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THE FUTURE OF THE 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 the EMU. Independent observers have pointed at a number of "shortcomings" or "hazard areas" in the construction of the EMU such as the lack of a central lender of last resort function for the EMU, the lack of a central authority supervising the financial systems of the EMU, unclear and inconsistent policy guidelines for the ECB, the lack of central coordination of fiscal policies within the EMU, and unduly strict criteria for domestic debt and deficits as set out in the Maastricht rules in the face of asymmetric shocks.

Do these "flaws" represent major threats to the future of the EMU? Or will they be handled by the European policy authorities in a successful way, 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 necessary and sufficient conditions for establishing and for maintaining monetary unions intact. Our interpretation of the history of

monetary unions is that political factors are the main determinants of the future of the EMU.

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THE FUTURE OF THE 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 the EMU. Independent observers have pointed at a number of "deficiencies", "flaws" or "hazard areas" in the construction of the EMU. These include (a) the lack of a central lender of last resort function for the EMU, (b) the lack of a central authority supervising the financial systems of the EMU, (c) the lack of democratic control (accountability) of the ECB, (d) unclear and inconsistent policy directives for the ECB, (e) the lack of central coordination of fiscal policies within the EMU, and (f) unduly strict criteria for domestic debt and deficits as

¹. This report builds upon and extends our previous work on the history of monetary unions. See Bordo and Jonung (1997). We are greatly indebted to Pontus Hansson for research support and to Anders Bornefalk for helpful suggestions.

set out in the Maastricht rules in the face of asymmetric shocks. The list can be made longer.

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

We will answer these questions by examining the historical record of monetary unions and making a crucial distinction between national and multinational monetary unions. We will focus on unions that have turned out to be lasting, that is successful, as well as on unions that have been dissolved. Our aim is to extract the necessary and sufficient conditions for establishing and for maintaining monetary unions intact. Thus, our interpretation of the historical record is adopted as the basis for our forecast for the future of the EMU, although we are well aware that there is no clear precedent to the EMU.

Our paper is organized in the following way. First, we list the most commonly asserted "flaws" of the EMU and the ECB in the present debate. This list will serve as a guide for our 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 the forecasts for the future stability of the EMU, evaluating the different "flaws" in the construction of the EMU.

Our conclusions should not be surprising to anyone familiar with monetary history. The major driving force behind the establishment as well of the break-up of monetary unions are basically political. In short, as long as the political will to keep EMU together is prevailing, EMU will survive in spite of the economic problems that will surface in the future. However, would

the political glue dissolve for any reason - and several may be suggested - the EMU or parts of it will dissolve as well. The political glue does not exist by itself; it is related to economic factors; both to deep structural forces and current economic conditions. These forces are important in determining whether the political glue will hold in the long run and whether it will hold up in the face of future shocks.

Much of recent analysis of monetary unions by economists are commonly based on the framework suggested by the literature on optimal currency area (OCA). This approach, as we remark, is not well-suited for the analysis of the history of monetary unions, being too static and ahistorical. The OCA-approach reduces the field of inquiry to such an extent that it runs the risk of ignoring important determinants of monetary unions.

Instead, our approach is an evolutionary one. This perspective is inspired by the long stretch of time that we examine and by the character of the processes causing the appearance and dissolution of monetary cooperation and unification.

2. The shortcomings of the EMU.

The economics profession has as a rule been sceptical of the monetary unification of the EU. Economists have pointed at a large number of pitfalls on the road to a common European currency. The road has indeed been a stumbling 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 the euro-rate have damaged credibility. The transition from stage two to stage three, when the exchange rates of the first set of countries to join the EMU was permanently fixed, was once

regarded as highly risky, potentially releasing speculative attacks. No such attacks materialized, however. The transition went smoothly at the turn of the new year of 1999.

Now after January 1st, 1999, the creation of the EMU and the ECB has triggered a discussion of the future of the EMU once it seems to have passed the major phase of the transition stage with apparent success.

Economists have pointed at a number of "shortcomings", "deficiencies", "flaws" or "potential fault lines" in the construction of the EMU. There are about half a dozen "hazard areas". We list the most common ones below, focusing on those pertaining to the Euro-area once it has been established, ignoring "deficiencies" that still pertain to the transition stages before the common currency is being finally introduced into circulation within Euro-land.

1. The EMU lacks a central lender of last resort. The ECB is not granted by the Maastricht treaty any power to serve as a lender of last resort. This stands out in sharp contrast with any modern central banking system, which has developed a lender of last resort function to guarantee the liquidity and the functioning of the payments system.² In the face of a liquidity crises, the absence of a lender of last resort may undermine the existence of the EMU.

2. The EMU lacks a central authority supervising the financial systems, including the commercial banking systems, of the EMU. The Maastricht treaty gives the ECB some opportunities to carry out supervisory functions but they are primarily the task of the union members. This state of affair implies that a future pan-

². This argument is put forth by i.a. Prati and Shinasi (1999).

European financial crises may not be efficiently handled, threatening the stability of the EMU.³

3. The ECB lacks democratic control and accountability. This will make the ECB subject to continuous political attacks and controversies, threatening the legitimacy of the EMU and eroding popular support for the Euro. The role of the European parliament in monitoring the ECB is unclear at this point.

4. The policy directives for the ECB are inconsistent, unclear and badly designed. The ECB is assigned to carry out "domestic" monetary policy with Euroland, while the exchange rate policy for the EMU is determined by the Council of the European Union, in reality by the Council of the finance ministers in the EMU according to the Maastricht Treaty.⁴ This state of affairs will open the door for political discussion and tensions and political pressure on the monetary policy of the ECB.

5. The lack of central coordination of fiscal policies within the EMU, in combination with unduly strict criteria for domestic debt and deficits as set out in the Maastricht rules and the Growth and Stability Pact will be a major problem when EMU is facing asymmetric shocks.⁵ This "flaw" is demonstrated presently by the booming Irish economy which is in need of a tighter monetary

³. See i.a. Prati and Shinasi (1999), Eichengreen (1993) and Obstfeld (1998).

⁴. The monetary policy issues of the EMU-the Eurosystem are critically assessed by i.a. Begg, et al (1998), Buiters (1999) and Svensson (1999).

⁵. 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."

policy while the ECB has been lowered interest rates in Euroland making monetary policy in Ireland more expansionary.⁶

This point is probably the major objection towards the EMU. The abolishment 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 constitutes in our opinion of the economics profession the most significant challenge to the stability of the EMU.⁷ European labor markets are rigid and labor mobility within the EMU members is small. An asymmetric shock will under these circumstances set off an adjustment process, that will be more slowly and costly within the EMU than otherwise. Rising unemployment, requests for transfers and for protection will undermine the credibility of the EMU and the political cohesion required for a well functioning monetary union.

In short, 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. This point can be traced back to the analysis of optimal currency areas as initiated by Mundell (1963). The gains from increased trade do not outweigh the costs of losing national sovereignty over the framing of national monetary and fiscal policies.

This list of shortcomings or objections is substantial.⁸ The question arises how important they will turn out to be in the

⁶. The case of Ireland illustrates how monetary policy within a monetary union is determined by the center, not the periphery.

⁷. See for example the discussion in Feldstein (1997).

⁸. 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.

future. How have the issues suggested by the list above been handled within monetary unions in the past? Let us look upon the historical record, first by examining the process of creating and maintaining monetary unions, second by studying the process of monetary union dissolution.

3. The creation of monetary unions

History has witnessed the creation of a number of monetary unions within which the same currency is serving as a unit of account, medium of exchange and store of value. Thus, the monetary union has one exchange rate towards the rest of the world. We are of the opinion that the history of monetary unions is most easily understood if we make a distinction between national monetary unions and multinational monetary unions.⁹

By a national monetary union we mean that 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. Or 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 and perfectly interchangeable with a five dollar bill from any of the other Federal Reserve Banks. A national monetary union has as a rule one single monetary authority, commonly a central bank.

By a multinational monetary union we mean an international monetary cooperation between a number of independent countries based on permanently fixed exchange rates between their

⁹. This argument is developed in Bordo and Jonung (1997).

currencies. Multinational monetary unions emerge when independent nation states link their monies together through a perfectly fixed exchange rate so that one country's money is perfectly exchangeable for another member country's at a fixed price. Indeed an extreme example of this would be that all the 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 currency, the Scandinavian krona, and three members: the countries of 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.

This distinction between a national and a multinational monetary union is an important one because - as we will demonstrate in the following - the survival prospects of a monetary union are crucially dependent if it is organized as a national or multinational union. When we consider the future of the EMU, we thus have to decide if EMU will more closely resemble a national than a multinational monetary union.

We first examine the establishment of three national monetary unions, those of the US, Italy and Germany. Next we investigate the creation of two multinational unions, the Latin and the Scandinavian union, and consider 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 also Table 1.

3.1. National monetary unions

3.1.1. The United States monetary union¹⁰

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 bills of credit, and the states agreed to accept outstanding bills in payment of taxes at 40 dollars to 1 in specie (a value much lower than the exchange rate of 1780) until 1783, after which date the continental would become worthless.

After the war the States continued to issue bills of credit during the Confederation period (1783 to 1789), some of which were credibly backed by future taxes and some of which were not. Consequently, problems concerning excessive volatility of exchange rates leading to exchange rate risk and high transactions costs, and competitive seigniorage emerged.

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

¹⁰. 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).

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

The movement to a complete monetary union with a more uniform nationwide 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 intended to provide loans to the private sector to spur economic development. Finally, it was deemed imperative that they hold sufficient specie reserves to always 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 did not have any form of a 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 the 19th century was characterized by considerable banking instability, the monetary union remained intact with the exception of the Civil war period 1861-65 when the Confederate States issued their own fiat currency. During the civil war the Confederacy issued its 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 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.¹¹

Monetary unification of the US was thus not finalised until long after its political unification. The US did not get a central bank assuming a lender of last resort function, nor an authority in charge of financial overseeing until this century. These institutions evolved at a considerably later stage than the monetary unification.

3.1.2. The Italian monetary union¹²

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.¹³ The unification process, led by the Kingdom of Sardinia, was completed in 1861. Prior to 1861, financial matters were widely disparate between 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 vast amount of different currencies was commonly regarded as a barrier to trade. In order to achieve more than a de jure unified Italy, measures were taken to turn the country into a monetary union as well.

¹¹. Lerner (1956).

¹². The account of the monetary unification of Italy is based on i. a. Fratianni and Spinelli (1985) and Sannucci (1989).

8. Venetia were 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, who until then had acted as a protector of the sovereignty of the Papal States, was engaged in war with Prussia.

The issue of coins was quickly resolved. During a brief transition period, four currencies were accepted while all other old currencies were exchanged into these. 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 preferred, primarily to conform to the monetary system of Italy's major trading partners and to accommodate the dominance of silver coins in southern Italy.¹⁴ The currency ratio between silver and gold was set at the European standard of 15.5.

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 was enhanced by the suspension of convertibility a few years later.¹⁵

The monetary unification of Italy was not accompanied by any 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, absorbing some other state banks in the process, held a leading position among banks, however, partly by being the largest bank in operation and partly by being 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

9. See also the section on the Latin Monetary Union.

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

it was not due to opposition towards monetary unification. Given that Sardinia imposed her system on the rest of the country in a wide range of areas, neglecting the preferences of other states, it seems unlikely that she would have backed down if she wanted to establish the BNR as the central bank of Italy.

Several explanations have been put forward. One suggests that it was simply a result of the general belief at the time that banking was like any other industry. Consequently, Italy would gain from competition between issuing banks just as competition in other industries was considered to enrich the economy. Another possible explanation argues that prior to unification, regional commercial banks were credit institutions as well as note issuers. The general concept of Italian banking of the time was to combine these two functions. Money was created in the form of bank notes in response to demands for credit. The central government may have concluded that the creation of one central bank would have destroyed, or severely impaired, the functioning of commercial banks at the local level and that the costs of this 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, the fluctuations in the Italian money stock followed the international pattern. The share of coins in the money supply remained stable until the mid 1860s, indicating that as long as bank notes were convertible into specie, the multiplicity of issuing banks did not create a problem.

The government's fiscal deficit rose sharply in the first half of the 1860s, however, worsening the strain already put on public finances by the central government assuming responsibility for the debt of the previous states. Italian bond prices fell abroad which drove specie out of Italy, leaving the reserves of the

commercial banks dangerously low and restricting their ability to lend to the government. 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.¹⁶ The government received a large loan in notes from the BNR after this step. 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 was 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, any bank had an incentive to increase its stock of notes. The risk of the government discovering an overissue was small. Furthermore, deteriorating government finances increased the likelihood that any illegal overissue 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 the 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 remaining note-issuing banks were put under direct state supervision.¹⁷

11. Corso Forzoso translates broadly as "forced circulation".

12. 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.

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 notes. The outflow triggered another liquidity crisis. 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. The success was 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 the formation of the US monetary union, took place after political unification. Similiar to the US record, 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) is 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 are of the opinion that the most important step towards monetary unification

was taken after the establishment of the Reich, thus Germany follows 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 perceived as 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, while 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. Although the coinage in Germany had been put on a common standard in 1857, voices were raised in the 1860s 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 induced 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.¹⁸ In 1875, a new banking act transformed the Prussian Bank into the Reichsbank and forced most other banks to opt for ordinary banking business.¹⁹ The Reichsbank was to serve as 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 issuing of paper money. With political unification Germany also get 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 was a fullfledged national monetary union. Again, in our opinion, monetary unification followed political unification.

3.2. Multinational monetary unions

¹³. There was an exception to the rule, however, as outstanding silver Thalers remained legal tender.

14. The termination of other banks' right to issue notes was not as straightforward as simply enacting a law forbidding it. Instead, the government opted to allow other state banks to carry on issuing 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.

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

3.2.1 The Latin monetary union²⁰

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

In the 1850s, a fall in the 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 the countries virtually with a gold standard currency since gold was the only medium of exchange that remained in circulation. However, the lack of silver coins meant a lack of small-denomination monies to use in minor transactions.

Upon monetary unification, 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 Switzerland was that mainly France but also Belgium were invaded by debased silver coins from their neighbouring countries which created seigniorage gains for the issuers. France reacted in 1864 by reducing the silver content in every silver coin, except the 5 franc coin, to Italy's

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

83.5 percent and by suspending the acceptance of Swiss coins by her customs offices.

There was an apparent need for international monetary coordination. 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 each country of creating token coins of varying fineness 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 with 83.5 percent silver fineness which the state treasuries had to accept as payment up to 100 francs regardless of the country of origin. Each state treasury was then obliged to exchange the other state treasuries' 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 already in circulation compared to the amount of Swiss coins. 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.²¹

²¹6. Two possible explanations for the French resistance have been put forward. One, mainly political, suggests that Napoleon III was planning a world monetary conference in 1867 where he hoped to be able to exchange a willingness to adopt the gold standard

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 preventing the member countries from issuing other forms of money - a failure that was to be exploited by the issue of paper notes. Consequently, the members still had considerable monetary independence.

Initially, the Latin monetary union achieved what it had set out to achieve. However, two problems soon emerged. After the inauguration of the union, the price of gold started to rise again which led to silver 5 franc coins returning in circulation and gold coins being 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 war with Germany in 1870-71. Italy's chronic government deficit preserved inconvertibility of the lira until 1881 and then introduced 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 costs of which was

for a 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 redeeming the 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.

shared between 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 an 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 her inconvertible paper money.

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

3.2.2. The Scandinavian Monetary Union²²

Prior to the formation of the Scandinavian monetary union in 1873, the three Scandinavian countries had a long history of similar units of account and exchange of notes and coins between

²². This section is based on Jonung (1984) and Bergman, Gerlach and Jonung (1993).

them.²³ They were all on a silver standard. Indeed, in the years leading up 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. As an effect of this, considerable parts of the coin circulation in either 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 enough regarding the Danish and Norwegian currencies for any profits that could have arisen from arbitrage to be negligible.

This was not the case for the Swedish currency, however. Its value exceeded 0.5 Danish or 0.25 Norwegian rigsdaler by an amount sufficiently large to produce an inflow of Danish and Norwegian coins into Sweden to be perceived as a nuisance in Sweden.²⁴

This currency flow was by no means the only reason, not even an important one, for aiming at a unified coinage. In all of 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, had created an intellectual climate in favour of converting the Nordic currencies into a common gold standard based on the decimal system.²⁵ The decimal system was favoured on the grounds

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

¹⁹. The law proposed in the Swedish parliament in 1873 specifically mentioned the permanent costs emanating from the inflow of Danish and Norwegian silver coins.

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, the 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 Sweden, Denmark and Norway creating a common currency union in 1873. Norway did not formally sign the agreement until 1875, though, but in practice her monetary standard was altered in 1873.²⁶

The formation of the Scandinavian monetary union in 1873 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 was 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 subsidiary 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

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

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

restrictions were a maximum amount stipulated for the settlement of private debts.

Because of the larger denominations of the gold coins compared to the denomination of bank notes, notes remained widely in 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 the 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 others' notes at par without restrictions. The Danish central bank did not join the new agreement until 1901.²⁷

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

²⁷2. 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 Sørensen (1994).

avoided issuing excessive amounts of subsidiary coins.²⁸ 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.²⁹

3.3. Other monetary unions³⁰

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.³¹ 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

²³. 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, suggesting that the action of the Swedish central bank in 1905 was motivated by a desire to demonstrate against Norway which had secured independence from Sweden that year.

²⁹. The effects of the union on intra-Scandinavian trade is an issue that needs more research. According to contemporary sources, the border trade between the countries benefitted from the union. However, intra-Scandinavian trade declined during the union period. The monetary union was not combined with a Scandinavian free trade area, however.

²⁴. This section is based on Cohen (1993) and Graboyes (1990).

²⁵. For a description of the workings and history of currency boards, see Hanke, Jonung and Schuler (1993) and Schwartz (1992).

1950s and 1960s. In a few cases the currency board system was maintained and made more sophisticated, like 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.³²

The currency board institution has experienced a renaissance in the 1990s as Argentina, Estonia, Lithuania and Bulgaria 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 see 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, and actually have much in common with a currency board agreement.³³ The 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.³⁴ 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 neighbouring African countries, primarily by limiting credit to national governments. The union is still in operation.

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

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

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

The East Caribbean Currency Area provides 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.³⁵ 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 unilaterally adopting 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.

The monetary union between Ireland and Britain formed after Irish Home Rule in 1922 represented a currency board institution.³⁶ When

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

Ireland was part of Britain, sterling was used in Ireland. This arrangement was initially 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. Next the collapse of some national monetary unions is considered.

4.1. Multinational monetary unions

The outbreak of World War I signalled the end of the Latin and the Scandinavian monetary union as well. 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.³⁷ The large quantities of paper money issued during the war remained in circulation after the end of the hostilities. As paper money was not recognized as legal means

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

³⁷. See Bordo and Jonung (1998) for an account of the international experience of the interaction of monetary and fiscal policies since the 1880s.

of payment in any country other than the issuing one, the union was in effect put out of practice. During the war, silver coins were melted or exported. Remaining coins constituted a small share of the total money supply.

Belgium was the first member to act accordingly, 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 fairly 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 been made during World War I.

Like the Latin monetary union, the Scandinavian monetary union's collapse was induced by 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.³⁸ The union was officially terminated in the early 1920s in spite of a political desire to maintain the union. Still after the 1920s a resurrection of the Scandinavian monetary union has been proposed.³⁹

³⁸. See the account of Bergman, Gerlach and Jonung (1993).

The two multinational unions examined, the Latin and the Scandinavian monetary union, were set up to standardize coinage between independent countries. They were both based on the international specie standard of the day, and they represented a closer degree of monetary integration than mere adherence to the specie standard. Each member continued to maintain a domestic monetary authority which facilitated the break-up of the union once it was subjected to large disturbances.

Other multinational unions have been dissolved in the 20th century in Europe. The British-Irish currency board arrangement - which could be analyzed as 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.

To sum up, the dissolution of multi-national monetary unions have as a rule been fairly expedient affairs as seen in the cases discussed here. The Latin monetary union and the Scandinavian monetary union dissolved due to an unexpected major exogenous shock, that is World War I. The war contributed to divergent monetary and fiscal policies among the member countries. The monetary separation was easy to carry out as each member country maintained a central bank of its own during the monetary union. The central banks of the nation states could expediently re-establish a domestic "national" monetary union. The same holds for other multinational monetary unions that have been ended.

³⁹. Recently, as a response of 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 (1998).

4.2. National monetary unions

In the 20th century, several national monetary unions have been terminated: the Austro-Hungarian empire after World War I, the German monetary union split after World War II into two parts; one covered by Western and the other by Eastern Germany. The political dissolution of Soviet Union, Yugoslavia and Czechoslovakia in the 1990s brought about monetary separation. See Table 2 for a list of break-ups of national monetary unions in the 20th century.

The break-up of the Austrian monetary union... to be written.⁴⁰

The gradual collapse of the Rubel zone in the 1990s is a fascinating element in the history of monetary unions .. to be extended.⁴¹

The break-up of the Yugoslav monetary union... to be written.⁴²
The Yugoslav monetary union broke up in the face of a civil war into several new monetary areas - each associated with a new nation state and a new currency.

The Czechs and Slovaks decided to form two nation states out of Czechoslovakia due to differences in views on politics and economics, but remain in a monetary union until a later stage. The political break-up occurred on January 1st 1993 when the state of Czech and of Slovakia were announced. It initiated expectations of a monetary separation, creating a divergence of the exchange rates of the new currencies. These expectations brought about monetary separation already in February 1993,

⁴⁰. See Garber and Dornbusch

⁴¹. This account is based on Bornefalk (1998).

⁴². This account is based on Kraft (1995) and Wyzan, M., (1993).

although such a step had not been considered by the authorities to be taken that early.⁴³

To sum up, the break-up of national monetary unions and their transformation into new monetary areas may follow two paths. The first path is accompanied by monetary turmoil and high inflation. This was the case of the dissolution of two European empires in the 20th century, Austria-Hungary and the Soviet Union, as well as the dissolution of Yugoslavia.

The second path is a more peaceful and civilized one. The dissolution of the monetary union of Czechoslovakia was a rather quiet affair, illustrating the importance of political factors. This sequence of events illustrates the political nature of the monetary de-unification.

Why are national monetary unions dissolved? The answer points at the central role of political factors. When far-reaching political events cause the break-up of existing nation states into smaller nation states, monetary separation and divorce follows as a corrolary in most cases we have studied.

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

Our account above of the establishment of monetary unions point at some central causes of why unions are created. First of all, the most important reason is the existence of political unity. Once such unity is at hand, the creation of a monetary union follows eventually. We have not found in history any nation state which has not chosen to be a unified monetary area with a national currency unit of its own - with the exception of very small states like Monaco, Andorra and Luxembourg.

⁴³. See Fidrmuc and Horváth (1998).

Second, economic reasons including reduction in transaction costs by standardizing the coinage, gains from trade, access to wider markets, harmonization of policies, and gaining monetary credibility have played an important role in the creation of monetary unions. Third and finally, there are other non-economic reasons as well behind monetary unification - besides political unity - such as a common history, a common language, culture and religion.

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

Although we argue above 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 - such as differences between various regions and groups - can result in the demise of the unity necessary for keeping the nation state together. The US civil war can be regarded as an example where economic tensions undermined political unity as well as monetary unity.

Most nation states have created or create institutions and mechanisms to resolve domestic conflicts. Differences in economic outcomes are commonly alliviated by transfer payments and constitutional designs. Most modern nation states, even federal ones, are based on a substantial redistribution of income. Such redistribution may not be enough: fundamental differences between

members for example due to religion and race and economic priorities combined with economic shocks may produce break-ups of both political and monetary national unions. Yugoslavia, Czechoslovakia and the Soviet Union are examples of this.

6. The shortcomings of the EMU evaluated from the history of monetary unions

When considering the future of the EMU, we first should face the questions if the EMU will be a national or a multinational monetary union? The answer is not an obvious one. The EMU-project is a unique in the history of monetary unions. We have not found any clear and unambiguous historical precedence to EMU, where a group of monetary and politically independent countries have 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.

The closest historical parallel is, in our opinion, the national monetary unions which evolved in the United States, Italy and Germany. These cases show how a complete monetary union, that is the use of the same money as well as a common monetary policy across all jurisdictions, have evolved over time without having initially all the institutions that are required for successful monetary policy according to conventional monetary policy wisdom of today.

We are inclined to view the EMU as closer to being a national monetary union than to be a multinational union for the following reasons. The EMU will have one common central bank, the ECB. It will eventually issue the only circulating money in the EMU-area. The previous central banks of the members of the EMU will lose their powers 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 the common European monetary policy. Monetary policy will be centralized on a pan-European level to the ECB over time.

This implies that our conclusions derived from the history of national monetary unions are of most interest when forecasting the future of the EMU.

Our review of the history of national monetary unions - primarily those of the US, Italy and Germany as well as those terminated in the 20th century - invites a few conclusions that have a bearing on the future of the EMU. We distill the following lessons from the historical record.

(1) First of all, the history of national monetary unions suggests that national monetary unions are permanent institutions but also flexible ones, that is they evolve over time influenced by political and economic events. Their durability and flexibility is a consequence of the political process that created them. The EMU is created by strong political unity, despite a number of primarily "economic" objections against the project. For this reason we expect the EMU to be able to meet the "shortcomings" or discussed earlier.

In short, the political forces creating the EMU will design mechanisms and institutions that today are characterized as "flaws" of the EMU, despite the initial set of rules and treaties embodied in the Eurosystem. (As pointed out earlier, the European authorities have already been flexible in various ways to adopt the EMU-project to "reality".)

We listed initially several flaws such as the (1) lack of a lender of last resort, (2) lack of a central authority supervising the financial system, (3) lack of democratic control and accountability of the ECB, (4) unclear and inconsistent

policy directives for the ECB. We do not regard this list as a major threat to the future EMU, rather as a challenge.

Seen from an evolutionary perspective, these characteristics or "flaws" will be handled by the development of various solutions. Such responses will emerge over time - just as they have emerged in most national monetary unions.

Let us illustrate our view by considering the development of these "flaws" over time in one national union, using the history of the monetary union of the United States as our benchmark as the future EMU seems to us to be close to the existing central banking system in the US.

.... Here follows a short history of the US central banking system:

.... The lender of last resort function developed in the US gradually over time. There was no lender of last resort in the US until the 1930s. It developed in response to problems within the US commercial banking sector.

... The US system of financial supervision developed. Tietmeyer (1999) for example has also opened up for a European system. Besides it may be a suitable approach to let each member state of the EMU to handle financial supervision.

We know about no case in history where a monetary union has emerged with all the institutions required to function as prescribed by the modern view on monetary policy. Institutions evolve in response to changing circumstances and requirements.

In support of our argument above, we would like to stress 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 incredeously in various ways, for example by allowing Belgium, Italy and others into the EMU. See Obstfeld (1998, p 24) and others. This implies that political desiderata have already overruled the rules of the EMU-game. The appointment of the first head of the ECB was a farce but it was eventually solved by political will and flexibility.

(2) Second of all, we conclude that the political will displayed to create the EMU is considerable compared to political will once needed for the task of establishing monetary unions of the past. The monetary unions of the past, the creation of national as well as multinational monetary unions, were in an important respect different from the present process leading to the common European currency. Monetary unification of the 18th and 19th century was based on adherence to specie standards. Specie standards provided a nominal anchor tied to a physical commodity, i.e. the volume of specie.

The three national monetary unions studied here, the US, Italy and Germany, were primarily arrangements to reduce seigniorage competition between states or regions, to standardize coinage and establish a national unit of account. The different monetary entities (member states) of the new nation states turned over their monetary, and thus part of their political, sovereignty to the new nation. Eventually they gave up the right of seigniorage - an important form of taxation at the time. A national monopoly of seigniorage was preferred to competition. Also, although it was not important at the time, they also gave up their ability to influence their regional (domestic) economies by monetary policy.

The establishment of national monetary unions of the past should thus be viewed primarily as a way of reducing transaction costs and uncertainty about exchange rates. The existence of many kinds of monies within a politically united area was regarded as a hindrance for trade and commerce. This process occurred also in

political systems that were not based on liberal democracy. The voters were not given the opportunity to influence the creation of monetary unions.

The relevance for today for EMU from the above observations is that EU-countries that join the EMU are on a fiat - not a specie - standard. A nominal anchor has to be created by these countries through some form of common monetary and political agreement to pursue and to enforce a rule such as monetary or inflation targeting. The European monetary unification is based on a commonly accepted politically decided commitment mechanism as opposed to the gold standard of yesterday which had gold convertibility as a common focal point and commitment mechanism. The statutes of the ECB set out price stability as its "principal objective". This leaves room for considerable debate about the proper interpretation of the goal of ECB.

Under the gold standard regime, there was no dispute about the character of the anchor, the process leading to monetary unification or the gold standard itself once it was in place. Today the policy framework is quite different. There is considerable uncertainty on this account over how the future members of the EMU will conduct monetary policy. However, cross-country differences in opinion will have to be ironed out via a political process forcing independent countries to follow common policies once they are members of the EMU.

Co-operation and harmonization of policies under the gold standard was episodic and not by design - in contrast with the EMU. 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 their common goal as did the advanced nations to the gold standard rule more than a century ago. This is a major challenge facing the EMU. At this point it is unclear how well EMU will succeed in creating such a convergence in policy preferences in the future.

The process so far suggests that the political effort spent on creating the EMU is probably larger compared to the political resources required to create national monetary unions of the past. This suggests that the political investment, that is the political capital, going into the EMU is substantial. This process demonstrates that EMU is basically a political project, reflecting a strong desire to create eventually political unity within Europe.

(3) Third of all, national monetary unions collapse as a rule when the political union that constituted the foundation of the monetary union disintegrates. The political disintegration can be an extremely traumatic process as witnessed by the break-up of several monetary unions in Europe in recent years. It could also be managed in a "civilized" way such as the division of the monetary union of Czechoslovakia into a Czech and a Slovakian monetary area.

Once the euro is introduced in stage 3, the chances for a break up will be severely reduced, making the union a stronger one. If it were to break-up, we suggest that the initial cause would be a major exogenous shock, preferably hitting the members of the EMU asymmetrically, combined with the lack of political will from one or a group of EMU-countries to adjust to the common policy of the EMU. Here only our fantasy limits the list of possible events or processes that could start a collapse of the EMU.⁴⁴

The collapse would most likely be due to asymmetric shocks exasperated by the distribution of power within the ECB. The political economy of national monetary unions 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

⁴⁴. For one account for potential causes of dissolution of the EMU see Feldstein (1997).

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 1875.⁴⁵

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 qualification to the loss of monetary sovereignty for a small or minor country from joining EMU is that it will take part in the policy framing within the future European central bank system. 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 - and most of the members will not be major powers due to the relative small size of their economies. Of course, small countries may enlarge their influence by forming coalitions within the EMU but coalition forming is commonly a costly process. If there will be tension between the three major powers of the EMU: Germany, France and the UK this will increase the risk for the EMU to be stable. The EMU requires one strong dominating player to

⁴⁵. 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.

function. Already we have seen how the needs of Germany overrides the needs of Ireland.

.... (4) Hardly any economists have argued that the EMU is an optimal currency area - nor that it will fullfill the criteria of such an area in the future.

(5) Fifth and finally, monetary history suggests that monetary unification is an evolutionary process. It is hardly possible to set up a detailed plan for the process in advance - and expect the plan to work. The founders of the Federal Reserve System in the US could not have foreseen the rocky path that it followed in its first 40 years before it became a truly effective central bank. We should not expect the future EMU to be identical to the EMU that is presently being designed. It will develop over time in ways that we cannot imagine today. Monetary history does not end with the formation of the EMU.

... To be extended: 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 other reserchers. See for example Cohen (1993, 1998)), Corden (1972), Goodhart (1994), Obstfeld (1998)

... Much of recent analysis of monetary unions by economists are based on the framwork suggested by the literature on optimal currency area (OCA). It is commonly critical towards the future of the EMU as Europe is not considered an optimal currency area. This approach is not a fruitful one in the analysis of the historical record of the rise and fall of monetary unions as it lacks the political dimension.

... 7. The Future of the EMU. Conclusions

The major driving force behind the establishment of monetary unions as well as the break-up are political ones. The shortcomings noted by economists concerning the workings of the EMU should for this reason not be viewed as crucial shortcomings. They can be overcome by political forces and will most likely be done so in the evolutionary process facing the EMU.

The EMU and the ECB will be subject to a large number of shocks in the future - just as the case is with any common monetary area and its central bank. Our fundamental conclusion is that EMU will last as long as there exists a political will to maintain the system. The political will dependent on the economic costs and benefits as well as on other non-economic variables.

The weakness and flaws of the EMU are all familiar from the monetary history of nation states, in short, this is the reason why they are brought up in present debate. Any monetary deficiencies 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, and given that the political will exists.

There is a risk that decision-making across the boundaries of the nation states will be more cumbersome, but this does not make the EMU an impossible or unlikely project. Political will has pushed the project so far. This political will is the main reason why the EMU may last.

A major lesson from history is that monetary unification is an evolutionary process. EMU will evolve in the future different from the existing plans for the EMU. This process, allowing the EMU to adopt and adjust to future disturbances, should properly

be regarded as a policy learning process, where policy makers learning to cope with the flaws and weakness that will emerge.⁴⁶ This process will continue as long as the political will to maintain the union is at hand. Once it would be gone, the EMU may break apart. However, judging from the history of national monetary unions such a process is not likely.

⁴⁶. The learning process of US policy makers is analysed recently by Sargent (1998) and for Sweden 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
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 divergencies, 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) and Goodhart (1995).

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