). Again, the solution could only be to decide the proper law of the contract, with the attendant uncertainties of that determination.

[5]This includes bonds issued in lira outside Italy.

iii. The need for collective action

The economic disruptions that result from the uncertain effectiveness of re-denominated contracts would give EMU participants, the greater EU and, indeed, other important economic powers, incentives to address collectively the legal problems of withdrawal from the euro by enacting clarifying legislation, much as they did when adopting the euro. Herdegen (1998) reaches the same conclusion. Such incentives would exist whether or not one contemplates a partial or complete break-up. As part of their collective process, countries would no doubt address the losses creditors might experience as a result of re-denomination, particularly with respect to government bonds.

VI. Conclusions

The possibility of attacks against potentially 'weak' currencies and an EMU structure which facilitates break-up are significant factors, which could undermine the survival of EMU. The primary danger of the attacks is that they can create a banking crisis in the weak currency country which may only be resolved by an EMU withdrawal. The scenario of ever mounting claims by central banks of strong currency countries on central banks of weak currency countries, leading the central banks of strong currency countries to cut off further credit to, and to demand the expulsion of, weak currency countries, is exaggerated. Claims of this type will only arise from the use of TARGET. Other payment systems are likely to be used, and claims arising from TARGET can be managed through drawdowns. The ECB should consider providing a settlement facility for TARGET payments to avoid the mounting claim problem entirely. If the ECB settled TARGET payments, strong currency countries would have claims on the ECB, not weak currency countries.

The paper argues there is no break-up plan for EMU largely because it would be difficult to design such plan in advance given the different and varied scenarios that might be involved. It also argues that the EMU structure facilitates break-up. The fact that there will be no euro banknotes for three years makes break-up easier before mid-2002, and the fact that there will never be pure euro coins makes break-up easier in general. Countries have kept their own payment systems, government debt instruments, central banks, and the lion's share of their foreign-exchange reserves. It is almost as if the EMU countries have hedged their bets on EMU by retaining the key institutions needed to re-establish their own currency and monetary policies, if need be.

Two key problems would have to be dealt with in any break-up: the re-establishment of national currencies, and the legal uncertainty produced by re-denominating existing euro obligations in new currencies. Importantly, the solution to both problems will require cooperation among all the EMU countries. The re-establishment of a national currency, in a partial break-up, would be very difficult for a weak currency country, particularly after national currencies disappear altogether in 2002. Countries that have traditionally had weak currencies will be 'euroized'. Transactors in these countries will not want to give up the strong euro for a new weak national currency. Countries would have to take extraordinary measures to re-establish their currencies, including sealing of their borders and imposing exchange controls. A withdrawing country would need cooperation from the remaining EMU countries to re-establish its currency at a reasonable cost. The only sure way this could be achieved would be, relatively simultaneously, to adopt a new euro for the remaining countries and a new national currency for the withdrawing country.

The second major problem is continuity of contract. What happens to existing euro contracts that are re-denominated in new national currencies? Unlike the case with the adoption of the euro, no special legislation exists for moving from the euro to a new national currency. Further, the common law is very unclear. The standard principle of *lex monetae* does not work, since both European and national law could both lay claim to being *lex monetae*. The law of the contract may be an alternative principle, but there is little precedent to go by. These legal problems would also be severe in a complete break-up, since countries might enact conflicting rules for cross-border contracts. These problems could only be resolved by concerted action, such as the enactment of a euro-wide regulation.

The solutions to the problems of re-establishing a national currency and ensuring continuity of contract will be difficult and costly. This may make the probability of the survival of the euro considerably higher than it would otherwise be.

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