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THE FUTURE OF EMU: WHAT DOES THE HISTORY OF MONETARY UNIONS TELL US?

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ABSTRACT

The creation of EMU and the ECB has triggered a discussion of the future of EMU. Independent observers have pointed to a number of shortcomings or "hazard areas" in the construction of EMU, such as the absence of a central lender of last resort function for EMU, the lack of a central authority supervising the financial systems of EMU, unclear and inconsistent policy guidelines for the ECB, the absence of central co-ordination of fiscal policies within EMU, unduly strict criteria for domestic debt and deficits, as set out in the Maastricht rules, in the face of asymmetric shocks, and Euroland as not an "optimal" currency area.

Do these "flaws" represent major threats to the future of EMU? Or will they be successfully resolved by the European policy authorities, leading to a lasting and prosperous EMU?

We provide answers to these questions by examining the historical record of monetary unions. We try to extract the key conditions for establishing and for maintaining monetary unions intact. Our main lesson from the history of monetary unions is that political factors will be the central determinants of the future of EMU. The "economic" shortcomings of EMU will likely be overcome as long as political unity prevails within EMU.

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THE FUTURE OF EMU. WHAT DOES THE HISTORY OF MONETARY UNIONS TELL US?

1. Introduction.[1]

On January 1st 1999 the exchange rates of eleven members of the European Union were locked to each other at irrevocably fixed rates. This was a major step towards the establishment of the European Monetary Union (EMU) and the European Central Bank (ECB). Eventually, the eleven domestic currencies will be replaced by one single currency, the euro. It will be circulating in an economic region probably larger than that of any other currency area. January 1st 1999 marks an important transition not only in the history of Europe but in the history of the global monetary system.

The creation of EMU and the ECB has triggered a discussion of the future of EMU. Independent observers have pointed to a number of shortcomings, "flaws" or "hazard areas" in the construction and workings of EMU. These include (1) the absence of a central lender of last resort function for EMU, (2) the lack of a central authority supervising the financial systems of EMU, (3) weak democratic control (accountability) of the ECB, (4) unclear and inconsistent policy directives for the ECB, (5) the absence of central co-ordination of fiscal policies within EMU combined with unduly strict criteria for domestic debt and deficits as set out in the Maastricht rules and the Stability Pact in the face of asymmetric shocks, and (6) Euroland is not an "optimal" currency area. The list can be lengthened.

Do these shortcomings represent major threats to the future of EMU? Will they eventually spell the demise and break-up of EMU? Or will they be handled by the European policy authorities in a successful way, leading to a lasting and prosperous EMU?

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[1] This report builds upon and extends our previous work on the history of monetary unions. See Bordo and Jonung (1997). Anna Schwartz has generously helped us improve our arguments. We are greatly indebted to Pontus Hansson for research support and to Anders Bornefalk, Benjamin Cohen and Kurt Schuler for helpful suggestions.

We answer these questions by examining the historical record of a number of unions that have turned out to be lasting as well as some unions that have been dissolved. Our aim is to extract the key conditions for the establishment and survival of monetary unions. Our interpretation of the historical record serves as the basis for our forecast for the future of EMU, although we are well aware that there is no clear precedent to EMU. While by now the literature on monetary unions and European monetary co-operation is voluminous, there are few systematic studies dealing with the stability or sustainability of monetary unions and monetary integration.[2]

The paper is organized as follows. First, the most commonly asserted shortcomings of EMU and of the ECB in the present debate are listed to serve as a guide for the examination of the historical record. Next, we investigate why monetary unions were created, focusing upon five major monetary unions established in the 19th century. Then we examine the break-up of monetary unions in the 20th century. Finally, we confront our account of monetary union performance with forecasts for the future of EMU and evaluate the destabilizing effects of several shortcomings in the construction of EMU.

Much of recent analysis of monetary unions by economists is based on the framework suggested by the literature on optimal currency areas. This approach is not well suited for the analysis of the history of monetary unions. It is too static and ahistorical. Instead, our approach is an evolutionary one, since we examine a long stretch of time and the character of the processes causing the appearance and dissolution of monetary co-operation and unification.

2. The shortcomings of EMU.

The economics profession has in general been sceptical of a European monetary union. Economists have pointed to a large number of pitfalls on the road to a common European currency. Indeed, the road so far has been a rocky one.

The ERM crisis in the early 1990s severely threatened the EMU-project. The last minute effort in May 1998 to put a Frenchman in charge of the ECB as well as various attempts in the early spring of 1999 by the German minister of finance to press for a lowering of

[2] Exceptions are Cohen (1993, 1998), Goodhart (1995) and Graboyes (1990).

the euro-rate damaged credibility. The transition from stage two to stage three, when the exchange rates of the first set of countries to join EMU were permanently fixed, was once regarded as highly risky, potentially provoking speculative attacks. No such attacks materialised, however. The transition went smoothly at the turn of the new year of 1999. Now after January 1st, 1999, the creation of EMU and the ECB has triggered a discussion of the future of EMU since it seems to have passed the major hurdles of the long transition stage that started in the 1970s.[3]

Economists have pointed to a number of shortcomings, also termed "deficiencies", "flaws" or "potential fault lines" in the construction of EMU. There are by now about half a dozen such "hazard areas".[4] We list the most common ones below, focusing on those pertaining to the euro-area once it was established but ignore "deficiencies" pertaining to the transition stages before the common currency is introduced into circulation within Euroland. We thus concentrate our discussion on the long run "steady-state" of EMU, assuming that it will successfully pass through the remaining transition.[5]

1. EMU lacks a central lender of last resort. The ECB has not been granted power by the Maastricht treaty to serve this function. This stands in sharp contrast with modern central banks, which exercise lender of last resort responsibilities to guarantee the liquidity and functioning of the payments system.[6] In the face of a liquidity crisis, the absence of a lender of last resort may undermine the existence of EMU.

2. EMU lacks a central authority to supervise the financial systems, including the commercial banks, of Euroland. The Maastricht treaty gives the ECB some supervisory functions but they are primarily the task of the union members. This state of affairs portends that a future pan-European financial crisis may not be efficiently resolved, consequently threatening the stability of the Eurosystem.[7]

[3] For the history of the EMU-project see Gros and Thygesen (1997).

[4] The shortcomings of the EMU have given rise to a flowering field of synonyms: "sources of concern" (Eichengreen (1990)), "hazard area", "weakness", "potential fault lines" (Obstfeld (1998).

[5] From a historical point of view, the sequencing of EMU, that is the lengthy step-by-step process involving ERM and the fulfilment of the Maastricht criteria etc, is without precedence. As we discuss below, monetary unions in the past have as a rule been introduced in a fairly rapid way without prior monetary and fiscal coordination.

[6] This argument is set forth by i.a. Prati and Shinasi (1999).

[7] See i.a. Prati and Shinasi (1999), Eichengreen (1993) and Obstfeld (1998).

3. The ECB lacks democratic control and accountability. The ECB will be subject to political attacks and controversies that damage the legitimacy of EMU and erode popular support for the Euro. The role of the European parliament in monitoring the ECB is unclear at this point as well. Should major economic problems arise within a single member of EMU, populist political movements may use them to attack EMU and the ECB.[8]

4. The policy directives for the ECB are inconsistent, unclear, and badly designed. Although the ECB is to carry out "domestic" monetary policy within Euroland, according to the Maastricht Treaty, exchange rate policy for EMU is set by the Council of the European Union, that is by the Council of finance ministers of EMU.[9] This will result in political discussion, tensions and political pressure on the monetary policy of the ECB.

5. The absence of central co-ordination of fiscal policies within EMU in combination with unduly strict criteria for domestic debt and deficits, as set out in the Maastricht rules and the Stability Pact implies that EMU will not be able to respond to asymmetric shocks and disturbances in a satisfactory way.[10] For example, presently (summer 1999) the booming Irish economy is in need of a tighter monetary policy yet the ECB has lowered interest rates in Euroland making monetary policy in Ireland more expansionary.[11]

6. Europe is too large a geographical area to form a well-functioning monetary union. In other words, Euroland with its present eleven member states is not an optimal currency area (OCA). This point, which dates from the analysis of optimal currency areas initiated by Mundell (1961), has been debated continuously since the announcement of the plans for a monetary union in Europe. Most empirical work on this issue reaches the conclusion that EMU is not an optimal monetary union, at least it is less optimal than the

[8] See for example Feldstein (1997).

[9] Monetary policy issues of the EMU-the Eurosystem are critically assessed by i.a. Begg, et al (1998), Buiter (1999) and Svensson (1999).

[10] On the effects of the stability pact, see i. a. Eichengreen and Wyplosz (1998) and Flandreau, Cacheux and Zumer (1998). The counter-argument states that once EMU is created private agents will adjust to the new rules of the game and smooth shocks through other channels than through fiscal and monetary policies. See e.g. Mélitz and Zumer (1998). See i. a. Alesina and Wacziarg (1998) on the weakness of the institutions of the EU.

[11] The case of Ireland illustrates how monetary policy within a monetary union is determined by the center, not the periphery.

US monetary union.[12] The efficiency gains from increased trade do not outweigh the costs of surrendering control over national monetary policies.

The costs of that surrender will depend on the incidence of asymmetric or idiosyncratic macroeconomic disturbances across Euroland, the degree of flexibility of wages and prices, the mobility of factors of production within Euroland, and the extent to which fiscal policies, either on a national or on a pan-European level, can serve as a substitute for changes in the exchange rate and the interest rate of the domestic currency.

European labour markets are commonly described as rigid and labour mobility within the EMU members as limited. Under these circumstances an asymmetric shock will set off an adjustment process that will be more slowly and costly within EMU than otherwise. Rising unemployment, requests for fiscal transfers, and for protection will undermine the credibility of EMU and the political cohesion required for a well functioning monetary union.[13]

This point is probably the major objection to EMU. The abolition of domestic currencies and thus of the ability to adjust nominal exchange rates and domestic interest rates when faced with asymmetric or country-specific shocks, in the opinion of most economists, threatens the stability of EMU.[14]

This list of shortcomings or objections is substantial,[15] but will they turn out to be important in the future. How have monetary unions in the past dealt with the issues we have listed? Below we study the historical record, first to examine the process of creation and maintenance of monetary unions, then the process of their dissolution.

3. The creation of monetary unions

[12] See for example Eichengreen (1997).

[13] See for example Obstfeld and Peri (1998) for a critical view of the effects of relatively low labor mobility within Europe.

[14] See for example the discussion in Feldstein (1997). A more optimistic view is given by Wyplosz (1997).

[15] The above list can be made longer. It could include the threat that election or political cycles within Europe may pose. When a majority of the EMU members face elections the same year, this will increase the risk of domestic expansive policies, threatening the EMU.

There is a historical record of monetary unions within which the same currency served as a unit of account, medium of exchange and store of value. Thus, a monetary union had one exchange rate towards the rest of the world. In our view, the history of monetary unions is best understood by distinguishing between national monetary unions and multinational monetary unions.[16]

In a national monetary union political and monetary sovereignty go hand in hand. Roughly speaking, the borders of the nation-state are the borders of the monetary area. For example, within the British monetary union comprising England, Scotland, Wales and Northern Ireland, Scottish commercial banks still issue bank notes. These notes are perfectly interchangeable for Bank of England notes. In the United States each of the Federal Reserve Banks issues dollar bills perfectly acceptable in every reserve district - a five dollar bill issued by the Federal Reserve Bank of Richmond is always perfectly interchangeable with a five dollar bill issued by any other Federal Reserve Bank. A national monetary union has as a rule one single monetary authority, commonly a central bank.

In a multinational monetary union international monetary co-operation between a number of independent countries is based on permanently fixed exchange rates between their currencies. Multinational monetary unions emerge when independent nation states link their monies together through a fixed exchange rate so that one country's money is perfectly exchangeable for that of another member country's at a fixed price. An extreme example is such that all member states use the same currency.

There is as a rule no common monetary authority in a multinational monetary union. An example of such a union is the Scandinavian monetary union, which had one common unit of account, the Scandinavian krona, and three members: Sweden, Norway and Denmark. Each member maintained its own central bank, issued its own krona currency which circulated freely within the other countries as long as the union existed. The exchange rate of the Swedish, Danish and Norwegian currency units remained one to one to one during the existence of the Scandinavian currency union.

We emphasise the distinction between a national and a multinational monetary union because we believe that the survival prospects of a monetary union depend crucially on

[16] This argument is developed in Bordo and Jonung (1997).

whether it is organized as a national or multinational union. The future of the EMU thus depends on whether EMU will more closely resemble a national or a multinational monetary union.

We first examine the establishment of three national monetary unions, those of the US, Italy and Germany, and next two multinational unions, the Latin and the Scandinavian unions, and finally the emergence of other forms of monetary unification. Here we deal primarily with the monetary experience of the late 18th century and the 19th century. See Table 1.

3.1. National monetary unions

3.1.1. The United States monetary union[17]

The American revolutionary war was largely financed by the issue of fiat money both by the Congress (the continentals) and by the States (bills of credit). During the War of Independence (1776-1783) paper money issues at the rate of 50 percent per year in the first five years of the war generated a very rapid inflation rate of over 65 percent per year and rapid depreciation of the exchange rate. The inflation ended after a currency reform in 1780 under which the federal government stopped issuing continentals, and the states agreed to accept outstanding issues in payment of taxes at 40 dollars to 1 in specie (a value much lower than the exchange rate of 1780) until 1783. After that date the continentals were to become worthless.

After the war the States continued to issue bills of credit during the Confederation period (1783 to 1789), only some of which were credibly backed by future taxes. Consequently, problems emerged of excessive volatility of exchange rates that lead to exchange rate risk, high transactions costs, and competitive seigniorage.

The US monetary union was created with the signing of the Constitution in 1789. The constitution gave the Congress the sole power to "coin money" and "regulate the value thereof". Moreover, the Coinage Act of 1792 defined the US dollar in terms of fixed weights of gold and silver coins, placing the country on a bimetallic standard. Finally,

[17] The account of US monetary unification rests on i a the following contributions: McCallum (1992), Perkins (1995) Rolnick, Weber and Smith (1994) and Fraas (1974).

establishment of a national mint in Philadelphia in 1792 secured the foundations for an effective currency area.

While the Congress was given the exclusive power to coin money, the States were allowed to charter commercial banks and to regulate their note issue. All bank notes had to be convertible into specie. In the early decades of the 19th century, the quality of bank notes varied considerably and various bank notes circulated at a discount.

The movement to a complete monetary union with a more uniform nation-wide price level was aided by the practices of the First Bank of the United States (1791-1811) and the Second Bank of the United States (1816-1836). Neither Bank was designed as a modern central bank but as a public bank. Both banks were sufficiently well capitalized to be able to provide the government with medium-term bridge loans to finance shortfalls in government tax receipts. Both were also authorised to provide loans to the private sector to spur economic development. Finally, it was deemed imperative that they hold sufficient specie reserves to maintain convertibility of their notes. One of the practices of both Banks was to enforce the convertibility of state bank note issues and to transfer specie between regions.

After the demise of the Second Bank of the United States in 1836, the United States had no formal central bank until the establishment of the Federal Reserve System in 1914. However, the US Treasury served as a monetary authority and maintained specie convertibility.

Although banking instability characterized the 19th century, the monetary union remained intact with the exception of the Civil war period 1861-65 when the Confederate States issued their own fiduciary inconvertible currency denominated in dollars. In the face of great difficulties in raising tax revenues and in selling debt both at home and abroad, the Confederate government also expanded its money issues at an ever-increasing rate. By the end of the Civil War a hyperinflation vastly reduced the value of Confederate notes. Upon Union victory in April 1865, Confederate notes were declared illegal in the United States.[18]

[18] Lerner (1956).

Monetary unification of the US was thus not completed until long after its political unification. The US did not establish a central bank with a lender of last resort function until this century. However, State bank regulation was undertaken by State banking inspectors well before the Civil War and national bank regulations by the Comptroller of the Currency beginning in 1863. These institutions evolved at a considerably later stage than the monetary unification.[19]

3.1.2. The Italian monetary union[20]

The main reason for the establishment of a currency union on the Apennine peninsula in the 1860s was political unification of the area now known as Italy.[21] The unification process, led by the Kingdom of Sardinia, was completed in 1861. Prior to 1861, disparate kinds of money circulated among the various small Italian states. In 1859, as many as 90 different metallic currencies were legal tender. In addition, major banks in the small states issued bank notes that served as legal tender in their respective regions. The existence of a plethora of different currencies was commonly regarded as a barrier to trade. In order to achieve more than a de jure politically unified Italy, measures were taken to turn the country into a monetary union as well.

The issue of coins was quickly resolved. During a brief transition period, only four currencies were acceptable and the others were exchanged for these four. Finally, in 1862, a new, unified coinage system was introduced based on the lira of Sardinia. All pre-unification coins and paper monies were abolished and exchanged for coins denominated in the new lira, equal in value to the French franc. A bimetallic currency standard was chosen, primarily to conform to the monetary system of Italy's major trading partners and to accommodate the dominance of silver coins in southern Italy.[22] The currency ratio between silver and gold was set at the European standard of 15.5.

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[19] The legal tender status of a number of foreign currencies was abolished by the US Congress as late as in the 1850´s. Cohen (1998, p 34).

[20] The account of the monetary unification of Italy is based on i. a. Fratianni and Spinelli (1985) and Sannucci (1989).

21 Venetia was incorporated in 1866 after Italy had participated on the Prussian side in her war against Austria. The Papal States were incorporated in 1870 when France, that until then had acted as a protector of the sovereignty of the Papal States, was engaged in war with Prussia.

22 See also the section on the Latin Monetary Union.

When Italy introduced the lira, the price of gold was falling, creating a shortage of silver coins. The legislators acted by lowering the silver content of coins to 83.5 percent instead of the customary 90 percent. This led to an export of silver coins, a phenomenon that the suspension of convertibility a few years later encouraged.[23]

The monetary unification of Italy was not accompanied by immediate action to establish a single monetary authority. Several regional banks were issuing notes as well as performing central bank functions. The Banca Nazionale nel Regno d'Italia (BNR), which was formed by the previous national bank of Sardinia and absorbed some other state banks in the process, held a dominant position in part because it was the largest bank in operation, in part because it was the bank of the state that led the political unification process.

Italian monetary research does not clearly explain why a single monetary authority was not created after unification. Apparently opposition to monetary unification was not the reason. Given that Sardinia imposed her system on the rest of the country in a wide range of matters, neglecting the preferences of other states, had she wanted why did she not establish the BNR as the central bank of Italy?

Several explanations have been offered. One is the general belief at the time that Italy would gain from competition between issuing banks, since banking was like any other industry, just as competition in other industries was considered beneficial. Also, prior to unification, the general concept of Italian banking was to combine the two functions of regional commercial banks that were credit institutions as well as note issuers. Money was created in the form of bank notes in response to demands for credit. The creation of one central bank, the central government might have concluded, would destroy, or severely impair, the functioning of commercial banks at the local level and the costs would exceed the benefits of control of the supply of paper money by a central bank.

When Italian monetary unification took place in 1862, almost the entire money stock consisted of coins. Since the supply of coinage was regulated by the supply of gold and silver, fluctuations in the Italian money stock followed the international pattern. The share of coins in the money supply remained stable until the mid-1860s, an indication

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23 For an account of the fineness of coins, see the section on the Latin Monetary Union.

that as long as bank notes were convertible into specie, the multiplicity of issuing banks did not create a problem.

When the central government's fiscal deficit rose sharply in the first half of the 1860s, it worsened the strain already put on public finances by its assuming the debt of the member states. Italian bond prices fell abroad, driving specie out of Italy and leaving the reserves of the commercial banks dangerously low. Their ability to lend to the government declined. To come to terms with the new situation, the government declared bank notes inconvertible into specie in 1866, corso forzoso in the language of the day.[24] After this step, the government received a large loan in notes from the BNR. In return, the position of the BNR was strengthened. The notes of other banks were made legal tender and at the same time convertible into BNR notes. BNR notes, however, were not convertible into other banks' notes. Consequently, BNR notes served as reserves for other banks.

The corso forzoso ended in 1884. Convertibility was resumed and the lira returned to gold parity. The notes of the six remaining note-issuing banks exchanged for each other at a one-to-one basis, although the parity was not stipulated by law. As a consequence of the de facto fixed exchange rate between the notes, each bank had an incentive to increase its stock of notes. The risk of the government discovering an over-issue was small. Furthermore, deteriorating government finances increased the likelihood that any illegal over-issue of notes would be legalized.

In 1891, a liquidity crisis due to the low levels of reserves relative to outstanding notes was pending. The government, as expected, responded by legalizing the total volume of notes in circulation by lowering reserve requirements. An ensuing enquiry into the state of the banking system completed in 1893 led to a major restructuring of the banking system. The Banca d'Italia was formed as an amalgamation between the BNR and the two remaining note-issuing Tuscan banks. The three other note-issuing banks were put under direct state supervision.[25] Despite these measures, specie continued to flow out of Italy. The lira depreciated, mainly as a result of the failure to reduce the excess issue of

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24 Corso Forzoso translates broadly as "forced circulation".

25 The newly created Banca d'Italia, the Banca di Napoli and the Banca di Sicilia. The Banca Romana went into liquidation in 1893. Its business was taken over by the BNR.

notes. The outflow triggered another liquidity crisis, and in 1894, bank notes once again were declared inconvertible into specie.

As part of the 1893 reshaping of the banking system, the government and the banks agreed to restrict the note issue to three times the volume of specie. In the long run this proved successful, in no small part due to the fact that the Banca d'Italia was established as the leading note-issuer with 75 percent of total circulation. Fiscal discipline contributed to making the period up until World War I one of monetary stability with an appreciating lira.

The formation of the Italian monetary union, as in the case of the US monetary union, took place after political unification. Similar to the US case, the creation of Italian monetary unity was a time-consuming process.

3.1.3. The German monetary union

The German monetary - as well as political - unification process proceeded stepwise. Thus, scholars do not agree when the most important step towards monetary unification occurred. Holtfrerich (1993) suggests that the unification of coinage in 1857 represents the major, though not the final, achievement towards a monetary union. Others like Kindleberger (1981) are of the opinion that the creation of the Reichsbank in 1875 was the most important step. The disagreement has important implications: in the former case monetary unification preceded political unification and in the latter case vice versa. We believe that the most important step towards monetary unification was taken after the establishment of the Reich, so that Germany followed the same pattern as the US and Italy.

Prior to German monetary unification, each principality and free town issued its own coins and, in some cases, paper money. Since many of the principalities were quite small, it was inevitable that their coins spread across their borders as an accompaniment of the free flow of migration within the Deutscher Bund. In addition, many foreign coins, not least of French origin, circulated within Germany. Money exchanges were common and profitable.

The diversity of coins was a great nuisance. Merchants and industrialists, often with a liberal orientation, became the main proponents of unified economic and monetary

conditions to reduce transaction costs emanating from the monetary disarray. The governments of the principalities resisted, safeguarding their seigniorage gains.

In 1834, all internal customs barriers were removed. This agreement, known as the Zollverein, also proposed that the various coinage systems should be integrated into a common standard as was done in 1857. In the 1860s voices were raised to continue the process of monetary unification. In 1870, the North German Federation, founded in 1867, prohibited new issues of state paper money and fixed the volume of note issues for most banks. These measures left the control of the future growth of paper money in the hands of the Prussian Bank.

The establishment in 1871 of the new unified German Reich following the Franco-Prussian war led to further steps. The coinage acts of 1871 and 1873 unified coinage throughout the Reich and introduced the Mark as the unit of account, based on the decimal system. In order to link the German currency to the British pound, at the time the leading international currency, the gold standard was adopted with silver being reduced to use in coins of small denominations with less metal content than their face value.[26] In 1875, a new banking act transformed the Prussian Bank into the Reichsbank and forced most other banks to opt for ordinary banking business.[27] The Reichsbank was designated the central bank for the new Germany. From the 1870s till the outbreak of World War I, Germany was part of the international gold standard.

Political unification epitomized by the creation of the German Reich was followed by three major changes in the German monetary system: the conversion of the currency standard from silver to gold, the replacement of the Thaler with the Mark as the unit of account, and the formation of a single central bank that, in practice, monopolized the issue of paper money. With political unification Germany also established a central bank that could function as a lender of last resort. Political unification was also a prerequisite for a common fiscal policy - as it emerged during World War I.

These changes meant that Germany after a long process became a full-fledged national monetary union. Again, in our opinion, monetary unification followed political unification.

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26 There was an exception to the rule, however, as outstanding silver Thalers remained legal tender.

27 The termination of other banks' right to issue notes was not as straightforward as simply enacting a law forbidding it. Instead, the government allowed other state banks to continue to issue notes but to stipulate stringent rules concerning the denominations of the notes and the total amount issued. Private banks were forced to choose between issuing notes valid only in the region of the bank or performing their business nationwide.

3.2. Multinational monetary unions

The Latin and the Scandinavian monetary unions were created in the 19th century as multinational monetary unions. They were based on a standardized coinage across the union while each member country retained its central bank.

3.2.1 The Latin monetary union[28]

Prior to the establishment of the Latin Monetary Union in 1865, France, Belgium, Switzerland and, to some extent, Italy had a history of recognizing each other's currencies as means of payment. The basis of this arrangement was the French bimetallic system, in operation since 1803, which stipulated the fineness of each coin, regardless of whether it was a gold or a silver coin, at 90 percent and fixed the relative value between gold and silver to 15.5.

In the 1850s, a fall in the market price of gold relative to the price of silver made gold coins overvalued at the mint. Consequently, it became profitable to melt silver coins and sell silver for gold at the market rate. As the price of gold continued to fall, even worn coins with low silver content started to disappear. The process left bimetallic countries virtually with a gold standard currency since gold was the only medium of exchange that remained in circulation. However, with no silver coins there was a lack of small-denomination monies to use in minor transactions.

Upon monetary unification, as noted above, Italy decided to lower the silver content of every coin smaller than 1 franc to 83.5 percent. The result of the actions of Italy and similar ones by Switzerland was that debased silver coins from the neighbouring countries flooded mainly France but also Belgium, creating seigniorage gains for the issuers. France reacted in 1864 by reducing the silver content of every silver coin, except the 5-franc coin, to Italy's 83.5 percent and by suspending the acceptance of Swiss coins by her customs offices.

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28 This section is based on Griffiths (1991) and Redish (1993).

The acute shortage of small denomination coins constituted a hindrance to trade both within and between countries and forced the countries into action to remedy the problem. The unilateral response by individual countries created an additional problem in the form of one country reaping seigniorage benefits at the expense of the others. To deal with this situation Belgium proposed a joint monetary conference, held at the end of 1865, that created the Latin Monetary Union.

The main issues at the conference in 1865 were to secure and standardize the supply of subsidiary coinage for smaller transactions and the formal adoption of gold as the currency standard. The first issue was unanimously resolved by deciding that all silver coins lesser in value than the 5-franc coin were to be token coins of 83.5 percent silver fineness. State treasuries had to accept token coins, regardless of the country of origin, as payment up to 100 francs. Each state treasury was obliged to exchange the other state treasuries' existing holdings of its token coins into gold or silver 5-franc coins at par. The figure 83.5 percent was chosen because of the dominant share of French and Italian token coins of that fineness already in circulation. The total value of token coins that each country was permitted to mint was restricted to 6 francs per capita. Due to strong French opposition and despite the fact that the other countries favoured such a move, the adoption of a gold standard was rejected in favour of retaining the bimetallic standard.[29]

The existing currencies continued to be in use virtually unchanged as parallel currencies. Each state treasury remained ultimately responsible for the redemption of its own coins. Apart from solving the problem of the scarcity of small-denomination coins, the purpose of the standardization of the dimension and metal content of the coins was to eliminate the possibility of seigniorage gains through the minting of debased coins. While aiming to restrict the amount of money in circulation, the conference failed to consider restrictions to prevent the member countries from issuing other forms of money - a failure that the issue of paper notes exploited. Consequently, the members still had considerable monetary independence.

29 Of two possible explanations for the French resistance, one, mainly political, suggests that Napoleon III was planning a world monetary conference in 1867 where he hoped to be able to exchange French willingness to adopt the gold standard for universal adoption of the French monetary standard. He was thus unwilling to convert to a gold standard at this stage. According to the other explanation, the Bank of France was concerned with the cost of redeeming outstanding silver coins in gold. This would stretch the Bank's reserves to the limit and Napoleon III, dependent on the Bank for loans, had to follow the Bank on this account.

Initially, the Latin monetary union achieved its objectives. However, two problems soon emerged. After the inauguration of the union, the price of gold started to rise. Silver 5-franc coins returned to circulation while gold coins were melted or exported. At the same time, France and Italy began to issue inconvertible paper money. In the case of France, it was a temporary measure due to the 1870-71 war with Germany. Italy's chronic government deficit maintained inconvertibility of the lira until 1881 and restored it again in 1894. The increased money supply in Italy led to a depreciation of the lira. Consequently, Italian silver coins were exported to the other member countries where they were legal tender. Obviously, this enabled the Italian government to finance part of her deficits with seigniorage, the cost of which was shared by all four countries, that is, Italy, France, Belgium and Switzerland.

In response to the problems facing the union, a conference by the members in 1874 decided to maintain the bimetallic standard but restrict the minting of silver 5 franc coins. In 1878 the members agreed to cease issuing 5-franc silver coins although those already in circulation were to remain legal tender. This arrangement established the "limping gold standard". In the discussions preceding the decision of 1874, both Belgium and Switzerland were originally in favour of terminating the union and the Belgian delegates argued for adoption of a gold standard. France and Italy, however, were against both proposals, probably because the Bank of France as well as the Italian government feared huge costs of redeeming in gold all the 5-franc silver coins in circulation. The other three nations feared as well that a termination of the union might lead to Italy refusing to redeem the other countries' large holdings of Italian token coins. Instead, Italy had to agree to withdraw her token coins from international circulation for as long as she retained inconvertible paper money.

The union remained intact until the outbreak of World War I, each member country with its own central bank. The main task of the union was to maintain a system of standardized coinage.

3.2.2. The Scandinavian Monetary Union[30]

Prior to the formation of the Scandinavian monetary union in 1873, the three Scandinavian countries were all on a silver standard.[31] Indeed, in the years leading up

30 This section is based on Jonung (1984) and Bergman, Gerlach and Jonung (1993).

to the 1870s, all of them used the riksdaler as the unit of account. One Norwegian specierigsdaler was roughly equal to two Danish rigsdaler which in turn was roughly equal to four Swedish riksdaler. A considerable share of the coin circulation in each of the three countries consisted of coins minted in the other two. The difference in value separating these simple exchange rates from the exchange rates based on the currencies' values in silver was small for the Danish and Norwegian currencies. Any profits that could have arisen from arbitrage was negligible.

This was not the case for the Swedish currency, however. Its value exceeded 0.5 Danish or 0.25 Norwegian rigsdaler. The amount was sufficiently large to produce an inflow of Danish and Norwegian coins into Sweden, for which it was a nuisance.[32]

This currency flow was by no means the only reason, not even an important one, for aiming at a unified coinage. In all the Scandinavian countries, a lively debate regarding the most suitable specie standard - gold or silver - and regarding the merits of the decimal system for dividing the unit of account, created an intellectual climate in favour of adopting a common gold standard based on the decimal system for the Nordic currencies.[33] The decimal system was favoured on grounds of rationality. A currency based on the gold standard was deemed appropriate since Scandinavia's leading trading partners, the United Kingdom and Germany, were on gold. In addition, nationalistic sentiments running through Europe in the latter half of the 19th century took the form of Scandinavism in Scandinavia, a social and political willingness to bring the Nordic countries closer together.

All of these factors - the disequilibrium in currency flows, the perceived superiority of the gold standard and the decimal system and the political climate of the day - contributed to the creation by Sweden, Denmark and Norway of a common currency union in 1873. Although Norway did not formally sign the agreement until 1875, in practice her monetary standard was altered in 1873.[34]

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31 Finland was at the time a grand-duchy of Russia. Iceland was governed by Denmark. Norway was formally part of a political union with Sweden but enjoyed far-reaching political independence.

32 The law proposed in the Swedish parliament in 1873 specifically mentioned the permanent costs emanating from the inflow of Danish and Norwegian silver coins.

33 The issue was debated at three meetings of Scandinavian economists: in 1863 in Gothenburg, in 1865 in Stockholm and in 1872 in Copenhagen.

34 The reasons for Norway's initial refusal to join the monetary union are not entirely clear. In any case, Norway joined the union two years later and, in doing so, accepted all the terms of the agreement. This was not particularly surprising

The formation of the Scandinavian monetary union replaced the old unit of account, the riksdaler, with a new one, the Scandinavian krona. The value of a Scandinavian krona was specified in terms of gold and to be equal in all three countries where the new gold coin was minted. Subsidiary coins were to be minted in silver and copper with a fineness of 80 percent and no restrictions were placed on the amount of such coins each country was allowed to mint. All coins were given legal tender status throughout the three Scandinavian countries. The state treasuries accepted unlimited amounts of coins irrespective of their country of origin. The only restrictions were a maximum amount stipulated for the settlement of private debts.

Because of the larger denominations of the gold coins compared to that of bank notes, notes remained in wide use in Sweden. Inter-country circulation consisted of notes and subsidiary coins. This caused some dissatisfaction since notes were not covered by the union agreement and thus did not always circulate at par. However, this shortcoming was eventually to be remedied.

The first enlargement of the Scandinavian monetary union occurred in 1885. The three central banks decided to establish inter-country drawing rights. Transactions between the central banks were made free of interest and other charges. It is unlikely that the central banks would have entered such an agreement if they felt that intra-Scandinavian currency flows would create permanent disadvantages. Consequently, the 1885 agreement indicates that no country sought to gain seigniorage benefits at the expense of the others. The smooth functioning of the union led Sweden and Norway to further extend the scope of the union in 1894 by accepting each other's notes at par without restrictions. The Danish central bank did not join the new agreement until 1901.[35]

No particular economic and political strains to the union appeared before World War I - except for the political separation of Norway and Sweden in 1905 which caused some uncertainty for a brief period. The gold standard, by requiring convertibility into gold, ensured stability in the money supply. All three countries avoided issuing excessive

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since she had already introduced in 1873 all measures except the grant of legal tender status to Swedish and Danish coins.

35 The comparatively less widespread note circulation in Denmark may have induced the Danish central bank to treat the issue as less urgent. Notes represented 26 percent of the circulation in Denmark, 41 percent in Norway and 57 percent in Sweden according to Henriksen, Kærgård and Sörensen (1994).

amounts of subsidiary coins.[36] The money supply in the member countries expanded in line with economic growth. Inflation rates and interest rates exhibited identical patterns in Scandinavia during the union.

3.2.3. Other monetary unions[37]

In the 19th century, currency boards developed as a common monetary arrangement in many colonies, in particular in British colonies. A typical currency board issued notes and coins at least fully backed by reserves denominated in the currency of the colonial power. Currency boards were a method of economizing on the use of notes and coins of the colonial power.[38] A currency board represented a form of monetary union, more precisely an exchange rate union, between the colony and the home country.

Most colonies abolished their currency boards and established central banks of their own when they gained independence in the 1950s and 1960s. In a few cases the currency board system was maintained and managed, such as HongKong, Singapore, the East African Currency Area, emanating from British colonial rule but dissolved in 1977, and the East Caribbean Currency Area consisting of seven small island nations.[39]

The currency board institution has experienced a renaissance in the 1990s as Argentina, Estonia, Lithuania, Bulgaria and Bosnia have recently adopted currency boards. So far these experiments appear to have worked well in terms of establishing monetary stability and credibility relative to alternative monetary arrangements. However, it remains to be seen how well they will function in the long run.

A number of monetary unions have been established in the 20th century. One example is the CFA Franc Zone, formed in 1959 by former French colonies in west and central Africa, which actually has much in common with a currency board arrangement.[40] The

36 One event, however, suggests underlying political strains. In 1905, the Swedish central bank cancelled its participation in the 1885 agreement. However, a new renegotiated agreement quickly followed which allowed each central bank to charge the other banks when selling drawing rights. This option was not used for five years, and then by Norway and Denmark. The action of the Swedish central bank in 1905 may have been motivated by a desire to show its resentment that Norway had secured independence from Sweden that year.

37 This section is based on Cohen (1993) and Graboyes (1990).

38 For a description of the workings and history of currency boards, see Hanke, Jonung and Schuler (1993) and Schwartz (1992).

39 Cohen (1993) and appendix C in Hanke, Jonung and Schuler (1993).

zone is in practice two monetary unions covered by the same arrangement, with each union having its own monetary authority. Each union uses a unit of account called the CFA franc which in 1948 was set equal to 1/50 of a French franc.[41] The CFA francs are legal tender within their respective monetary unions and are convertible into French francs. France's influence over monetary policy in the region is substantial. The CFA Franc Zone has provided lower inflation rates than in neighbouring African countries, primarily by limiting credit to national governments. The union is still in operation.

The East Caribbean Currency Area is an example of a multinational monetary union with a single monetary authority. The East Caribbean Currency Area comprises seven small countries in the Caribbean Ocean that were previously British colonies.[42] Under British rule, monetary matters were controlled by the British Caribbean Currency Board, which has since evolved into the East Caribbean Central Bank. It is the sole issuer of a single currency for the union, the Caribbean dollar, which is legal tender in the seven member states. The seven member countries also co-operate in other matters, for instance through the East Caribbean Common Market. The union is still in operation.

Some unions deal with the case of a very small country adopting the monetary system of a large country, most commonly a close neighbour, for example Luxembourg-Belgium, Andorra-France, Monaco-France, the Vatican City-Italy, San Marino-Italy and Liechtenstein-Switzerland. In each of these cases, monetary authority is exercised entirely by the larger country.

There are a few cases of a small country that unilaterally adopts the monetary system of a country far away. Examples include Liberia where the Liberian dollar was fixed to the US dollar at a one-to-one rate and US bank notes were made legal tender in 1944 and Panama which, one year after the country was formed, in 1904 fixed the exchange rate of the domestic currency, the balboa, to the US dollar and made the US dollar legal tender.

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40 More specifically, the members are Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Congo, Equatorial Guinea, Gabon, Ivory Coast, Mali, Niger, Senegal and Togo.

41 In 1994, though, the CFA Franc was devalued by 50 percent.

42 The members are Anguilla, Antigua and Barbuda, Dominica, Grenada, St. Kitts-Nevis, St. Lucia and St. Vincent and the Grenadines.

The monetary union between Ireland and Britain formed after Irish Home Rule in 1922 represented a currency board institution.[43] When Ireland was part of Britain, sterling was used in Ireland. This arrangement was temporarily prolonged in 1922. With Britain as the largest trading partner of Ireland, the Irish government by taking no action to change the monetary system clearly indicated that the advantages of maintaining close monetary links to Britain outweighed the advantages of monetary sovereignty. In 1925, a new unit of account, the Irish pound, was introduced. The Irish pound was explicitly linked to sterling. It had to be backed by gold or sterling assets one-to-one and sterling remained legal tender. The union was not ended until 1979 when, due to the strong inflationary tendencies of the British economy, Ireland decided to join the newly formed EMS instead.

4. The dissolution of monetary unions

Several monetary unions have been dissolved in the 20th century. We first discuss the break-up of the two multinational unions considered above, and next the collapse of some national monetary unions.

4.1. Multinational monetary unions

The outbreak of World War I signalled the end of the Latin and the Scandinavian monetary unions. The main cause of the break-up of the Latin Monetary Union was World War I. The sharp increase in military expenditures left its members with no choice but to issue paper money.[44] Large quantities of paper money issued during the war remained in circulation after the end of hostilities. As paper money was not recognized as legal means of payment in any country other than the issuing one, the union was in effect terminated. During the war, silver coins were melted or exported. Remaining coins constituted a small share of the total money supply.

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43 The section on the monetary union between Ireland and Britain is based on Bradley and Whelan (1992).

44 See Bordo and Jonung (1998) for an account of the international experience of the interaction of monetary and fiscal policies since the 1880s.

Belgium was the first member to act formally, declaring in 1925 that she would leave the union at the start of 1927. The other countries followed and the Latin monetary union was dissolved. The process was easy to carry out as each member had a central bank and a domestic currency of its own. The monetary separation did not create any major problems. It had de facto dissolved during World War I.

Like the Latin monetary union, the Scandinavian monetary union's collapse was a result of World War I. At the outbreak of war, Scandinavian notes were declared inconvertible into gold. At the same time, in order to prevent an outflow of gold, the export of gold was prohibited. The growth of the money supply thereby ceased to be tied to the supply of gold and the basis for the exchange of Scandinavian notes at par was eliminated.

Monetary policy was more expansive in Denmark and Norway than in Sweden. In 1915, the official exchange rates changed accordingly with one Swedish krona buying more than one Danish or Norwegian krona. The dissolution of the Scandinavian monetary union was a gradual one. It occurred in several steps, first, Scandinavian notes were not traded at par, Scandinavian gold coins were prevented from circulating freely within Scandinavia, and finally coins were not traded at the one-to-one rate.[45] The union was officially terminated in the early 1920s although the political desire to maintain the union accounted for proposals to resurrect the Scandinavian monetary union later on.[46] Each member of the two multinational unions examined, the Latin and the Scandinavian one, continued to maintain a domestic monetary authority which facilitated the break-up of the union once it was subject to large disturbances.[47]

Other multinational unions have also been dissolved in the 20th century in Europe. The British-Irish currency board arrangement - which was a form of multinational monetary union - was terminated in the 1970's. Luxembourg established a central bank when it joined the European Central Bank system, ending the monetary union with Belgium that had lasted since the 1920's. These break-ups occurred with no major political tensions or repercussions.

45 See the account of Bergman, Gerlach and Jonung (1993) and of Bergman (1999).

46 Recently, as a response to the creation of EMU, a Finnish-Swedish monetary union has been proposed as an alternative to Finnish and Swedish membership in the EMU. See Jonung and Sjöholm (1999).

47 The existence of a domestic central bank was an important prerequisite for the expansionary fiscal policies carried out during World War I. Central banks in belligerent countries monetized the huge budget deficits emerging as a result of the financing of the war effort. See Bordo and Jonung (1998).

To sum up, the dissolution of multinational monetary unions has been easy to carry out when each member country maintained a central bank of its own during the monetary union. The central banks of the nation states could rapidly re-establish the domestic "national" monetary union.

4.2. National monetary unions

Several national monetary unions have been terminated in the 20th century and divided into smaller monetary areas. The two world wars contributed to the demise of some monetary unions; the Austro-Hungarian empire[48] and the Russian empire after World War I; and the creation of new ones; the German monetary union after World War II splitting into two parts, one covered by Western and the other by Eastern Germany.

In the 1990s the national monetary unions of Soviet Union, Yugoslavia and Czechoslovakia broke up. The Ruble zone disintegrated in a lengthy process during the first half of the 1990s ending in a large number of new currency areas.[49] The Yugoslav monetary union in the face of a civil war collapsed into several new monetary unions - each associated with a new nation state and a new currency.[50]

The Czechs and Slovaks decided to form two nation states out of Czechoslovakia due to differences on politics and economics, but to remain in a monetary union until a later stage. The political break-up occurred on January 1st 1993 when the Czech republic and Slovakia separated. Political separation initiated expectations of a monetary separation, creating a divergence between the exchange rates of the new currencies. These expectations brought about monetary separation by February 1993, although so early a step had not been contemplated by the authorities.[51]

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48 See Garber and Spencer (1994) and Dornbusch (1992).

49 This account is based on Bornefalk (1998).

50 This account is based on Kraft (1995) and Wyzan (1993).

51 See Fidrmuc and Horváth (1998) and Garber and Spencer (1994).

The common cause of these break-ups is found in the political process, not in the monetary union by itself, nor in "economic" forces. War and/or political disunity have brought about the dissolution of nation states. As a consequence of political separation monetary divorce followed. See Table 2 for a list of national monetary unions dissolved in the 20th century.

The typical collapse has followed two paths. The first path was accompanied by fiscal and monetary turmoil and high inflation in some or all of the new monetary areas. This was the case of the dissolution of three European empires in the 20th century, Austria-Hungary, Russia and the Soviet Union, as well as the dissolution of Yugoslavia. The second path was a more peaceful and orderly one. The dissolution of the monetary union of Czechoslovakia was an orderly affair, not accompanied by huge fiscal deficits and high inflation.

To sum up, when far-reaching political events cause the break-up of existing nation states into smaller nation states, monetary separation and divorce follows in almost all the cases we have studied.[52]

5. Summary: Why are monetary unions created and dissolved?

According to our account of the establishment of monetary unions, the most important reason is that a national monetary union generally follows as part of the process of political unification. There are few exceptions in history of nation states, which are not a unified monetary area with a national currency unit of their own - and these have generally been very small states like Monaco, Andorra, and Luxembourg.

Second are economic reasons, including a reduction in transaction costs by standardizing the coinage, gains from trade, access to wider markets, and harmonization of policies. Third and finally, non-economic reasons besides political unification includes a common history, a common language, culture, and religion have contributed to monetary unification. This is in particular the case with multinational monetary unions.

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52 The independence of Norway from Sweden in 1905 and Ireland from the United Kingdom in the 1920s are exceptions in the sense that the monetary cooperation between the various countries continued <u>after</u> political separation.

The causes of the break-up of national monetary unions are foremost found in political developments. Political unity is the glue that holds a monetary union together. Once it dissolves, it is most likely that the monetary union will dissolve.

Although we have argued that national monetary unity follows from political unity, we do not want to make a watertight separation between political and economic factors. They are closely interlinked. Political unity is based partially on economic conditions. As long as the economic gains from political unification outweigh the benefits from separation, the nation state will be a viable alternative, not running the risk of falling apart.

Within the nation state political tensions created by economic differences between various regions and ethnic groups, can result in the demise of the unity necessary for keeping the nation state together. The US civil war and the recent break-up of Czechoslovakia are examples of economic tensions that undermined political unity and hence monetary unity.

Most nation states have created - or create when deemed necessary - institutions and mechanisms to resolve domestic economic and political conflicts. Differences in economic outcomes are commonly alleviated by transfer payments. Tensions due to language, religion, and culture can be reduced within the nation state through constitutional designs that allow a high degree of sovereignty for minority groups. Switzerland is an example of a nation state, as well as a monetary union, with widespread local political power to allow diversity in religion, language and culture. Most modern nation states, even federal ones, require substantial redistribution of income. Such redistribution may not be enough: fundamental differences between members, for example, due to religion and ethnicity, combined with political and/or economic shocks may produce break-ups of nation states and consequently of national monetary unions. Yugoslavia, Czechoslovakia and the Soviet Union are examples in the 1990s.

Our reading of the historical record, giving prominence to the "political will" to explain the rise and fall of monetary unions, is consistent with the conclusions of other researchers. Cohen (1993, p. 190) argues from six case studies of monetary cooperation "that political conditions are most instrumental in determining the sustainability of monetary cooperation among sovereign governments." The term "political conditions" covers the presence of a strong local hegemon or a dense network of institutional linkages. Cohen

(1993, p. 188) concludes that "Economic and organizational factors matter, but interstate politics appears to matter most of all."[53]

6. The future of the EMU. The lessons from history.

Our history of monetary unions is based on a crucial distinction between national and multinational unions. When considering the future of EMU, we first should ask whether EMU will emerge as a national or a multinational monetary union? The answer is not obvious. The EMU-project is unique in the history of monetary unions. We have not found any clear and unambiguous historical precedent to EMU, where a group of monetary and politically independent countries surrendered their national currencies to form a common monetary union based on a new unit of account under the leadership of a common monetary authority - while still retaining political independence. Monetary unification has heretofore followed political unification - not the other way around.[54]

Political unity has a rule also entailed to some extent a centrally coordinated tax and expenditure system, thus allowing for central fiscal policies.[55] EMU is unique in the sense that monetary coordination within Euroland will be stronger than political and fiscal coordination.[56]

We are inclined to view EMU as closer to a national monetary union than to a multinational union for several reasons. EMU will have one common central bank, the ECB. It will eventually issue the only circulating money in Euroland. The previous central banks of the members of EMU will diminish in power and importance according to the Maastricht treaty. They will most likely resemble the regional reserve banks of the Federal Reserve System of the US. This analogy suggests that they will not formulate a

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53 Cohen (1993) examines the record of six multinational unions. He does not deal with the case of any national monetary union as defined by us. His conclusions concerning the role of political factors would most likely be strengthened if had also considered national monetary unions.

54 As stated by Goodhart (1997, p 92); "What is remarkable, and virtually unique, about the proposed move to the EMU and the euro is that it will be done without an accompanying federalization of governmental and fiscal functions."

55 See also Goodhart (1995, p 465): "The domain of a single currency has generally had the same boundaries as its central political and fiscal system, and areas with independent currencies have likewise had separate political and fiscal centers."

56 EMU is often regarded as a method for accomplishing political and fiscal unification. Once Europe has a common currency, it will rapidly move towards a federal state according to a common interpretation.

common European monetary policy. Monetary policy will be centralized on a pan-European level under the ECB. Furthermore, membership in EMU and the adoption of the Euro are regarded as permanent. There are no escape clauses. The Maastricht treaty gives no country the right to leave EMU. [57]

This implies that, when forecasting the future of EMU, our conclusions derived from the history of national monetary unions are more relevant than those from the experience of multinational unions. [58] EMU involves considerably stronger monetary integration than was the case for the multinational unions of the past. We believe the closest historical parallel to EMU to be the national monetary unions of the United States, Italy and Germany. [59] These cases demonstrate how a complete monetary union, that is, the use of the same money as well as a common monetary policy across all jurisdictions, evolved over time. Initially all the institutions required for successful monetary policy, according to the conventional monetary policy wisdom of today, did not exist.

Starting from our critical assumption that EMU will be close to a national monetary union, we distil the following from the historical record.

(1) EMU will be a flexible monetary union. First of all, the history of monetary unification suggests that national monetary unions are permanent and flexible. They evolve over time in response to political and economic events. Their durability and flexibility is a consequence of the political process that once established monetary unity. EMU has been created by a strong will for political unity, despite a number of primarily "economic" objections to the project. This political determination will likely design mechanisms and institutions to overcome the shortcomings of EMU that the initial set of rules and treaties embodied in the Eurosystem impose.

We initially listed several shortcomings, such as the absence of a lender of last resort and of a central authority supervising the financial system, lack of democratic control

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57 The Scandinavian monetary union had an explicit right for any member to leave the union. See Jonung (1999).

58 However, we are aware that to some extent EMU will resemble a multinational monetary union. There is not complete central coordination of the political and fiscal systems of the member states. Monetary centralization goes before political and fiscal centralization. However, in our opinion EMU still is closer to the workings of a national monetary union than to a multinational union.

59 The US currency union is commonly used as a benchmark by economists when examining various issues of the process of European monetary unification.

and accountability for the ECB, inconsistent policy directives for the ECB, lack of a central fiscal policy-making authority, and Euroland as not an optimal currency area.

Seen from an evolutionary perspective, these shortcomings will likely be met by various solutions, emerging over time - just as they have emerged in national monetary unions. Thus, we do not regard this list per se as a major threat to the future of EMU. Indeed, current criticism by economists concerning the shortcomings of the Eurosystem lays the groundwork for future improvement. Policy-makers will eventually respond where the critique is found deserving - a pattern that holds for general policy-making in an open society.

Let us briefly illustrate our interpretation by considering how shortcomings in the U.S. monetary union were dealt with. A unified economy was created in the Constitutional Convention of 1789, which gave the Congress the power to coin and regulate the currency. It took another seven decades to create a complete uniform currency with the National Currency Act of 1863. The process involved two failed attempts to establish a central bank and the instability associated with state regulation of bank notes.

Establishment of a unified currency did not resolve the endemic problem in the nineteenth century U.S. financial system of periodic banking panics. Private mechanisms to provide emergency currency through the clearinghouses and occasional interventions by the U.S. Treasury were only successful in allaying several minor panics.

Major crises in 1893 and 1907 in which many banks failed and monetary contraction led to depression, were instrumental in the successful campaign to create a national lender of last resort and central bank in the Federal Reserve Act of 1913. Although the Federal Reserve System was empowered to act as a lender of last resort, it failed miserably in meeting banking panics in the early 1930s, thereby converting a not unusual contraction into the Great Depression. As a consequence of that experience the U.S. developed an extensive financial regulatory network including deposit insurance, and the Fed finally evolved into an effective lender of last resort.

Moreover, the mechanisms to transfer fiscal resources from the federal government to the states in the face of shocks, were developed only many years after the monetary

union was created. It took the shock of the Great Depression to devise an effective means for the Federal Government to transfer resources to the states.[60]

Our argument that institutions evolve in response to changing circumstances and requirements can be supported by the fact that European policy authorities have already displayed substantial flexibility in interpreting and adjusting to economic and political realities. The Maastricht criteria are tough on paper. In reality they have already been stretched incredibly in various ways, for example by allowing Belgium, Italy and others into the EMU in spite of their debt to GDP and deficit to GDP ratios being "too" high.[61] Political desiderata have already overruled the rules of the Eurosystem.

The appointment of the first head of the ECB was something of a political farce but it was eventually solved by political will and flexibility. Regularly the financial press reports various proposals to adjust the statutes and structure of the EMU-system in response to different challenges. The system thus appears open to changes and revisions that will likely reduce its initial weakness and shortcomings.[62]

Of course, there is no guarantee that the Eurosystem will survive all future shocks, only that the system allows for mechanisms of self-correction and adjustment that increase its prospects for survival. Besides, we are not aware of any case in history in which a monetary union commenced with all the institutions required to function as prescribed by the modern view on monetary policy. Such institutions develop over time.

(2) EMU will be hit by major shocks. Second, history shows that exceptional shocks and crises will eventually hit any monetary area. Countries like the US, Canada and Italy have been the subjects of asymmetric or region-specific shocks and structural shifts that have left permanent scars. The maritime provinces of Canada and Southern Italy have been struggling for long with comparative stagnation. In spite of transfers to these poor regions, their problems have not been solved. However, they have not led to the breakdown of political unity, splitting up the nation state, and thus the monetary union.

60 See Wallis and Oates (1998)

61 See Obstfeld (1998, p 24) and others.

62 On this point see for example the analysis of von Hagen and Fratianni (1993, p 184) who conclude that "The Maastricht agreement leaves many options to design the monetary and financial market institutions of the EMU." Tietmeyer (1999) stressed the options that will be available for the Eurosystem in case of future disturbances.

Major idiosyncratic disturbances and crises will hit EMU sooner or later. Judging from the record, national monetary unions survive such events except in the case of a collapse of the political unity underlying monetary unity. If EMU were to break-up, we conjecture that the initial cause would be a major exogenous shock that hits the members of the EMU asymmetrically. In addition political will be lacking on the part of one or a group of EMU-countries to adjust to the common policy of the EMU. Here only fantasy limits the list of possible events or processes that could start a collapse of the EMU.[63]

(3) EMU will be based on political unity. Third, monetary unions of the past were in two important respects different from the present process leading to the common European currency. First, the national monetary unification of the 18th and 19th century followed after political unification and, second, they were based on specie. Consequently, monetary unification was a much simpler process than in the case of Euroland, thus also politically easier to carry through.

Countries that have joined the EMU today are on a fiat - not a specie - standard. Present European monetary unification is based on a commonly accepted politically decided commitment mechanism as opposed to the metallic standard of yesterday that had gold convertibility as a common focal point and commitment mechanism. The statues of the ECB set out price stability as its "principal objective". A precondition for the EMU to succeed and be stable in the future is that the individual members of the EMU must display forever a similar commitment to this common goal, as did the advanced nations to the gold standard rule more than a century ago. This is most likely the major challenge facing EMU.

It is unclear how well EMU will succeed in maintaining such a convergence in policy preferences in the future. The process so far suggests that the political effort spent on creating EMU is probably greater compared to the political resources required to create the national monetary unions of the past. This demonstrates that EMU is basically a political project, reflecting a strong will to create eventually political unity within Europe.

[63] For one account for potential causes of dissolution of the EMU, stressing the interplay between politics and economics, see Feldstein (1997).

The sequencing of events is reversed compared to the national unions of the past. Monetary unification has been used as a means of accomplishing the final aim of political unification. Political backing and support for EMU may be substantial at present but has to remain so in the future as well. The political imperative may remain strong as a result of the huge investment already made in the monetary unification process. However, we are reluctant to present any forecast on this matter. Political forces may turn and twist rapidly in the future.

The political economy of past national monetary unions also suggests that such arrangements are dominated by one or a few major economic powers in the center, not by countries or members in the periphery. In the United States, within the Federal Reserve system established in 1914, the Federal Reserve Bank of New York plays by tradition the most important role, in Italy the Banca Nazionale nel Regno d'Italia emerged eventually into the central bank, and in Germany the state Bank of Prussia was the major element in the new Reichsbank, set up in 1875.[64]

This center-periphery pattern has implications for the future working of the EMU, more specifically for the relationship between the major and minor member countries in the EMU. An obvious compensation for the loss of monetary sovereignty for a small or minor country from joining EMU is that it will take part in policy formation within the ECB. Judging from monetary history we should not, however, expect a peripheral country and thus a minor voice, to have a major influence on the decision-making process.

The political economy of the EMU will primarily be determined by the major powers among the members of the monetary union. If there will be tension between for example Germany and France, the risk for the EMU to become unstable will increase. The EMU requires one dominating player or a strong coalition to function well.

(4). EMU will not be an "optimal" currency area. A major objection of the economics profession to EMU is that it is not now and will not be an optimal currency area. History

[64] The history of international exchange rate regimes suggests a similar pattern with the center having a strong influence on monetary policies: the United Kingdom was the hegemon of the classical gold standard, sometimes working in co-operation with France and Germany. The short-lived interwar gold standard was dominated by the actions of the United Kingdom, the US and France. The United States played the key role in the Bretton Woods system. The ERM-arrangement that failed in 1992-1993 was based on the policies of the Bundesbank.

shows that the creation, reign and dissolution of national monetary unions have hardly any connection with the criteria spelled out in the literature on optimal currency area (OCA) inspired by the work of Mundell, McKinnon and Kenen. Instead, they have developed in a historical context as a result of the political process. The historical record suggests that the OCA-theory is not well suited to analyze the evolution of monetary unions as it lacks important political and historical dimensions. Thus it is not a promising concept for considering the future of EMU either.[65]

On this point see the succinct summary by Goodhart (1995, p 452):

"The evidence therefore suggests that the theory of optimum currency areas has relatively little predictive power. Virtually all independent sovereign states have separate currencies, and changes in sovereign status lead rapidly to accompanying adjustments in monetary autonomy. The boundaries of states rarely coincide exactly with optimum currency areas, and changes in boundaries causing changes in currency domains rarely reflects shifts in optimum currency areas."

To sum up, our emphasis on the political process as the major determinant of the future of the EMU is consistent with the views put forth by many researchers. See for example Cohen (1993, 1998), Corden (1972), Goodhart (1998) and Obstfeld (1998).

7. Conclusions

EMU is a unique construction without any clear precedent in monetary history. This suggests great caution when forecasting the future of EMU. However, we know that EMU will function as a national monetary union with one central bank and one common currency circulating within the union. We are therefore able to apply some forecasts based on the record of national monetary unions.

The major driving forces behind the establishment of national monetary unions as well as behind their dissolution are political ones. The "economic" shortcomings noted by economists concerning the workings of the EMU need not spell disaster. They can be overcome by political forces as well as by market-based adjustment mechanisms.

[65] Similar conclusions concerning the OCA-approach are found in Cohen (1993, p 200). Goodhart (1998) examines two alternative concepts of money, concluding that the "cartalist" approach has a firmer empirical foundation than the monetary theory underlying OCA-theory.

The EMU and the ECB will be subject to major shocks in the future - just as the case is with any monetary area and its central bank. Monetary deficiencies or monetary problems that can be solved within the nation state should be solvable in a monetary union covering many nation states, given that the union is organized as a national monetary union with one type of money circulating within the whole union and with one central bank.

A major lesson from history is that monetary unification is an evolutionary process. EMU will evolve in the future in a way different from the existing plans for the EMU. This process, allowing the EMU to adapt and adjust to future disturbances, should properly be regarded as a policy learning process, where policy makers learn to cope with the shortcomings that emerge.[66] This process will continue as long as the political will to maintain the union is present. Once it disappears, the EMU may break apart. Judging from the history of national monetary unions such an outcome appears likely only under extreme circumstances.

[66] The learning process of US policy makers was recently analysed by Sargent (1998) and of Swedish policy makers by Jonung (1999).

Table 1. The creation of some monetary unions in the 19th century.

Monetary area	Time of creation
National monetary unions:	
The United States	1789-92
Italy	1861
Germany	1875
Multinational monetary unions:	
The Latin monetary union	1865
The Scandinavian monetary union	1873-75

Source: Bordo and Jonung (1997) and Vanthoor (1996).

Table 2. The dissolution of some monetary unions in the 20th century.

Monetary union (1)	Time of dissolution (2)	Causes of dissolution (3)
National monetary unions:		
Austria	1919-27	Defeat at war, creation of several new nation states
Russia	1918-20	Creation of several new nation states
Soviet Union	1992-94	Political unrest, creation of several new nation states
Yugoslavia	1991-94	Political unrest, civil war, rise of new states
Czechoslovakia	1993	Political divergences, rise of new nation states.
Multinational monetary unions:		
Latin Monetary union	1914-27	Divergent monetary policies
Scandinavian monetary union	1914-24	Divergent monetary policies

Source: Bordo and Jonung (1997), Garber and Spencer (1994, p. 36-37) and Goodhart (1995).

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