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‘Leaving EMU’ is just an expensive way to default

‘Leaving EMU’ is not a practical nor practicable policy step. It is certainly not a way to head off a sovereign default. However, it may be a way of implementing one, but at the expense of making it systemic.

We update our September 2000 report “Leaving EMU is nearly impossible” to weaken slightly a key underlying assumption, that an EMU sovereign would never voluntarily impose mass default on its financial system. But the conclusions are not substantially affected.

We aim to provide a factual backdrop to the renewed fashion for over-free use of terms such as “leaving EMU” or “reintroducing the Deutschmark”.

However, it would be helpful to fix EMU’s fault-lines (a Herculean task) as otherwise crises will likely continue. Indeed one possible path is via a redefining “super-crisis”. But this will have to wait at least for the next cycle, in our view. We summarize our views as follows:

- The decision to join EMU is irreversible in practice, regardless of nominally retained national sovereignty.
- The old currency can never be recovered.
- An EMU member trying to redenominate into a new currency would inflict prohibitive damage on itself and other members.
- In certain limited circumstances a new currency could be introduced and circulate in competition, being used for **new** obligations and possibly succeeding, especially if sponsored by a number of strong countries.
- With government solvency a challenge, EMU exit does provide one way to default, but still an excessively expensive one, in our view.
- We think the costs still make departure an extremely unlikely outcome, with or without intentional sovereign default.
- The defining characteristic of a euro obligation is its governing law, not geography or nationality of the obligor/obligee. If any EMU departure were to become a serious possibility, it would be vitally necessary to manage legal-system mismatches as a risk factor.

Summary

No country can 'leave EMU'[1] with the pre-EMU currency reintroduced or a new currency for two main reasons:

Firstly, the monetary sovereignty of a 'leaving' nation is absolute under its own law, but once it has adopted the euro, it has pooled its sovereignty in this important area. This is a one-way step. The pooling occurs because the euro is also used in other legal jurisdictions over which a single government has no control.

Currencies are legal constructs: a government controls its currency only to the extent it controls the law of its currency. For most countries, that control is absolute. But the EMU member only retains control over euro transactions in its own law. Entry is therefore a one-way street. Due to the lack of precedents, this is widely misunderstood. 'Leaving' partly recreates an independent currency and leaves some transactions in euro. So it redistributes financial wealth depending on the law in which transactions are denominated.

Secondly, a non-random transfer of wealth overseas would occur. An attempt to 'leave' exposes the country's financial system, most seriously its central bank, to limitless, unhedgeable speculative flows aimed at exploiting this redistribution and legal mismatch. The central bank is particularly vulnerable because it transacts in national and "European law"[2], effectively at the choice of speculators.

There are some theoretical ways to 'escape' EMU:

- The most realistic is to dollarize.
- There is a chance that a new currency could be circulated in parallel. If enough rich countries did this, the euro could be sidelined.

But in all circumstances, existing euro obligations survive unless they are denominated in the legal system administered by a 'leaving' government. It follows that the governing law of a euro contract is a defining characteristic.

Note: most of the mechanisms discussed herein could at least be argued to be Treaty breaches, subject to sanctions possibly including EU expulsion. Rather than repeat this caveat at every turn, we ask that readers keep it in mind throughout.

Discussions of 'leaving EMU' remain misguided, in our view

Continued sovereign solvency pressures and the results of the recent recession have led to discussion in some circles of the possibility of countries 'leaving EMU'.

When we looked at this in 2000 ("Leaving EMU is almost impossible"), we reached the strong conclusion implied by the title on the basis that the costs (namely, a system-wide default) were prohibitive. We wrote:

> "'Leaving EMU' is not an independent event whose discussion can impact spreads. Rather, it is part of the default process. Therefore, spreads should not be driven by talk of 'leaving EMU', but by other factors driving credit within the euro zone. A discussion of the lack, or de facto existence, of bail-out provisions is a separate subject and one that should impact spreads. Independent risks of 'leaving EMU' should not.
>
> Any widening of spreads driven by talk of 'leaving EMU' without a credit default should eventually mean-revert".

[1]In single quotation marks throughout to stress the hypothetical nature.
[2] There is no such thing (yet-see below) but the European Court of Justice adjudicates within the Eurosystem.

The question needs revisiting in that default needs to be considered as a possible strategic move for dealing with current levels of debt. Might a country 'leave EMU', knowingly defaulting its financial system? We argue that this is still a very expensive alternative to a government default within EMU, which we see as very unlikely anyway.

Discussions of 'leaving EMU' remain misguided, in our view.

Why leaving is impossible

It is taken for the purposes of this report that any country seeking to 'leave EMU', or even to impose a sovereign default, wishes to do so without returning to barter, with a surviving modern financial economy and a convertible currency[3]. Certainly, this appears to be implicit when talk of 'leaving EMU' arises in markets. This report seeks to set out a case that this is difficult to the point of being impossible. The *status quo ante* can never be regained. A unilateral attempt to do so would be disastrous, in our view. Introducing a new currency to circulate in parallel with the euro could be attempted but we believe this is very unlikely to work. In the latter case, existing euro obligations would be unaffected. At the very least, EMU should not be considered a readily-reversible step.

Some small exceptions can be allowed for as follows:

- The euro inflating away to near-worthlessness;
- Switching to another major currency, almost certainly, the dollar;
- The euro being dissolved by unanimous agreement in a reverse of the EMU process;
- For completeness, the 'disaster scenario' of a split down the middle is considered. But this is very costly compared to mutually agreed dissolution, which is therefore more likely.

Why the old currency is irretrievable

Currencies are legal constructs. The currency of the United Kingdom is what Parliament says it is, at whatever rate to the old currency Parliament decides. (1p = 2.4d, as set in 1971, for a partial example). This would include adoption of the euro at the agreed exchange rate. The universally recognised concept of *lex monetae* refers to the fact that this precedent is respected by all other jurisdictions. On the UK joining EMU, a sterling contract would become a euro contract at the agreed exchange rate, under whichever law in the world it has been contracted and of course the same is true of the 16 actual EMU members. And all EU members remain explicitly sovereign, with a right to negotiate departure from the EU enshrined in the Lisbon Treaty. The ECB, as we explore below, sees such departure as inevitably implying EMU departure, and vice-versa.

Superficially, therefore, an EMU state appears to retain the theoretical power to 'leave EMU', either as part of a renegotiation of its relationship with/within the EU or as part of a negotiated (or even unilateral, depending on domestic political developments) abrogation of the Treaties.

The ECB's opinion was expressed, along with views on other legal implications of a country 'leaving EMU' in a December 2009 paper, "Withdrawal and expulsion from the EU and EMU, some reflections". It concluded that 'leaving EMU' and the EU were inseparable. It also reached the (non-legal) opinion that any country so doing would end up with a "euro-ized" economy and of course losing its places at EU decision-making bodies such as the ECB Governing Council. We agree, and see this as a powerful disincentive.

[3] Without these conditions, clearly more options open up. Appendix A explores some of the 'precedents' for the breakup of currency zones. But there is no precedent of the breakup of a modern zone with a financial system anywhere approaching that of the euro area.

But the superficial appearance of an ability to 'leave' is misleading, even if a country is prepared to run the risk the ECB sees. The euro is unique among major currencies: its borders do not coincide with those of a sovereign jurisdiction. While the sovereignty of a 'leaving' nation is absolute under its own law, once it has adopted the euro, it no longer owns its currency outright. The precedent set by the 'leaving' country's laws would be subordinate to another jurisdiction's own *lex monetae* if the two were in conflict. This would be the case if the euro were still in use in that jurisdiction. So for example, no decision taken by a 'leaving' Germany will affect the status of the euro in French courts. The normal principle of *lex monetae,* which allows a state to control its currency globally, is overridden in this case. This is new to EMU member states and therefore causes confusion.

Let us say Germany 'leaves EMU' today. The German Parliament passes a law reintroducing the Deutschmark at the legal parity of DEM1.95583 to €1. Bundesbank-issued notes and German-minted euro coins are to be used pending reissue of Deutschmark notes[4] and existing euro debts are to be redenominated into Deutschmarks. (As a practical matter, an exchange rate of 2:1 would be far preferable of course, but this is like arguing over the colour of a space alien's tie.) Domestically, this causes minimum fuss and, in our view, is quite manageable. But internationally, things are not that simple.

French-law contracts, for example, between French parties and private-sector German counterparts, would be enforceable in euro in the French courts. French courts would see even surviving references to the (old) Deutschmark in French law documents as a reference to 1/1.95583 of a euro, since this is enshrined in French law. Laws passed by the German Parliament which deem references to euro to be references to 1.95583 'new' marks (or 2) can therefore have no impact under French law. Nor can any attempt to deem references to 'old' marks as being references to 'new' marks.

The normal precedent of *lex monetae* is subordinate to the fact that French courts would not recognise the attempt of any foreign power to legislate over the domestic currency of France, still, for these purposes, most definitely a state with monetary sovereignty. Any country 'leaving EMU' can only regain control of transactions under its own law. The key to 'currency risk' under EMU is therefore the jurisdiction of the contract, not the nationality of any of the counterparties or the 'original' currency.

It follows that any institution exposed to a possible breakup needs to monitor the legal system of its assets and liabilities as a risk variable.

The position under other jurisdictions is more complex, and much confusion is likely, since there is no precedent. (Scott, 1998)[5]. But we think a very strong case can be made[6] that under English law, be the UK in EMU or out, redenomination would not be recognised. Given the role of English law in international contracts, this is a very big obstacle to redenomination. German companies — possibly even the state — would find that euro contracts originally at English law remain in euro despite redenomination.

Once EMU has been entered, the *status quo ante* can never be regained. Full jurisdiction over the entering country's currency has been lost and the old currency is gone for good.

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[4] Note that euro notes carry a letter which identifies country of origin (via identifying the issuing NCB). The match is not perfect, in that some NCBs issue notes on behalf of the system, carrying a corresponding asset item on their balance sheet. But it is interesting in light of the "stamping" discussion in Appendix A and we think it would inevitably come into play if such a scenario were to arise.

[5] 'When the euro falls apart' Hal S. Scott, Harvard Law School. International Finance 1:2 1998.

[6] See, for example 'Thinking the Unthinkable - the Break-up of EMU' Charles Proctor and Gilles Thieffry, Partners at Norton Rose. In summary, 'leaving' would involve breaking a Treaty to which the UK was a party and would therefore be incompatible with English law. There is an interesting corollary to this. Pending the emergence of European law, monetary sovereignty is defined by the adoption of national legal systems. This gives the UK disproportionate influence for now. This is very unlikely ever to be relevant, but is noteworthy.

Can any new equilibrium be achieved without the euro?

Although a 'leaving' country cannot reintroduce its old currency, in theory it might have three other alternatives; the system has two more:

1) Use monetary sovereignty to redenominate all existing domestic euro obligations to a new currency, taking its chances with the overseas jurisdictional problems outlined above;

2) Introduce a new currency to circulate in parallel;

3) Adopt a different, major currency: almost certainly, the dollar;

4) Dissolution of the entire EMU project is theoretically feasible, but is an enormous project of the order of EMU itself. It requires unanimous consent and is not open as a 'leaving' option;

5) The system could pursue the 'disaster scenario' and schism. Unlikely and subject to the same objections as unilateral action. Multilateral renegotiation is more likely. This alternative was considered here for thoroughness.

The options are explored below. It will be seen that options (3) and (4) represent the only stable outcomes, although (2) provides an escape from a hyperinflating euro.

1) Redenominating existing obligations is effectively impossible: the 'main critique'

The 'leaving' currency would be either strong or weak[7]; assume strong, but the argument is broadly symmetrical. Recall that it is the jurisdiction of the contract that dictates its 'currency' post-leaving. All contracts in the law of the 'leaving' country give rise to a strong-currency contract relative to all other euro contracts, which remain in weak euro. Any mismatch of contract jurisdictions would lead to a windfall gain and loss. The effects of this are highly unpredictable but may well work against the overall interests of the 'leaving' country. A strong 'leaving' currency is likely to be associated with a net foreign asset position; a weak 'leaving' currency, with debts[8]. Both lead to loss-making mismatches; chaos and randomly-distributed financial hardship would be guaranteed. The 'leaving' government would no doubt attempt redistribution but most likely would be doing so within a shrunken pot.

We note that at the time of writing, with pressure on Greece, there are reports in the press of Greek nationals moving euro deposits to Nicosia. This is widely interpreted as a tax move; we think of it in terms of a legal jurisdiction hedge as mentioned above. The theoretical flows are: investor draws down account with Megabank Athens (Greek law), by writing a cheque and builds up their balance with Megabank Nicosia with same cheque. Megabank Nicosia collects on the cheque and Athens credits Nicosia's account. So all the books still balance but the depositor has transformed a deposit into Cypriot law (still Megabank risk) and Megabank has the other side of the trade in its Nicosia branch, which faces a loss if an act is passed at Greek law. Especially with rates effectively at zero, the system has limited defences against this trade.

We note the primacy of the legal system variable in the case of Argentina. When Argentina defaulted in 2001, it broke a fixed peg with the dollar. This did not destroy the financial system (bank defaults were limited) because the two currencies had not been used interchangeably. However, holders of onshore dollar deposits suffered heavy losses since these deposits could be withheld and devalued as an act of Argentinean law.

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[7] Otherwise why bother. The initial exchange rate is of course irrelevant. Converting at e.g. €1: 1,000,000 New Marks achieves nothing compared to a new rate of par, due to the extra quantity of money created.

[8] A situation that, in the case of an overnight 'devaluation' is likely to be better for the debtor, weak-currency 'leaver' since the debts are more likely, although not guaranteed, to be denominated in the law of the 'leaving' country. But with notice, the picture changes, as discussed next.

Damage to the 'leaving' central bank…

An equally serious problem concerns the central bank of the 'leaving' country. Flows are likely to 'leave' a 'leaving', weak-currency, debtor nation and enter its opposite, as noted above. We note that even in the current round of sovereign pressures, the funding of the banking system by the ECB is a heavily "weak-country" phenomenon, with Greek and Irish banks most heavily reliant on ECB funding.

Ahead of an expected move, large interest-rate differentials would appear. These would depend on the laws of contracts, not, other than coincidentally, the nationality of borrowers. European banks would face effectively limitless demand to concentrate deposits in the jurisdiction of the likely strong future currency. The simplest way for parties to do this is geographical. If a strong German currency were being recreated, deposits at the Paris branches of German banks would be moved into Germany. In the private sector, market rates will provide a disincentive to this, but the central banks cannot post market rates according to the jurisdiction in which they find themselves. They are restricted to ECB-mandated rates. Note that money-market interventions are conducted by National Central Banks in the ESCB. Net flows are settled through TARGET as intra-Eurosystem assets and liabilities. The banking system is therefore able, without limit, to deposit funds at the deposit window of the expected-strong jurisdiction central bank in a contract denominated in that jurisdiction and thus that future currency. The resulting drain is met by banks in other jurisdictions, at the Marginal Lending rate.

Any interest-rate defence would be ineffective, in our view. Under the ERM, the market got very used to seeing central banks raising rates to protect against devaluationary pressure. (In the recent financial crisis, the Danish central bank briefly had to protect the kroner peg in that way). But, faced with a decision to 'leave EMU' that would in any case be a political decision, the ECB would have no interest-rate weapon, since rates are uniform across the euro area. To the extent that speculation required borrowing in one centre and depositing in another, hikes in the Minimum Lending Rate could be effective, but, in our view, the relocation of deposits is a far bigger threat.

The balance sheet of the central bank of the 'leaving' country therefore grows. On the one hand, providing in local law the assets or liabilities that its counterparties seek and on the other, recycling the flows through the ESCB under "European" law.

Maastricht Treaty, Protocol on ESCB/ECB statute, 35.3 and 35.6:

> *The ECB shall be subject to the liability regime provided for in Article 215 of this Treaty. The national central banks shall be liable according to their respective national laws.*
>
> *The Court of Justice shall have jurisdiction in disputes concerning the fulfilment by a national central bank of obligations under this Statute.*

…which in our view would be destroyed…

The 'leaving' country's central bank would be open, with no defence[9] at its disposal, to recycling indefinite sums, possibly amounting to a significant fraction of total €-11 money supply, across a legal mismatch. The price for 'leaving EMU' is therefore the likely total destruction of the national central bank. And the best defence of the system is for the ECB to do nothing, raising the costs of 'leaving'.

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[9] The only defence that would have a chance would be to 'seal the borders' electronically, turning off TARGET. This would of course have widespread effects. Unless it was sprung as a COMPLETE surprise, it would be too late. One careless comment from a Finance Ministry official would lead to effectively limitless arbitrage. However, as we explore later, TARGET could be shut against a misbehaving jurisdiction, making the rudiments of "an exit strategy".

…and on its own

The ESCB/ECB Protocol provides (32.1) for sharing of seignorage income accruing to NCBs…

> *"…in the performance of the ESCB's monetary policy function… equal to its annual income derived from its assets held against notes in circulation and deposit liabilities to credit institutions… reduced by an amount equivalent to any interest paid by that central bank on its deposit liabilities to credit institutions in accordance with Article 19."*

There is no mention of indemnifying NCBs for the costs of 'leaving EMU' and it would be odd if there were. It would be very hard to argue at the Court of Justice that the above wording was intended to capture such losses. The 'leaving' NCB is responsible on its own for the exposures that would appear across its balance sheet. This is another powerful glue holding NCBs into EMU.

Damage to the ESCB, including non-EMU central banks such as the Bank of England

The financial crisis provided plenty of cheap collateral and otherwise hard-to-finance paper. As a result, government bonds have fallen as a percentage of Eurosystem collateral. But this is not permanent. The cheapest collateral tends to drive out the more expensive. If a country were considered as being a candidate to 'leave' EMU as a weak currency, the resulting upward pressure on rates would cheapen the collateral and make it that more likely to be tendered at all ESCB repo operations (Eurosystem and non-euro — it is believed that the Bank of England holds large amounts of euro paper as collateral). This would give the ESCB large exposures, collateralised by a devalued asset and at a time of acute financial stress. Losses would be very likely.

We would expect a correlation between a sovereign event and 'leaving EMU'; in the extreme, 'leaving EMU' would be one expensive default mechanism. In either case, departure or a jump to default from within EMU would, in our view, impose heavy losses on the ESCB.

In the current environment, this puts the ECB and the ratings agencies in a starring role since between them they decide whether a sovereign's debt is eligible for rediscount in the Eurosystem. Prior to the financial crisis, euro-area sovereign debt needed at least one A rating to be eligible. Greece currently has one such rating, an A2 from Moody's. Currently, the rules have been liberalized (to one BBB rating), with the expectation but not the certainty that the liberalization will be reversed at the end of 2010.

Given the reliance on ECB funding of the Greek banking system, it is possible that the loss of eligibility precipitates a discussion of departure. Or, if the ECB, trapped in a "lost game" is forced to extend liberalization, the possibility of a jump to default would have to be considered as the credit-worthiness of still-eligible government collateral deteriorates.

A 'leaving' economy would 'leave' having sustained damage from a huge, near-random redistribution of wealth and would be establishing a new currency with the balance sheet of its central bank wiped out. In the process, it would have randomly-distributed wealth overseas and with/among foreign participants in its economy. It would inflict collateral damage on other economies and on the ESCB. In particular, the fate of the central bank would be very hard to contain. Establishing a new currency in these circumstances is likely to be extremely hard. Indeed, although domestic obligations would have been redenominated, there are strong parallels with the case discussed later in this paper of introducing a parallel weak currency. 'Re-euroization' is the likely result, as the ECB concluded.

The impact is similar to that of a currency devaluation on a country with heavy foreign-currency debt. But the scale of that foreign-currency debt is indeterminate in this case due to the opportunity provided to the market to exploit the expected devaluation cost-free at the expense of the central bank. Our conclusion is that the scale of the damage caused would be tantamount to destruction of a large part of the financial system and severe damage on the systems of the rest of the euro area. The possibility can be contemplated of a country's situation being so bad that it is prepared to pay that price in order to 'leave EMU'. But almost any concession is likely before that point and, should the option be taken, destruction of the financial system scarcely constitutes reversibility of the EMU-entry decision. Again, this hardly constitutes a true option to 'leave'.

We highlight the point set as background at the outset. The series of actions would be construed as inimical to the Union, resulting in possible expulsion, in our view, underlining the ECB's other point that EU and EMU membership are coterminous. Friendly—even, in the worst case, peaceful—relations with neighbours would be threatened.

Heavy economic damage is likely to result from an attempt to 'leave' EMU by redenominating existing obligations. There would be likely collateral damage on other economies. Currency redenomination is a really radical step. This series of problems, which we regard as being insurmountable to all intents and purposes, is occasionally referred to in this report as 'the main critique'.

Even given a prior decision by the sovereign to default we think that the extra costs of doing so by 'leaving EMU', as opposed to defaulting within EMU, would be prohibitive. A sovereign default would have effects on the banking system and NCB, but these would be limited, compared to the costs of 'leaving EMU'.

Note that 'leaving EMU' is a credible threat for any sovereign contemplating default, as the rest of the area has a stronger incentive to help prevent default due to the extra costs of doing so by the defaulter 'leaving EMU' as a default mechanism.

We were recently asked what would happen if an NCB simply bought the debt of its sovereign. Since the full structure of sixteen central banks in sixteen separate legal systems, with sixteen separate balance sheets, has survived EMU, and they implement monetary policy under the co-ordination of the ECB, this is theoretically possible. We suspect that the chain of events would unfold in such a way that the ECB would immediately shut TARGET to the relevant NCB and the NCB would effectively have started to circulate its own currency (distinguishable by the law of denomination and the letter on the bank notes) under case one above.

As a practical matter, this is in fact probably the most likely way to try and execute an exit. The purchase might even be quite far advanced before the market or the ECB worked out what was going on. But the main critique survives. With TARGET closed, many foreign obligations would default and the effect would be mass systemic default, similar to the effect of the Argentinean "corralito" in December 2001.

2) Introducing a new currency in parallel. A currency could be introduced to circulate in parallel but it is very likely to fail

The fact that monetary sovereignty, while pooled, is retained does indeed means that a new, officially legislated currency can be introduced to circulate in parallel. This cannot recover the *status quo ante*, but provides an opportunity to recreate monetary sovereignty effectively from scratch. We believe this is likely to be very difficult, to the point of being unfeasible in most circumstances. Its importance in thinking that EMU entry is reversible should certainly not be exaggerated.

Establishing a new currency, so that effective monetary sovereignty is recovered, requires its widespread adoption by the banking system and the government, including the redenomination of government debt.

We note that for all non-G7[10] countries, redenomination of government debt into a new, local currency constitutes an event of default under the ISDA 2003 Definitions. This is likely to be that last thing on the mind of a 'leaving' government, but is a consideration for sovereign CDS traders and hedgers. Notably, an old EMU breakup proxy, Italian sovereign CDS, do not trigger on an Italian currency redenomination. See our recent report: *Sovereign CDS Primer: Devilish details*, for a full discussion of this interplay.

The earlier argument prevents the government legislating equivalence between existing euro claims and the new currency. It can however redenominate its debt (probably triggering CDS, into which the ex-euro debt would be deliverable) and demand, to the extent it can, that the new currency be used domestically. Use or hoarding of the euro could be outlawed or at least discouraged. But under this course of action, there is no way to extinguish domestic private-sector euro obligations. This establishes a situation where a foreign currency (the euro) is circulated very widely in competition with the domestic currency and goes a long way towards the euro-ization the ECB foresees in these circumstances. In some countries, this has already occurred to some extent. In note form, the euro circulates widely in Eastern Europe. Zimbabwe recently dollarized via parallel circulation. To regain actual monetary sovereignty, the new currency has to establish itself throughout the economy. Gresham's law (that bad money drives out good) does not describe this situation: on the contrary, history suggests that foreign currencies circulate in response to a valueless local currency. (Scott 1998).

Following introduction of a parallel currency there would be three cases.

A) **A new, weak currency**. Were the euro still a strong currency, with a new weak currency to be introduced, the situation would resemble some of the history of Eastern Europe and the economy would remain effectively 'euro-ised'. Redenomination of government debt would provide some short-term windfall gains to the public sector, in common with any such default, but would not gain monetary independence and would incur large costs. The country would be in breach of EU Treaties and would lose whatever say it has in euro monetary policy. Those owing overseas debts (and see main body: this is likely to include everyone transacting overseas) would still be on the hook. Would a sovereign (for rhetorical purposes) East Germany expect to gain from reintroducing the Östmark? Failure.

B) **A new currency and a chronically weak euro**. Were the euro chronically weak, the new currency could establish itself. The original EMU would remain intact, but become irrelevant. This indeed provides relief from the problem of a euro devaluing to worthlessness (taking the legacy currencies with it) but this scarcely constitutes reversibility of the decision to join. Note that in this case all 'old' euro debt would be likely to stay in euro.

C) **A new, relatively stable currency and stable euro**. New claims and government debt could be accrued in the new currency, but old claims would remain in euro. Establishing the new currency would require widespread redenomination to take place voluntarily on the part of the private sector. Either debtors or creditors would push for this, through the markets, depending on the reasons for introducing the new currency and the monetary policy being pursued within it. Debtors would seek to 'redenominate' through the markets into a weak, lower-interest-rate currency, creditors the opposite. With a very small natural base and with the whole private economy denominated in euro, this implies either a monetary policy exactly matched to that of the euro, or a quick degeneration to case (a), driven by the interests of debtors gaining the upper

[10] Or, in theory, at least one AAA rating. But we think that is a meaningless exception.

hand or a slower degeneration in the direction of case (b), driven by creditors. The latter is probably the most stable outcome. It implies the new currency being very strong. The economy would be faced with a choice of two monetary policies and an internally floating exchange rate. A form of internal divergence is conceivable, with very sharp and sudden internal price moves between those parts of the economy that remain euro-ised and those that are not.

But, in addition to these problems, the situation is unstable in that any tendency to weakness on the part of the new currency degenerates into case (a) unless the currency has become very firmly established. Monetary sovereignty can therefore only be regained for as long as the new currency is needed to be strong. As soon as the need changes, case (a) occurs, leading to failure of the new currency. The only case in which it never does so is case (b).

An earlier paragraph referred ahead to the likely fate of a currency that redenominates into a new, weak currency and drew an analogy with the parallel introduction of a weak currency. That reference can now be put into context. Case (a) would prevail. The 'leaving' country, in addition to the other costs and problems would probably be euro-ised in any case.

It is highly unlikely that introducing a new, parallel currency can regain monetary sovereignty. However, it does provide a way to manage the euro becoming worthless. In this case, existing obligations would stay in euro.

3) Another major currency could be adopted instead: a true 'way out' but rather academic

The 'leaving' country's authorities could announce that effective from some certain date in the future, their currency will be (to name the clear obvious example) the dollar with existing claims redenominated at market rates prevailing at the instant of conversion (cf sterling's presence in the ECU basket as the ECU became the euro). *Lex monetae* is clear: claims in the law of the 'leaving' country are in dollars, other claims in euro. The mechanism is broken whereby the market can accrue claims against the central bank in the currency they have reason to believe will be stronger. Even if a judgement is made as to the course of the dollar vs. the euro and asymmetric claims build up against the 'leaving' country, the eventual exchange is at market rates and involves no gain or loss (compare the ECU at the end of 1998). It can be hedged. The main mechanism for inflicting economic damage on a country attempting to 'leave EMU' is neutralised.

A key underlying assumption is that the destination currency is sufficiently robust to be able to absorb the impact of the incoming entity. The complicity of the destination-currency authorities is clearly highly desirable but is not indispensable in all circumstances[11]. The dollar is the only realistic 'target'. Ecuador and, as mentioned, Zimbabwe, have dollarized[12].

[11] A full study of the mechanics of adopting a foreign currency is beyond the scope here. Briefly, for the process to be sustainable, the adopting country has to accumulate enough of the target currency to retire the liabilities of the central bank in the retiring currency. A monetarily sovereign state can achieve this unilaterally, given the right policies. While not essential, the assistance of the target currency's authorities is useful: this is how countries join EMU - the 'Eurosystem' cooperates in deeming the old liabilities to be denominated in the target currency. But these liabilities remain distinct. The process is more difficult for an existing EMU member adopting a foreign currency, but theoretically possible while still monetarily sovereign. In contrast to the indeterminate sums mentioned in the main critique, the liabilities of the central bank are strictly determinate. Transfer of EMU central banks' FX reserves to the ECB makes the process more expensive but the mechanism is intact.

[12] These are not 100% comparable with the proposal made here, in that they left or would leave no surviving currency. Dollarising out of EMU is probably new ground, although the South African Colonies redenominated from guilders to sterling in 1828. But no overriding objection is seen.

Interest-rate contracts of course create transfers of wealth in this process, to the extent the interest-rate structures are different in both currencies. This is no different from the process of convergence in the transition to EMU. The law of new interest-rate transactions can be chosen freely once the government's plans are known. Unlimited arbitrage at the expense of the 'leaving' country is therefore impossible. So interest-rate contracts pose small problems compared to that imposed by the main critique. There are likely to be costs, but these are strictly determinate in contract to the indeterminate costs of creating a new currency. These issues existed in the creation of the euro. EMU 'convergence' occurred over a period of years but created very large wealth transfers, mainly away from the governments of high-interest-rate countries and in favour of bond-holders. The issues were manageable and managed.

4) EMU could be dismantled in the same way it was built, via a basket currency

The main critique concerns the creation and management of international claims in a way that harms the 'leaving' country and destroys its central bank. Surviving countries' jurisdictions continue to recognise euro claims on the 'leaving' country. But if all countries left, some mechanism could be agreed to destroy ALL euro claims in favour of, for example, a basket of new currencies — the reverse of EMU. *Lex monetae* would redenominate all euro claims globally to the basket, given that the laws of all ex-EMU countries would legislate that change. The basket received would be the same across the zone (or the main critique would be triggered). This would be an enormous project, but no more so than the creation of EMU itself. In extremis, it is just conceivable as a possibility. There would be no differentiation between the various countries/jurisdictions: all euro holders would receive the same basket.

But this is not a general 'way out'

Note that this mechanism is most unlikely to allow a country to 'leave EMU' even by mutual agreement with all survivors. A basket would have to be agreed on which would make a 'new euro' and some fraction of a new (e.g.) Deutschmark out of a euro. The political resistance to such a proposal would be insurmountable. And what of a euro claim by an EMU-country entity on a 'leaving-country' entity under the laws of England and Wales or of New York? Creditors would immediately seek to establish these claims, which could be argued to survive: this would be new legal ground. And non-EMU claims under non-EU law - claims of UK banks, for example - would remain in euro.

There are small exceptions, such as a hyperinflating euro, adopting a third currency or unanimous reversal of the whole EMU project. But apart from these, any country attempting to 'leave EMU' would either introduce a new, parallel, currency that would be unlikely to succeed or, by attempting to redenominate existing claims, inflict disastrous damage on itself and probably its neighbours.

5) The 'disaster scenario': a full-blown split is a remote possibility, but all current euro obligations would remain

For thoroughness, the case should be considered where the euro creates an environment intolerable to several economies, to the point where the Treaties are not observed[13]. For argument's sake consider the minority rich: a *noyeau dur* that seeks higher rates, but is an outvoted minority[14] at the ECB. The 'options' outlined above are open. The 'main critique' still binds. If the 'leaving' countries redenominated existing obligations, the abandoned 'rump' would outvote the monetary defence of a higher Marginal Lending Rate and the 'leaving' central banks would be very severely penalised by the market.

More promising would be a synchronised attempt by a hard-currency core to float a new currency in parallel, hoping to force the occurrence of case 2B above — a currency floated in parallel with a chronically weak euro. A disaster indeed. However, the 'leaving' countries' old government debt would still be in euro.

A cross between a split and a basket-based unwind is a distant theoretical possibility. We have mentioned in the past the idea of splitting the euro into a 'latino' and a 'duro', with a floating exchange rate and with countries able to redenominate backwards and forwards over time: a relatively straightforward process, as described above. Existing euro would be denominated into a basket. The ECB could act as central bank to both (sets of NCBs). This is probably the theoretically optimum outcome, but can hardly be considered a serious possibility.

Short of a true disaster, renegotiation of the entire euro project under alternative 4 above would be far preferable all round: cleaving off in this way would inevitably be costly. However, a rich minority group has the best chance to 'leave' a weak euro and create a parallel hard currency.

EMU can be reduced to irrelevance by sufficiently powerful forces, but it cannot be left. In any case, the conclusion stands:

Even a rich minority group acting in concert would not create a new currency into which existing euro obligations are redenominated.

Conclusions: for all practical purposes, 'leaving EMU' is impossible and attempting to do so is a very expensive way to default

Due to the costs imposed on a 'leaving' country, we think EMU is highly stable. 'Leaving EMU' is not a concept to be discussed lightly. Although various theoretical possibilities for doing so might be argued to exist, in practice the options are either ineffective, inflict devastating damage or only exist in the absence of a modern financial system and are therefore academic to EMU. Realistically, therefore, a country's 'leaving EMU' and inflicting a (massive, widespread) default are inseparable. 'Leaving EMU' is not an independent event whose discussion can impact spreads. Rather, it is part of the default process. Therefore, spreads should not be driven by talk of 'leaving EMU', but by other factors driving credit within the euro zone. A discussion of the lack, or de facto existence, of bail-out provisions is a separate subject and one that should impact spreads. Independent risks of 'leaving EMU' should not.

[13] To repeat, this whole piece downplays Treaty obligations, which would clearly tend to work against 'leaving'. Many of the 'options' are contrary to the spirit of the Treaties if not to the letter. But the EU — even the 'leaving' country's membership — would probably survive one country leaving. A split of the sort in this scenario would very likely be fatal to the EU.

[14] Otherwise, stay and dominate: the ECB sets interest rates and generates no material controversial policies beyond that.

Even given that a sovereign decides to default, we think that the dominant strategy is to do so within the area, rather than through the mechanism of trying to leave it, which greatly increases the costs.

To repeat, throughout we have minimized the effect of the Treaties; most of the actions herein, such as introducing a new currency, and in our view certainly outright debt purchases, would represent constructive unilateral derogation of the Treaties, which would carry its own large and unpredictable costs.

A closing note: what would Monnet do?

The aim of this report is not to forecast, but we think that the continuing “fault-lines” illustrate our point that crises are “baked into the cake” despite the equilibrium ultimately being stable. The counter-factual discussion below is an illustration of the likelihood of those fault-lines to persist, not a Credit Suisse position paper.

Jean Monnet, who is generally seen as the initiator of the EU and EMU, was considered by many a radical of the highest order; his response to the events of 1940 was a full political union between Britain and France, an idea that came close to fruition. Any radical should be bored to tears by legal minutiae of the sort outlined above, and individually appalled by tales such as those of German bank customers rejecting euro notes without a “X” serial letter. So how can these issues go away? The minutiae at least highlight the issues. Our suggestions would be wildly controversial and impractical; radicalism usually is. Constitutional objections would be inevitable. But one idea would be to:

1) Merge fully the ECB and NCBs, which become ECB branches. Excess equity values in reserves etc. can be transferred to the current shareholders, national treasuries, before the merger. There would be a single set of accounts, and so no need for letters on the banknotes. Possibility rating 5/10.

2) A Europe-wide ECB cannot operate in national laws; a European corpus juris is needed. English law and its successors dominate international commerce due to certainty, clarity and established precedent. The language helps. The Westminster Parliament has adopted most EU directives into English Law. Introduce European Law based on English Law as it currently stands, giving the European Parliament powers to make further European Laws in areas of “federal” competence, with the ECJ in its current role. All operations of European bodies, specifically the ECB, are conducted in the new European Law. This particularly is obviously a huge political step, not easily “fudged”. Possibility rating 1/10.

3) The euro area is probably not an optimal currency area (OCA): it certainly cannot be guaranteed to remain one indefinitely. A fiscal balancing mechanism is needed to help make fairer the resulting costs. Harmonize VAT across the EU as a “federal” tax, authorized by the European Parliament and administered by the Commission[15]. Possibility rating 4/10.

4) Non-euro EU members join the euro. Possibility rating 8/10. (Conditional on the legal system point and the ending of fault-lines, which would help convince the UK).

[15] There would be huge costs, associated with the "pork-barrel" politics seen in the US. But creating a single currency area has benefits and costs. Critics of EMU usually focus on the costs, and conclude that the project is unsustainable. This is a non-sequitur; sub-OCAs are legion and we would argue the US was one for most of its history. A fairer point is that having those costs borne by "losing" but more-or-less sovereign entities, as arguably is currently the case, is unstable compared to pork-barrel style inefficiencies. Arguably this is the point highlighted by US history.

When convincing the UK to join the euro is your easiest task, you are faced with a challenge, so it looks likely to us that crises will remain “baked in the cake” and there will be no substitute for understanding the details in this report for the foreseeable future.

This, in our view, helps account for the growth in sovereign CDS. The private sector will continue to explore “hedges” against strains as long as fault-lines, which can be construed as an official “hedge” or at least a lack of further commitment, persist.

Our aim is that discussions during such crises will at least be better informed as to the implications of ‘leaving EMU’.

Appendix A: Historical 'Precedents'

1) Mauritania left West African Monetary Union and the CFA Franc on 28 June 1973 to establish the ouguiya as a non-convertible currency. Many foreign interests were nationalised at the same time. Maintaining a modern financial system was not a priority in a country where widespread slavery was still a problem.

2) The newly independent states of the disbanded Austro-Hungarian Empire introduced their own currencies. The main mechanism for doing this was 'stamping' of Austro-Hungarian banknotes. The last successor state to do so was Hungary, between 18 and 27 March 1920. In a foretaste of the 'main critique',

   > *Because the Austrian crown had depreciated by more than the unstamped crowns in Hungary, people brought the still-unstamped small-denomination crown notes to Hungary, bought dollars, and then returned to Austria, where the dollars could purchase a larger number of crowns…*

   Earlier, Czechoslovakia had asserted monetary independence and

   > *…the Austrian government had forbidden the import of Austro-Hungarian banknotes and the transfer of crown deposits from outside Austria… There are indications that these ordinances were widely evaded.*

   In general, the experience suggests a strong tendency for money to move across borders:

   > *…unless carefully planned and executed, this act of currency separation can provide individuals with incentives to move currency about, exacerbating monetary instability in the breakaway member or in the surviving currency union.*

   (All quotations Garber and Spencer 1994)[16]

3) The 'Confederate dollar' 1861-1865 was not a new currency as such. Rather, it consisted of bills issued in *US dollars* by the Confederate States of America. The Civil War was fought under a US dollar standard and the CSA of course defaulted (although as part of the Reconstruction settlements, States did not do so with very limited exceptions). The notes traded at deep discounts and were almost valueless after Gettysburg. It is mentioned here in light of other references to Texas. This currency union not only failed to prevent a war, it survived it and influenced the outcome.

4) Czech and Slovak Republics, February 1993. Residents of the two countries were allowed to exchange currency up to a (low) threshold. Payment systems were suspended. Nonetheless, banknote arbitrage appears to have taken place (Garber and Spencer), with Czech being the importer.

5) The ruble area was dissolved in 1991/2. The Russian central bank turned off the 'main critique' by restricting the interstate payment system and the supply of banknotes to other states. The Baltic States, particularly, were able to establish new currencies helped by many factors such as nationalised banks, closed and cash-based economies and a very weak ruble. Even so, Lithuania froze 'legacy' ruble deposits.

[16] The Dissolution of the Austro-Hungarian Empire: Lessons for Currency Reform. Peter M. Garber and Michael G. Spencer - Essays in International Finance No. 191 - February 1994, Department of Economics, Princeton University

6) The Irish pound is not a precedent, although its 1979 float from sterling is often quoted as an example of a country leaving a currency union. The Irish pound was created certainly as early as the Bankers (Ireland) Act 1845 and probably much earlier, under "An Act passed in the Parliament of Ireland in the 21st and 22nd years of the reign of HM George 3rd [1780 or 1781], intituled 'An Act for establishing a bank by the name of the Governors and Company of the Bank of Ireland'". It never lost its independent existence during 'monetary union' with the UK and there were no implications to breaking in 1979 what was actually a fixed peg. The risk of a float was always a risk for the market although the market seems not to have hedged it or been concerned by it until the last minute. The float was helped by a relatively close match between the boundaries of Irish law and the area of widespread use of the Irish pound. Ireland 'leaving EMU' would already be an entirely different matter.

7) The Latin Monetary Union of 1865-1927 is sometimes quoted by the press along the lines of "the last time France and Greece shared a currency" but is a red herring. It was a co-ordinated gold/silver standard. Participating countries minted similar gold and silver coins that circulated relatively freely. Its weakness was it gave a first-mover advantage to the arbitrage that plagued bimetallic systems, including the US. So by 1873 it was a mutual subset of the gold standard with no relevance to EMU.

   Likewise, the Scandinavian Monetary Union of 1873 to 1914 was a fixed exchange-rate regime, not a pooling of monetary sovereignty.

In general, where applicable, the precedents of a breakup of a currency zone contained strong restrictions, verging on the confiscatory. They occurred in cash-based economies largely lacking the complexity of modern financial systems. In many cases deep state control of the financial system was used to expedite the process.

Even if some of the precedents, such as Austria-Hungary, are considered as applying to the euro, the following of them by any EMU state would imply that a disaster had occurred: they are therefore academic for current purposes. At least, they do not contradict the strongest conclusion of this paper: EMU should not be considered a readily reversible step at least in light of our restriction at the outset that 'any country seeking to 'leave' EMU wishes to do so without returning to barter, with a surviving modern financial economy and a convertible currency.

Appendix B: British Monetary Union

The Treaty of Union of 1706 between Scotland and England (enacted in the Acts of Union of the following year) provided for a single currency but separate legal systems. There is no "law of Great Britain" or "UK law" but a "law of England and Wales", often abbreviated to "English law", and a law of Scotland. Both are administered by the Parliament of Great Britain, sitting at Westminster, subject to powers devolved to the Scottish Assembly, which specifically exclude financial and foreign affairs. So the single Westminster legislature could in theory set aside "BMU" and float the Scottish pound, or even have it join the euro.

The only true differences between 'BMU' and EMU are the lack of a Scottish central bank and the overlap between the legislatures administering both legal systems.

Scottish bank notes need no letters to distinguish them: they are readily identifiable as zero-coupon perpetual obligations of certain Scottish banks, and are backed 1:1 by deposits at the Bank of England. Prior to the recent crisis, it was not clear exactly how the notes would have ranked in insolvency. (We believe seignorage was the original reason for the backing, not secured lending). Following the crisis and the passage of the Banking Act 2009 and the The Scottish and Northern Ireland Banknote Regulations 2009, the notes are effectively secured by Bank of England notes. English bank notes are direct obligations of the Bank of England.

The fact that the independent existence of the Scottish pound cannot be considered a true fault-line is proven, in our view, by the fact that the question never arose even in the depths of the recent banking crisis.

But consider how BMU might have fared during the recent crisis, or during a future British political crisis if financial affairs had been delegated. The fault-line would have become real and deposits might well have crossed the border. This counterfactual highlights, in our view, some of the issues we address above, and the fact that the UK is addressing potential fault-lines 303 years on suggests patience in dealing with those in the euro area.

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