

PAUL DE GRAUWE: THE CHALLENGE OF THE ENLARGEMENT OF EUROLAND

November 2002

HM Treasury invited Paul De Grauwe to revisit his 1996 paper 'Monetary Union and Convergence Economics'.¹ He provided an edited version of a paper presented in Genoa in November 2002.²

1. INTRODUCTION

1. The present eurozone that consists of twelve members, could become a maxi Eurozone of twenty-five members in the foreseeable future. Denmark, Sweden and the UK could join pretty soon, and the Central European countries, which are likely to join the European Union in 2004, are also knocking at the door of the European Monetary Union. In this paper we analyze the challenges that this enlargement produces for the Eurozone. In Section 2 we analyze the issue of whether the potential entrants form an optimal currency area with the present eurozone. In Section 3, we analyze what the implications are for the present members of the eurozone. Section 4 deals with the special position of the UK.

2. ARE THE ACCESSION COUNTRIES PART OF AN OPTIMAL CURRENCY AREA?

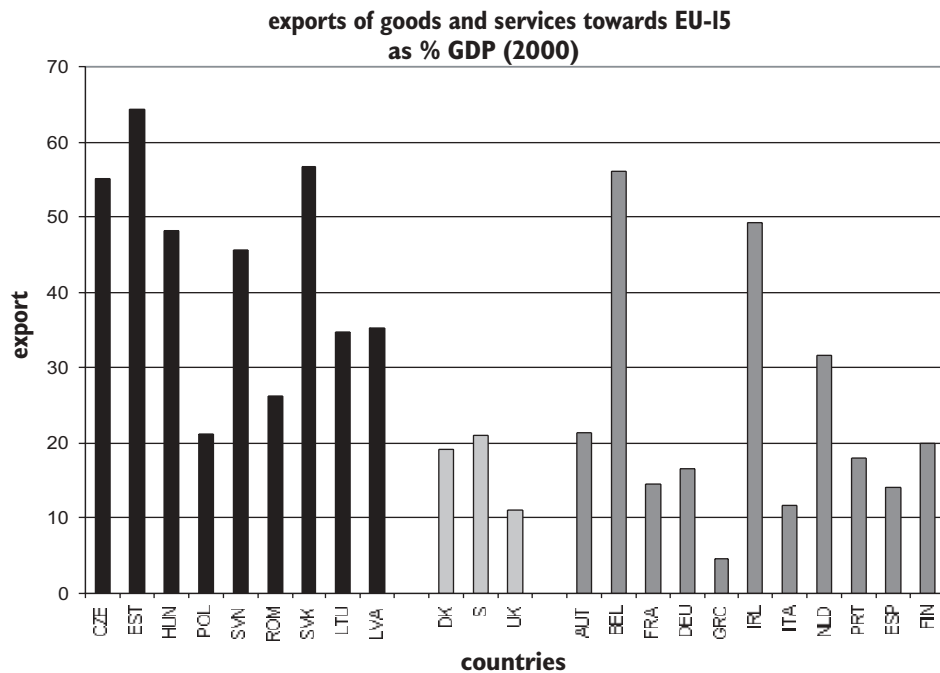
2. There is a very large literature on the factors that affect the optimality of monetary unions. Here we will concentrate on two factors, openness and asymmetry of shocks. We start by comparing the degree of openness of the central European countries with those of the EU. We show the result in Figure 1. The most striking aspect of this figure is that the central European countries are at least as open towards the EU as the EU-countries themselves³. It is also surprising to find that the Central European countries appear to be more integrated with the EU than Denmark, Sweden and the UK, which today have opted out from monetary union. Thus, if one concentrates on openness as a criterion of optimality of the currency union, the Central European countries would fit quite well in the existing EMU.

¹ De Grauwe, P. (1996) 'Monetary Union and Convergence Economics', *European Economic Review* 40, pp. 1091-1101.

² De Grauwe, P. (2002) 'The Challenge of the Enlargement of Euroland', Paper prepared for the International Conference "EU Enlargement: The Endgame Economic Issues" organised by the Jean Monnet European Centre of Excellence, Università degli Studi di Genova, Genoa, November 15th.

³ It should be pointed out that with the exception of Poland, the Central European countries are quite small. Small countries tend to be more open on average than large countries. Nevertheless, even when one compares the Central European countries to small EU-countries, (e.g. Belgium, Ireland, Finland, Denmark, Sweden) the former's openness is typically larger than the latter's.

Figure 1:



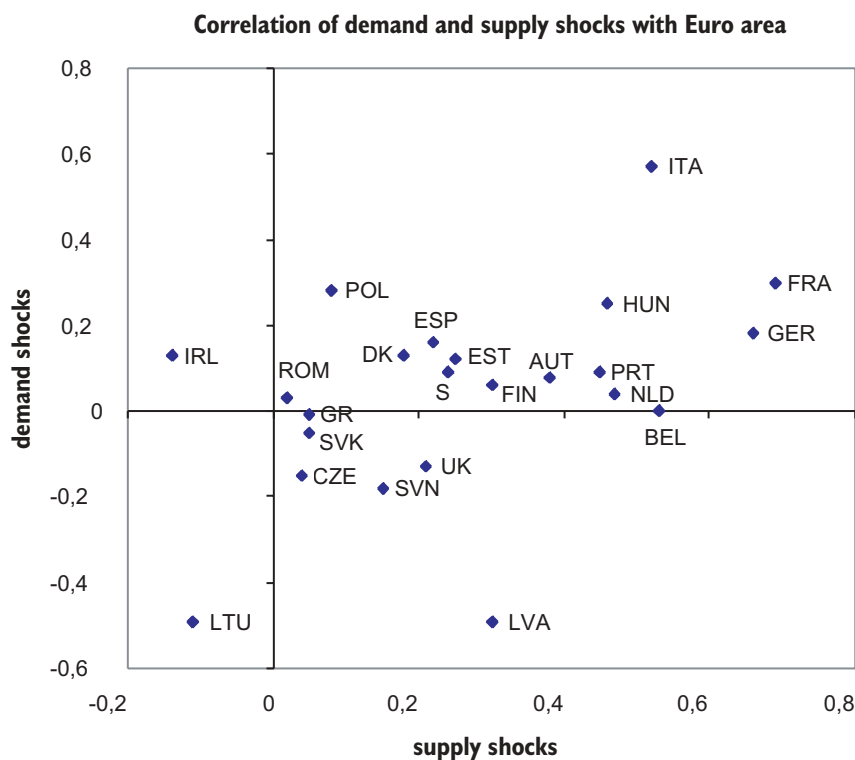
Source: European Commission(2001), and World Bank(2002)

3. A second factor affecting the optimality of currency unions is the degree of asymmetry of shocks. We do this using a recent study of Korhonen and Fidrmuc (2001). This study applied the methodology developed by Blanchard and Quah (1989) and implemented in the context of optimal currency areas by Bayoumi and Eichengreen(1993). It consists of extracting from the price and output data the underlying demand and supply shocks⁴. This is done for all the prospective members of the monetary union, and the correlation of these demand and supply shocks with the average of the union is then computed. We show the result of such an exercise performed by Korhonen and Fidrmuc (2001) in Figure 2. Each point represents the correlation coefficient of demand shocks (vertical axis) and supply shocks (horizontal axis) with the average demand and supply shocks in the Euro area. The results are quite instructive. First we find relatively high correlations of the large countries (France, Germany and Italy) with the euro area. This is not surprising because these large countries make up a significant part of the euro area. Second, although some Central European countries (Hungary and Estonia) are well correlated with the Euro area, this is much less the case with others. A large number of them have negative correlations of their demand shocks (Lithuania, Latvia, Czech Republic, Slovenia, Slovakia). Such negative correlations undoubtedly are partly the result of the fact that these countries pursue independent monetary policies. Once in a monetary union, this source of asymmetry will disappear. A more troublesome feature is that the correlation of the supply shocks of the Central European countries with the Euro area is rather low. This source of asymmetry is unlikely to disappear in a monetary union.

4. Finally, the position of the UK is noteworthy. This country's correlation of demand shocks is also negative, reflecting to a certain degree the fact that it pursues its own national monetary policies quite independently from what happens in the Euro area. At the same time the correlation of the supply shocks with the Euro area is rather low.

⁴In order to do so Vector Autoregressions (VAR) are estimated. In order to identify demand and supply shocks it is assumed that demand shocks have only temporary effects while supply shocks have permanent effects on prices and output. For more detail see Blanchard and Quah (1989) and Bayoumi and Eichengreen (1993).

Figure 2:



Source: Korhonen and Fidrmuc(2001).

5. From these results the following can be concluded. First it is not clear that all countries in the sample are part of an optimal currency area with the rest of the European Union. This is most evident for the UK. Its trade with the Euro area is rather low (see Figure 2) and it seems to be subjected to more asymmetric shocks than other large members of the union. One understands the hesitation of the UK to enter EMU.

6. Second, despite relatively large openness of the Central European countries vis-à-vis the European Union, many of these countries are subjected to relatively large asymmetric shocks, so that it is not obvious that they would gain from entering EMU. This conclusion should be handled with care however. Some of these countries may still feel that entering EMU is the best possible way to import monetary and price stability, so that the benefits of entering exceed the costs. In addition, one should compare the degree of flexibility of labour markets in these countries to come to a final judgment on the optimality of their union with the present EMU.

3. ENLARGEMENT AND THE COSTS AND BENEFITS OF THE UNION FOR THE PRESENT EUROZONE MEMBERS

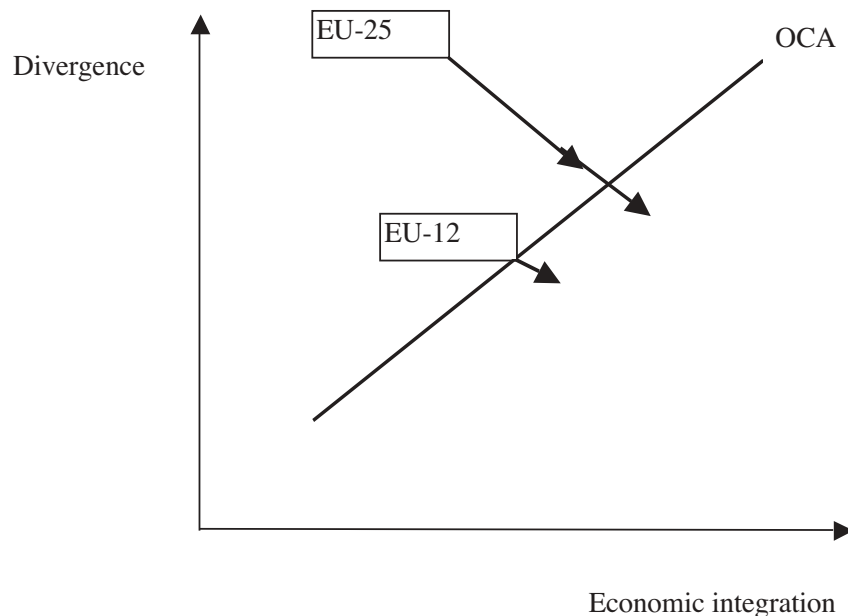
7. The previous results allow us to obtain some insights into the optimality of the existing Euro area after enlargement. In other words, these results have some implications for the costs and benefits of the monetary union for the present members when the newcomers have entered.

8. We analyse this issue using the graphical device developed in De Grauwe (2000). In Figure 3 we show divergence and integration, and plot two groups of countries. Let us first concentrate on the EU-12, the present Euro-zone. We have depicted this group of countries quite close to the OCA-zone and moving towards it, possibly aided by the endogeneity of the

dynamics towards the OCA-zone (see Frankel and Rose (1996)). Thus, pretty soon the present Euro-zone could be an optimal currency area. We have seen that one of the implications of such a happy state of affairs is that the members of the Euro-zone who face relatively few asymmetric shocks are satisfied with the monetary policies of the ECB most of the time. What happens when the Euro-zone is enlarged? Let us assume that all prospective members (Denmark, Sweden, UK, Central Europe) were to join. We represent this group of countries by EU-25.

9. It is reasonable to assume that this group of countries will be located higher up on a downward sloping line, reflecting the fact (observed in Figure 2) that EU-25 faces more asymmetric shocks than EU-12. The important insight from this analysis is that the original members of Euroland (who are also part of EU-25) will now have to wait longer until they reach the OCA zone⁵. Practically this means that since in the enlarged Eurozone the shocks are more asymmetric than in the original one, some of the original members will more often than today be outliers (in terms of inflation and output) compared to the average that the ECB will be focusing on. As a result, these members will perceive the policies of the ECB to be less receptive to their national shocks than it did before the enlargement. Some of the original members of the Eurozone may then find that the cost-benefit calculus about monetary union has become less favourable. While today most of the members of Euroland probably find that the interest rate decisions of the ECB are consistent with their national economic conditions most of the time, this may no longer be the case in an enlarged EMU. It will happen more frequently that some countries consider the monetary stance taken by the ECB to be inappropriate to deal with the economic situation of the moment. As a result, the perceived costs of the union will increase relative to the perceived benefits of the single currency. Such a situation is bound to produce tensions both inside the decision making process of the Eurosystem as outside the system when some countries feel that their economic interests are not served well by the ECB.

Figure 3:



10. There is very little the ECB can do about this. By its very nature a monetary union implies that the power to set interest rates is transferred to a common central bank which can only set one interest rate. Fine-tuning of the interest rate to cater for different national economic conditions is made impossible. This is the price the members of the union pay for the benefits they obtain from the existence of one currency.

⁵If the EU-12 is in the OCA-zone at the moment of enlargement, its members are thrown out of this zone when the enlargement occurs.

II. The only way to deal with these issues is to make sure that individual member countries have the instruments to deal with these asymmetric developments. In this context progress towards reform of the labour markets aiming at making these more flexible is of great importance. Flexibility is probably the only instrument available that allows Eurozone countries to adjust to asymmetric shocks.

4. SHOULD THE UK JOIN EMU?

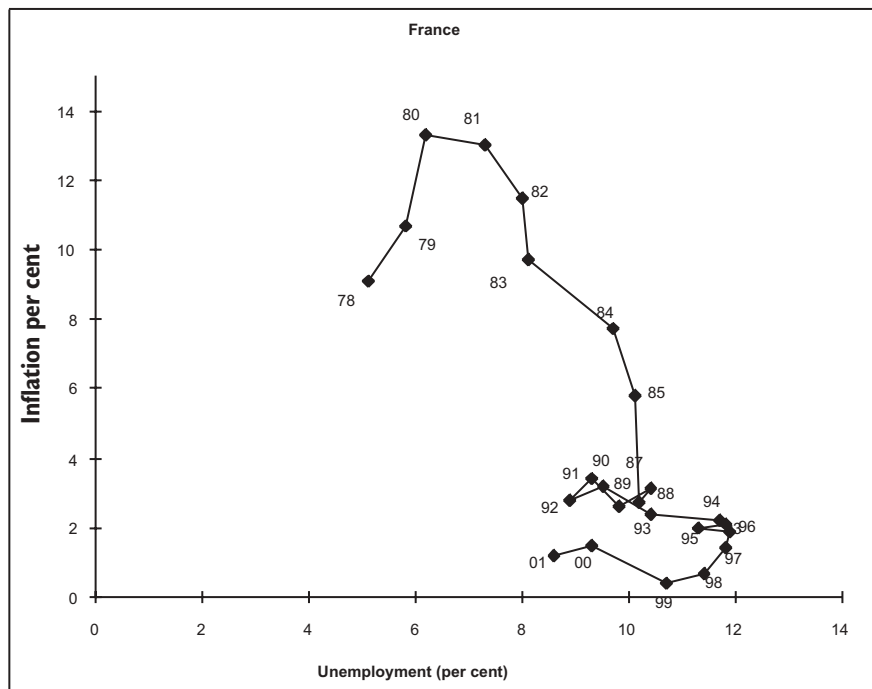
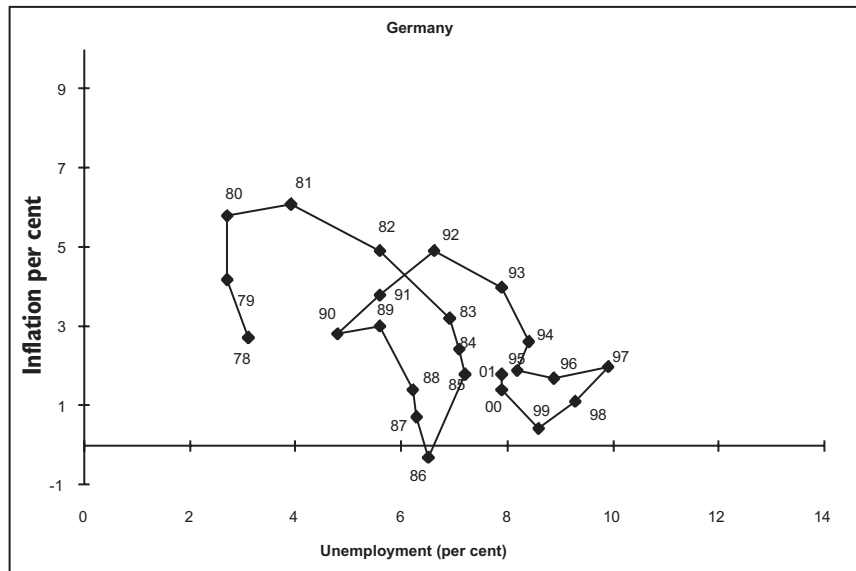
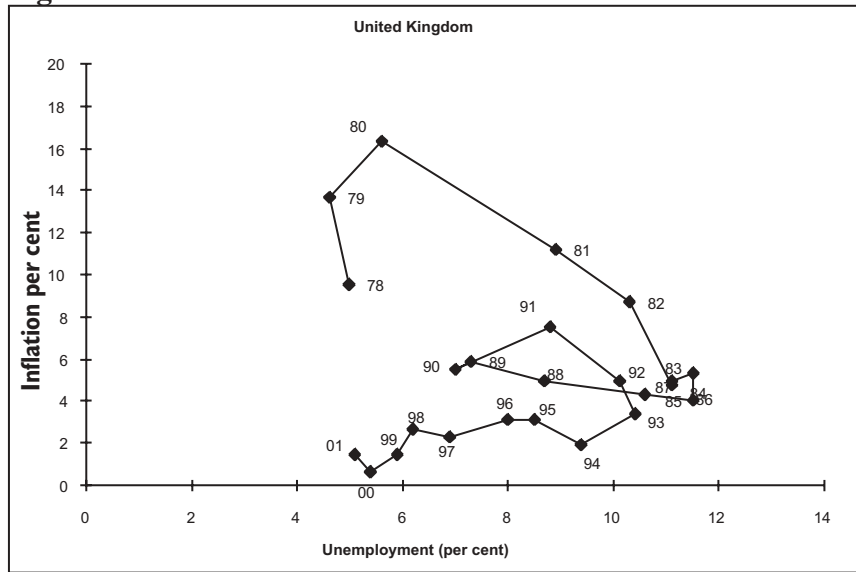
12. This question has been hotly debated in the UK, and continues to be so. The Government of Tony Blair has promised to organise a referendum on the subject, the timing of which is as yet (end of 2002) unclear. Thus in the end the public will decide about the question of whether it is in the interest of the UK citizens that the euro should be introduced.

13. The question of whether the UK should join EMU can only be answered by studying the costs and benefits of being part of EMU. Several of the cost and benefit items have been discussed in the previous sections. There is some merit in bringing these together. This will allow us to gain better insights about this burning question.

14. Let us start with the cost side. We have identified several factors that affect the costs of a monetary union, i.e. openness, flexibility, and asymmetry of shocks.

- *Openness:* We have found that, with the exception of Greece, the UK has the lowest degree of openness towards the rest of the EU (see Figure 1). It is even more striking to find that the UK is less open towards the EU than the Central European countries which are likely to join the European Union in 2004.
- *Asymmetry of shocks:* From Figure 2 we have learned that the demand shocks in the UK are negatively correlated with the demand shocks in Euroland. This is probably related to the fact that the UK has pursued independent monetary policy. If that is the case, part of this asymmetry may disappear when the UK joins the union. This remains uncertain, however. We have also found that the supply shocks in the UK are only weakly correlated with those in Euroland. All this suggests that the divergence between economic movements in the UK and Euroland is relatively high, introducing potentially high costs of joining EMU.
- *Flexibility:* There is a general consensus among economists that the UK labour markets are more flexible than the labour markets of the major countries in Euroland (Germany, France, Italy). We show the effects of the greater flexibility of the UK labour markets by contrasting the inflation–unemployment of the UK on the one hand, and Germany and France on the other hand during 1978–2001 (see figure 4). The contrasts are striking. The successive shocks that occurred, first during 1979–80 (oil shock) and later in the early 1990s (a recession) were relatively well absorbed by the UK. The effect of these shocks was to increase unemployment. These increases, however, were temporary and the UK managed to bring back unemployment to the level prevailing before 1978. The experiences of Germany and France were very different. The increases in unemployment following the shocks of 1979–80 and 1992–93 took on a permanent character. As a result the unemployment more than doubled from 1978 to 2001 in both countries. This evidence is consistent with the view that labour markets are rigid in Germany and in France: an increase in unemployment due to some shock does not lead to wage adjustments; as a result unemployment does not decline.

Figure 4:



15. Concluding the cost side of the analysis, one can state that the UK faces less integration and more asymmetric shocks making monetary union potentially costly. However, flexibility is significantly more favourable than in important Euroland countries, so that the UK may experience fewer problems in adjusting to these (higher) asymmetric shocks.

16. One last point about the costs of a monetary union for the UK is the following. We have seen that countries with a history of monetary instability (high-inflation) have been enthusiastic to join EMU, because entry into the union was seen as a way to import stability. Thus, countries like Greece and Italy have joined even though openness, asymmetry of shocks and flexibility were not so favourable. This effect may not be very strong in the UK, which since the 1980s has been able to introduce monetary stability on its own. The desire to enter as a way to import stability is certainly not present in the UK today.

17. The benefits of a monetary union for the UK will be similar as for the other countries, although they could be a little smaller. We now form the theory that the benefits of a monetary are a function of openness, i.e. relatively less open countries have smaller benefits from a monetary union than more open economies. In the case of the UK, however, this negative effect may be compensated by the special position of the City of London as a major financial center. Entry into the Eurozone is likely to consolidate the strong position of London as a financial center; it is even likely to enhance it. As a result, relatively large benefits will accrue to the UK.

18. Thus the cost-benefit analysis leads to the view that although the various cost and benefit items look very different for the UK, the bottom line may not be so different. If countries like France, Germany and Italy came to the conclusion that the benefits outweigh the costs, the same conclusion could hold for the UK. Put differently, one can make a case that the UK would benefit economically from joining EMU. But as is so often the case in economics, this conclusion remains clouded in uncertainty. As a result, subjective elements will weigh very heavily in people's opinion about the desirability of entry in the eurozone.

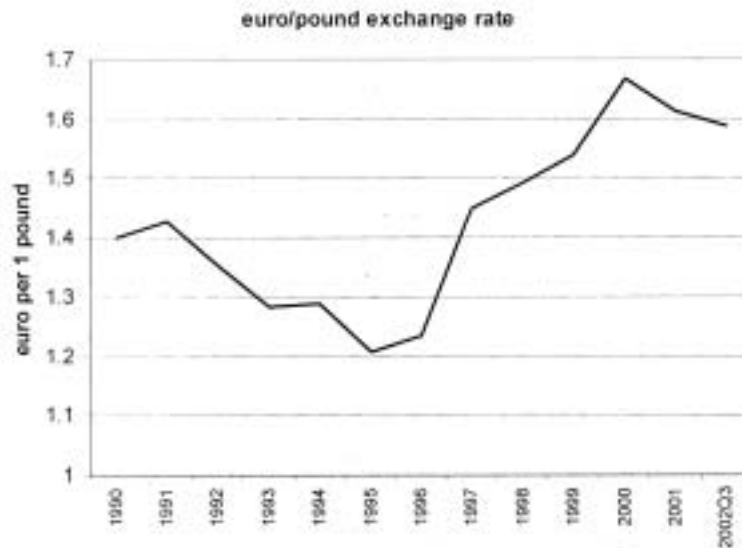
19. The corollary of this conclusion seems less subject to uncertainty. This is that the cost-benefit calculus for the existing members of being in EMU together with the UK becomes less favourable. We have developed the argument in general terms in the previous section. It can now be made more precise. If the UK joins the eurozone it will have a significant impact on the interest rate decisions made by the ECB. This is so because the UK will represent about 20% of Euroland's GDP. Since, as we have seen, the UK is characterised by significant asymmetric shocks, these shocks will influence the interest rate decisions of the ECB. Put differently, it will happen more frequently that the ECB is taking decisions that take less account of the economic conditions prevailing in some or all of the present eurozone members. As a result, these countries will feel that the common central bank disregards their national economic conditions more so than it does today. The monetary union will have become less attractive for them.

20. One last problem should be considered. This is the problem of the exchange rate at which the UK should join if it decides to do so. As one observes from Figure 5 the pound sterling started a strong upward movement from the middle of the 1990s. In 2002 it had appreciated by approximately 30% relative to its low point of 1995. One could argue that the level of 1995 may have been the result of an excessive depreciation after the UK had left the exchange rate mechanism of the EMS in 1992. But even if we take 1990 as the benchmark, which is the time just prior to entry into the ERM⁶, the pound appreciated by close to 15%.

⁶ Many economists believe that the exchange rate at which the pound entered the ERM was overvalued, and that this overvaluation explains the subsequent crisis in 1992 and the ensuing depreciation.

21. One way to find out whether the pound is over or undervalued is to compute the real effective exchange rate of the pound. This measures the average exchange rate development of the pound vis-à-vis its main trading partners corrected for differential developments in prices in the UK versus the same trading partners. We show the real exchange rate of the UK as computed by the European Commission in Figure 6. The prices used to make the correction are unit labour costs⁷. We observe that the pound has experienced a real appreciation of close to 30% since 1995. Again, 1995 may not be the right base year, because at that time the pound may have experienced an excessive depreciation following its exit from the ERM in 1992. Taking 1993 as the base year, which may have been the year when the pound came close to its equilibrium value, the size of the real appreciation in 2002 amounted to close to 20%. This may give a rough indication of the size of the depreciation of the pound sterling that may be desirable before the pound joins EMU.

Figure 5:

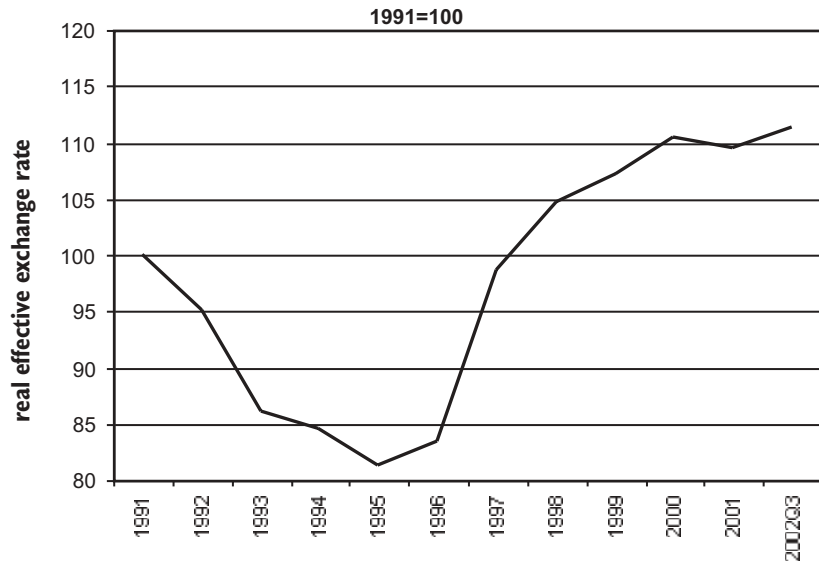


Source: Bank of England, Statistical Bulletin

Note: prior to 1999 the exchange rate refers to the ECU/pound rate.

⁷Unit labour costs are defined as the cost of labour per unit of output. As a result, the real exchange rate also corrects for divergent labour productivity growth. Thus, if labour productivity increases faster in the UK than in the other countries there is a relative decline in the UK unit labour costs (assuming unchanged wages) so that the real exchange rate declines.

Figure 6:



Source: EU–Commission, European Economy, Statistical Appendix

22. If the previous analysis is correct, it would be a mistake for the UK to enter EMU with the present (2002) exchange rate. In that case the UK government is likely to push for a more favourable (i.e. depreciated) exchange rate of the pound vis-a-vis the euro at the moment of entry. This will create a problem. The Maastricht Treaty stipulates that the exchange rate at which a country enters EMU is a matter of common concern. Thus the member countries of Euroland will have to give their agreement, and they may resist such a depreciation of the pound.

5. CONCLUSION

23. The introduction of the euro has been spectacularly successful. This success should not make us complacent. The challenges ahead are formidable as well. We discussed the major challenge of enlargement to a zone of potentially twenty–seven countries which will affect the effectiveness of the ECB in maintaining monetary and financial stability within the euro zone. This is so because the enlargement is likely to change the perceptions of costs and benefits of the union for the present members of Euroland, increasing the costs relative to the benefits. Consequently, countries will face more often than today the possibility that ECB interest rate decisions do not reflect their national interests. There is very little the ECB can do about this. As a result, the pressure on countries to increase labour market flexibility will increase, which for most people in the labour market is not a comfortable prospect.

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JEAN DERMINE: EUROPEAN CAPITAL MARKETS WITH A SINGLE CURRENCY, WHAT DO WE LEARN?

November 2002

HM Treasury invited Jean Dermine to revisit his 1999 book 'European Capital Markets with a Single Currency' co-edited with Pierre Hillion, with particular reference to his conclusion that the single currency could "change fundamentally and permanently the sources of competitive advantage of financial institutions" (p. 1).

1. In this note, we propose to review the various channels through which the euro affects financial institutions, with a major focus on capital market activities. How does the single currency affect the strategies of banks, and why might domestic and/or cross-border mergers become increasingly relevant? Four potential effects of the Euro are identified and analyzed.
2. The first impact of the Euro concerns capital markets, including the government and corporate bond and equity markets. The next two effects concern banking, with the impact of the single currency on credit risk and bank profitability in a low inflation environment. The final impact concerns the fund management industry.
3. For each channel, a discussion of the theoretical arguments is followed by the empirical evidence.

(I) THE BOND AND EQUITY MARKETS, UNDERWRITING AND TRADING THEORY

4. Before the introduction of the Euro, one observes that the capital markets in Europe were very fragmented with domestic players capturing a large market share of the underwriting and secondary trading business. This raises the question of the sources of competitive advantage for local banks.
5. With regard to the underwriting and trading of securities, the dominance of local firms is the result of four main factors: (a) an historical factor, with local banks having privileged relations with the local issuer (customer relations), (b) local expertise in evaluating business risk to price the issue, (c) domestic currency denomination, which facilitates the access to a large investor home base, providing a significant advantage not only in placing the issue, but also in understanding the demand/supply order flows, and (d) expertise of local banks in the domestic monetary environment, which provides essential information for operations on the bond secondary market.
6. A single currency in Europe changes fundamentally the competitive structure of the corporate bond and equity markets, since one key source of competitive advantage, namely home currency, disappears. Indeed, savers will diversify their portfolio across European markets, now that the exchange rate risk has been eradicated. If access to a Europe-wide investor base facilitates placement, and if access to information on the supply/demand order flows seems essential to operate on the secondary market, operations on a large scale and at a European-wide level are likely to become a necessity, and one should observe a consolidation on the capital markets.

¹ Dermine, J. and Hillion, P. (eds) (1999) *European Capital Markets with a Single Currency*. Oxford: Oxford University Press.

7. Therefore, the two main sources of comparative advantage remaining for local players will be an historical customer relationship and the understanding of credit (business) risk through a better knowledge of the accounting, legal, fiscal (not to mention language) environment. Whenever the business risk embedded in corporate securities can be better assessed by domestic banks, these firms will control underwriting and secondary trading. Local expertise would be particularly valuable for smaller companies, venture capital, or the real estate market. However, for larger corporations, worldwide industry expertise and placing power at the international level will most likely dominate any national source of advantage. The replacement of national currencies by the Euro thus explains consolidation in capital markets activities.

Empirical evidence

8. Using an International Financing Review (IFR) database over the years 1993-1996 for the issue of 6,517 corporate bonds and loans, Harm (2001) estimates a logit regression to determine the probability that a debt issue is led by a bank of a specific country. He observes that currency denomination is a key factor for bond issue, confirming the impact of national currency on placing power and the competitive advantage of local banks. He also observes a significant impact of the nationality of the borrower for syndicated loans, a confirmation of the importance of customer relations. Santos and Tsatsaronis (2002) analyze the early impact of the arrival of the Euro with the 1994-2001 IFR database. They not only confirm the earlier findings that 80.5 per cent of the issues were underwritten by banks from a country with the same currency denomination, but that this figure sharply decreased to 59.5 per cent in the post-EMU 1999-2001 period. Moreover, they report that the average fee has decreased from 1.6 per cent to 0.77 per cent in the post-EMU period. Bishop (2001) reports that issues of more than €1 billion increased from 14 percent to 48 percent of all Euro-denominated issues from the first quarter of 1998 to the first quarter of 2001. Driven by a much larger market liquidity, Belgium came up with a €5 billion issue in 2002. This confirms the need for larger banks with a bigger capital base to absorb the risk of an issue. Anecdotal evidence is that the Royal Bank of Scotland has become much more active on the capital markets thanks to a larger size achieved with the merger with NatWest. In Scandinavia in 2000, not one of the five largest underwriters of corporate bonds were domestic firms. This explains in part the creation of Nordea, the merger of four banks from Sweden, Finland, Denmark and Norway. As a comparison and further source of evidence on the need for scale, one observes that the five largest players capture a market share of 53 per cent of US Debt and Equity Issuance in 2001.

(2) EMU AND CREDIT RISK THEORY

9. An additional impact of the Euro is its potential effect on credit risk. The argument is based on the theory of Optimum Currency Areas. The theory of Optimum Currency Areas has called attention to the fact that countries subject to asymmetric economic shocks would value monetary autonomy to lessen the effects of a shock. Indeed, with symmetric shocks, there would be a consensus among the members of a currency union on economic policy, but with asymmetric shocks, the policy run from the center may not be adequate for all the members of the Union. For instance, one can wonder whether the rapid recovery enjoyed by British banks in 1994 was helped partly by the September 1992 devaluation, which reduced somewhat a bad debt problem. Similarly, the 42 per cent devaluation of the Finnish Markka in the early 1990s helped the restructuring of the country after the real estate crisis and the collapse of one of its major trading partners, the Soviet Union. A case of fixed exchange rates which prevented a smooth adjustment is that of Texas. The decrease in oil prices from US\$40 a barrel in 1979 to under US\$10 in 1986, and a change in federal tax policy affected not only the oil industry, but also unemployment, real estate and the Texan banking industry. Had the

Texan dollar been allowed to devalue, the severity of the recession would have been lessened. How could the introduction of a single currency affect credit risk? If a bank concentrates its credit risk in its home country, and if that country is subject to asymmetric shocks, it is quite possible that a central European monetary policy or fiscal transfers will not be able to lessen the shock. Although the likelihood of such a significant asymmetric shock could be quite low, the fact remains that any bank must control risk in such extreme, 'stress', cases. An indirect corollary of the Optimum Currency Area theory is that, for banks operating in a single currency area, the need to diversify their loan portfolio increases in proportion to the likelihood of the home country being subject to asymmetric (uncorrelated) shocks. This can be achieved through an increased international diversification of the loan portfolio with cross-border lending or cross-border merger. Securitization and credit derivatives could help to trade credit risk, but the asymmetric information on the quality of loans will raise the cost of trading credit risk, most likely leaving a major place to international diversification of lending.

Table 1: International diversification of Credit Risk, a simulation exercise

Loan Loss Provisions as Percentage (%) of Total Loans

	1988	1989	1990	1991	1992
Austria	0.32	0.35	0.39	0.54	0.76
Belgium	1.38	1.35	0.64	0.88	1.09
Denmark	2.20	1.69	2.38	2.66	3.20
Finland	0.64	0.54	0.47	0.45	3.20
France	0.46	0.33	0.30	0.49	0.74
Germany	0.40	0.82	0.83	0.60	0.69
Greece	1.09	1.28	1.40	2.50	1.24
Italy	0.46	1.23	1.21	1.12	1.12
Luxembourg	1.48	1.55	2.17	1.72	1.62
Netherlands	0.39	0.34	0.39	0.46	0.43
Portugal	3.44	4.25	4.02	4.45	4.52
Spain	1.27	0.70	0.65	1.10	1.34
Sweden	1.72	1.51	0.75	3.20	6.00
UK	0.51	2.57	1.53	2.16	2.13
Diversified Portfolio¹	0.65	1.15	0.93	1.15	1.35

¹The diversified portfolio is a weighted-portfolio of loans of banks from each country, the weights being the 2000 GNP.

Source: Dermine (2002)

Empirical evidence

10. US studies² report that large banks, able to diversify credit risks across many states, exhibit a lower variance of profit. Other studies simulating a merger between banks and insurance companies, come to similar conclusions (a quite obvious result, since low correlation can only lead to more stable profits). Simulation results indicating the benefits of diversification must be viewed with caution for two reasons. First, there is an implicit assumption that the combined firm can be managed as efficiently as the separate firms. Second, as emphasized in an empirical study by Boyd and Runkle (1993), lower volatility of asset return is often combined with a lower equity base (higher leverage) so that the probability of default of large diversified institutions appears to be as high as that of smaller, less diversified but less leveraged, firms. At the international level, Berger *et al.* (2000) report very low correlations of the aggregate ROE of banking systems of the various European countries. Dahl and Logan (2002) analyze the overdue international claims of 28 UK-owned banks over the period 1987-2000. They report a significant gain from international diversification of credit risk exposure.

11. A word of caution should be expressed here, concerning studies that focus on correlation and volatility of losses. As credit risk distribution is known to be highly skewed (many states of the world with fairly few loan losses, and few states of the world with large recession and substantial losses), it might be better to analyse the impact of diversification at times of deep recession. A standard approach in the management of trading risk is to simulate the impact of a large shock (*stress scenario*) on a portfolio. In Table 1, we report the provisions on loan losses (an imperfect estimate of loan losses) of the banking system of several countries over the recession period 1988–1992. To study the potential benefits of diversification, we simulate the average loss on a GNP-weighted diversified loan portfolio. In the case of the United Kingdom, which experienced severe loan losses during that period, one can observe that diversification would, *ceteris paribus*, reduce the loan losses by fifty per cent. Note that this is only a simulation. Part of the diversification benefit could disappear if credit management quality were to worsen in a large international organisation.

(3) BANKING IN A LOW INFLATION ENVIRONMENT

Theory

12. The third effect of a single currency concerns the impact on bank profitability of doing business in a low inflation environment. Indeed, in the last twenty years, inflation and relatively high interest rates in some countries have created significant interest margins on price-regulated deposits. One can safely expect that the objective of monetary stability and low inflation, pursued by an independent European Central Bank, reduces the source of profitability on the deposit funding business. However, if this effect is quite significant in a large number of countries, two additional effects of a low inflation environment might soften the impact of lower margins on deposits: margins on loans and the so-called ‘inflation tax’

13. The first impact is that a low interest rate environment usually leads to much higher margins on personal loans because of the relative inelasticity of interest rates on personal loans. This effect is well known on the credit card markets in which margins are known to be permanently higher in a low interest rate environment. A second positive impact of a low inflation environment is that the so-called ‘inflation tax’ will be much smaller. An inflation tax arises because banks, being net holders of financial assets, are taxed on their nominal income rather than their real income.

² Boyd and Runkle (1993) and Hughes, Lang, Mester and Moon (1999).

Table 2: Intermediation margin¹ (per cent) 1980–2000

Belgium	1980	1985	1990	1995	2000
Treasury Bill	14.40	10.70	10.40	5.36	3.34
Margin on Savings Deposits	9.40	5.70	4.90	0.72	0.75
Margin on Consumer Loans				6.92	3.63
Retail Intermediation Margin				7.64	4.38
Margin on Corporate Loan	0.80	1.04	1.05	1.15	1.14
Netherlands	1980	1985	1990	1995	2000
Treasury Bill	9.20	6.85	8.13	5.18	3.34
Margin on Savings Deposits	4.20	3.50	5.63	3.13	1.84
Margin on Consumer Loans	5.30	1.65	3.62	2.32	2.91
Retail Intermediation Margin	9.50	5.15	9.25	5.45	4.75
Margin on Corporate Loan	3.05	-0.60	1.12	-0.18	0.41
Finland	1980	1985	1990	1995	2000
Treasury Bill	13.80	12.80	16.05	5.85	3.34
Margin on Savings Deposits	9.55	7.55	11.55	3.85	1.84
Margin on Consumer Loans	-3.64	-1.10	-0.45	4.09	2.75
Retail Intermediation Margin	5.91	6.45	11.10	7.94	4.59
Margin on Corporate Loan	-3.64	-1.10	-1.29	1.58	0.89
France	1980	1985	1990	1995	2000
Treasury Bill	12.20	9.50	10.00	5.00	3.34
Margin on Savings Deposits	5.30	3.00	5.60	0.66	0.92
Margin on Consumer Loans			5.40	3.03	4.85
Retail Intermediation Margin			11.00	3.69	5.77
Margin on Corporate Loan		3.83	1.19	2.28	1.75
Germany	1980	1985	1990	1995	2000
Treasury Bill	8.86	5.87	8.30	5.16	3.34
Margin on Savings Deposits			2.08	1.37	1.31
Margin on Consumer Loans			4.32	8.18	6.84
Retail Intermediation Margin			6.40	9.55	8.15
Margin on Corporate Loan	0.80	2.39	1.31	4.16	4.34
Spain	1980	1985	1990	1995	2000
Treasury Bill	12.20	12.00	14.00	8.33	3.34
Margin on Savings Deposits	8.45	8.25	11.58	5.58	2.37
Margin on Consumer Loans	2.57	5.03	3.18	5.62	4.67
Retail Intermediation Margin	11.02	13.28	14.76	11.20	7.04
Margin on Corporate Loan	-3.64	-1.10	-1.29	1.58	0.89

¹Methodology:

Margin on savings deposits : treasury bill rate - rate paid on savings deposits

Margin on consumer loans : rate charged on loan - treasury bill rate

Retail intermediation margin : rate charged on consumer loans - rate paid on savings deposits

Margin on corporate loans : rate charged on loans - treasury bill rate

Source: Dermine (2002)

14. Therefore, the impact of a low inflation environment on the profitability of banks will depend on the relative importance of reduced margins on deposits, higher profit on personal loans, and on the significance of the 'inflation tax'.

Empirical evidence

15. In Table 2, we report the intermediation margin on the retail banking market of a number of European countries. As expected, margins on deposits have been reduced in most countries, while margins on consumer lending have increased in some countries. This is consistent with the impact of a low interest rate environment on the retail margins on deposits and loans. Anecdotal, but consistent with the evidence, is the recent acquisition by HSBC of Household International, a large US consumer finance specialist (to be confirmed at the time of writing). HSBC is searching high margin business in a low interest rate environment.

(4) ASSET MANAGEMENT

Theory

16. An important segment of capital markets business is the fund management industry, pension funds or mutual funds. It is symptomatic to see the total dominance of the fund management industry by local firms. For instance, in 2001, the five largest asset managers are all local firms in France and the United Kingdom³. In view of this extreme fragmentation, specially in comparison with other segments of the capital markets, one wonders about the impact of the single currency on the fund management industry. In this case too, an understanding of the main sources of competitive advantage needs to be developed. They concern the retail distribution network, the home-currency preference, research expertise, and the existence of economies of scale. The first source of competitive advantage in the retail segment is the control of the distribution network, in the hand of local banks in several countries. Domestic control of distribution is even protected under current European legislation framework which gives national authorities the right to regulate the marketing of funds into their own territory. Obviously the advantage derived from the control of the distribution network applies to retail investors only, as it will not be a barrier to entry in the institutional market. A second source of competitive advantage was the customer preference for home-currency assets, often imposed by regulation. A single currency of course eliminates this factor and reinforces the need for European-wide portfolios. A large part of these will be provided by index-tracking investment funds. A third source of success is excellence in research-based management. As to the existence of economies of scale and scope in the fund management industry, it is still a subject of debate. If scale seems important for index-tracking funds, it could be less relevant for actively-managed funds.

17. A single currency eliminates the main obstacle to international diversification. One will observe quite likely very large low cost European index-tracking funds competing with smaller research-based funds. On the retail distribution side, domestic banks will keep their competitive advantage as long as the branch network remains a significant channel of distribution, the case for most countries in continental Europe.

³ Local firms, even if they are owned by foreign shareholders in the United Kingdom (such as MAM with Merrill Lynch, or Phillips and Drew with UBS).

Empirical evidence

18. On the asset allocation side, there is empirical evidence (Adjaouté and Danthine, 2002) that the practice of a ‘top down’ allocation approach, with ‘country allocation’ as a first step, is being replaced by an ‘industry allocation’ as a first step. Industry-based allocation will reduce the home bias, creating the need for international industry expertise. Moreover, there is evidence that asset tracker specialists, such as the US State Street, are growing very rapidly in Europe, at the expense of traditional asset managers.

19. Four channels of impact of the euro on the sources of competitive advantage of financial institutions have been analyzed: impact of a single currency on the bond and equity markets, impact of the euro on credit risk, impact of doing business in a low inflation environment, and impact on the fund management industry. A conclusion from the above analysis is that size, international placing power, international industry expertise, and risk diversification are key factors for success in the capital markets sector.

(5) CONCLUSIONS

20. Four additional observations conclude this note:

- a) Although a large series of domestic bank mergers, documented in Table 3, are driven by cost efficiency reason (the relative ease to realize domestic efficiency gains with the closure of branches), another reason for merger is to achieve size to be competitive in the capital markets;
- b) One can argue that the number of significant cross-border mergers in banking have been few (Table 4 & 5), limited mostly to countries of smaller size, such as Belgium, Netherlands or Scandinavia. This is indeed the case so far, but it is the belief of the author that the end of domestic consolidation will force banks to search across borders for new sources of value creation;
- c) Some have argued that American banks, helped by their large domestic capital markets, have been the first to benefit from integrated European capital markets. The jury is still out, but the important issue might not be so much the nationality of firms, but rather the degree of efficiency of European capital markets;
- d) Finally, of importance for small countries such as the Netherlands or Switzerland, is that the larger size of domestic banks, relative to their GDP, could create financial stability problems. Bank consolidation might call for a more centralized approach to European banking supervision (Dermine, 2002).

Table 3: A selection of Major domestic mergers in Europe

Belgium	1992	CGER-AG (Fortis)
	1995	Fortis-SNCI
	1995	KB-Bank van Roeselaere
	1997	BACOB-Paribas Belgium CERA-Indosuez Belgium
	1998	KBC (KB-CERA-ABB)
	2001	Dexia-BACOB
Denmark	1990	Den Danske Bank Unibank (Privatbanken, Sparekassen, Andelsbanken)
	1999	Unibank - TrygBaltica
	2000	Danske Bank -RealDanmark
Finland	1995	Merita Bank (KOP-Union Bank of Finland)
France	1996	Crédit Agricole-Indosuez
	1999	BNP-Paribas
Germany	1997	Bayerische Vereinsbank
	2001	Hypo-Bank (HBV) Allianz-Dresdner
Italy	1992	Banca di Roma (Banco di Roma, Cassa di Risparmio di Roma, Banco di Santo Spirito) San Paolo- Crediop
	1995	Credito Romagnolo (Rolo)-Credit Italiano (UniCredito)
	1997	Ambroveneto-Cariplo (Intesa)
	1999	San Paolo-IMI Intesa-BCI SanPaoloIMI-Banca di Napoli
	2000	Banca di Roma-Bipop (Capitalia)
Netherlands	1990	ABN - AMRO
	1991	NMB-PostBank-ING
Portugal	1995	BCP-BPA
	2000	BCP-BPSM
Spain	1988	BBV(Banco de Vizcaya-Banco de Bilbao)
	1989	Caja de Barcelona-La Caixa
	1992	Banco Central-Banco Hispano
	1994	Santander-Banesto
	1999	Santander-BCH BBV-Argentaria (BBVA)
Sweden	1993	Nordbanken-Gota Bank
Switzerland	1993	CS-Volksbank-Winterthur
	1997	SBC-UBS
United Kingdom	1995	Lloyds-C&G-TSB
	2000	RBS-NatWest Barclays-Woolwich Abbey Nat.-Scottish Provident
	2001	Halifax-Bank of Scotland (HBOS)

Source: Dermine (2002)

Table 4: A selection of cross-border acquisition of merchant banks

BUYER	TARGET
Deutsche Bank	Morgan Grenfell
ING Bank	Barings
Swiss Bank Corp	Warburg, O'Connor, Brinson, Dillon Read
Dresdner	Kleinwort Benson
ABN-AMRO	Hoare Govett
UNIBANK	ABB Aros
Merrill Lynch	Smith New Court FG (Spain), MAM
Morgan Stanley Dean Witter	AB Asesores
CSFB	BZW (equity part)
Société Générale	Hambros
Citigroup	Schroder
Chase	Robert Fleming
ING	Chaterhouse Securities

Table 5: A selection of cross-border acquisition of commercial banks

BUYER	TARGET
DEXIA (B, F)	Crédit Communal (B), Crédit Local (F), BIL (L), Crediop (I), BACOB (B)
BACOB (B)	Paribas (NL)
ING (NL)	BBL (B), BHF (G)
GENERALE BANK (B)	Crédit Lyonnais (NL), Hambros (UK, corporate)
FORTIS (B, NL)	AMEV+Mees Pierson (NL) / CGER/SNCI (B) / Generale Bank (B)
NORDBANKEN (S)	Merita (F), Unidanmark (DK), Christiania (N)
BSCH (E)	Champalimaud (P)
HSBC (UK)	CCF (F)
Hypovereinsbank (D)	Bank Austria-Creditanstalt (A)

Table 6: Bank size

Country	Bank	Equity (book value) (euroMillion 2000)	Equity/GDP 2000	Equity/GDP 1997
UK	RBS	37,649	2.43%	0.51%
UK	HSBC	35,060	2.26%	2.00%
CH	UBS	31,364	12.37%	8.65%
DE	Deutsche Bank	29,476	1.34%	0.90%
NL	ING Groep	28,980	6.65%	5.94%
ES	Santander-CH	28,415	4.30%	1.75%
CH	Crédit Suisse	26,752	10.55%	5.63%
FR	Crédit Agricole	26,646	1.86%	1.55%
FR	BNP-Paribas	24,194	1.69%	0.80%
UK	Barclays	23,519	1.52%	1.28%
DE	HVB	21,777	1.00%	0.42%
NL	ABN AMRO	17,809	4.09%	3.88%
NL	Rabobank	16,258	3.73%	2.84%
FR	Société Générale	16,605	1.16%	0.89%
DE	Dresdner	15,150	0.69%	0.65%
BE	Fortis ¹	15,989	2.27%	1.33%
BE	KBC	7,668	2.85%	1.28%
US	Bank of America	56,008	0.59%	0.24%
US	Citigroup	70,518	0.75%	0.50%

¹In the case of the Belgian-Dutch Fortis, the ratio is Equity to the sum of GDPs from Belgium and the Netherlands.

Source: Dermine (2002).

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BARRY EICHENGREEN: REFLECTIONS ON THE COHERENCE OF THE EURO AREA¹

September 2002

HM Treasury invited Barry Eichengreen to revisit his 1992 article ‘Shocking Aspects of European Monetary Unification’² co-authored with Tamim Bayoumi, with particular reference to the quotation: “underlying shocks are significantly more idiosyncratic across EC countries than across US regions, which may indicate that the EC will find it more difficult to operate a monetary union”.

1. In 1992 I published an article together with Tamim Bayoumi which concluded that “underlying shocks are significantly more idiosyncratic across EC countries than across US regions, which may indicate that the EC will find it more difficult to operate a monetary union.” This analysis was based on an analysis of macroeconomic adjustment and of determinants of that adjustment as suggested by the theory of optimum currency areas (Mundell 1961, McKinnon 1964, Kenen 1969). This theory pointed to the symmetry or asymmetry of aggregate supply and aggregate demand shocks (the drivers for business cycle fluctuations) as a major determinant of the ease of operation of that monetary arrangement. If shocks are very asymmetric, there will be the need for sharp changes in prices and quantities to restore internal and external balance. Eliminating the exchange rate as an instrument of adjustment by joining a monetary union could then be problematic. Exactly how problematic would depend on the efficiency of operation of alternative adjustment mechanisms, such as labor mobility, wage flexibility, and inter-regional fiscal transfers.
2. We used an econometric methodology to identify these aggregate supply and aggregate demand shocks. In most of our analysis we focused on supply shocks on the grounds that the demand disturbances were likely to change significantly if the countries concerned in fact formed a monetary union. In particular, asymmetric demand disturbances due to the lack of coordination of monetary policies would be eliminated, by definition, by the advent of a single currency and a single monetary policy. We found that aggregate supply disturbances were considerably less correlated across European countries than across U.S. census regions, which led us to conclude that Europe would find it more difficult to operate a monetary union.
3. Looking deeper, we were able to distinguish a “European core” made up of France, Germany, Luxembourg, the Netherlands, Belgium, and Denmark from a “European periphery” composed of the UK, Greece, Ireland, Italy, Spain and Portugal. The correlation of shocks was highest among the members of the core, where it approached levels approximating those evident among the ten census regions of the United States. This led us to conjecture that a narrow monetary union made up of the core countries could function as smoothly as the US currency and customs union, but that a wide euro area would be more problematic.

¹ This note was written at the volition of HM Treasury.

² Bayoumi, T. and Eichengreen B., (1992) “Shocking aspects of European Monetary Unification,” in Francisco Torres and Francesco Giavazzi (eds), *Adjustment and Growth in the European Monetary Union* Cambridge, Cambridge University Press.

4. Our analysis of other factors also highlighted by the theory of optimum currency areas pointed to the same broad conclusion. Labor mobility is lower in Europe than in the United States. Wage flexibility is less. Inter-state budgetary transfers are smaller and less elastic than in the U.S. federal system. All this pointed to the possibility of significant economic divergences (less cohesion) in the euro area. We were able to use the same vector autoregressions employed to identify supply and demand disturbances to analyze impulse-response functions, subjecting the equations to shocks and seeing how quickly equilibrium was then restored as a way of marshaling evidence on speed of adjustment. Doing so confirmed that adjustment to shocks affecting one region but not others was faster in the U.S. than in Europe, despite the absence of internal exchange rate flexibility in the United States. We also found, perhaps more surprisingly, that the speed of adjustment for the EU core was somewhat faster than that for the periphery, again suggesting that the members of the core would find it easiest to participate in a monetary union.

5. The principal objection to basing this inference on this kind of evidence is that these relationships are endogenous. Specifically, there is the possibility that they will be transformed by the decision to join the euro area. The creation of a single market and the transparency created by the single currency (in particular, the greater ease of comparing earnings in different European countries) will facilitate greater labor mobility over time. There is some anecdotal evidence of this already (particularly at the top and bottom ends of the labor market), but one's main impression is that movement in this direction is slow. Similarly, eliminating the exchange rate as an instrument of adjustment, by removing one easy way out, increases the perceived need for adjustment on other margins, encouraging reforms that enhance wage flexibility (Calmfors 1998). Again, there is modest anecdotal evidence of change in this direction, but again the pace is slow.

6. Another optimum-currency-area precondition that could be altered by the decision to form or join a monetary union is the symmetry of shocks. One view is that as economies integrate and trade expands, stimulated by the transparency of a single currency, national economies will specialize yet further in those industries in which they have a comparative advantage. If disturbances are industry specific, shocks will then grow more asymmetric across countries. If trade is intra-industry rather than inter-industry, however, the opposite conclusion may follow. Bayoumi and Eichengreen (1999) updates our earlier study, using an additional six years of data, and asks whether the ongoing integration of the European economy produced an increase or reduction in the asymmetry of shocks. As it turns out, there is little evidence in these time series comparisons of significant movement in either direction. A substantial number of other studies extended this analysis subsequently, updating the time period still further, and generally reached the same conclusions.

7. The most provocative statement of the view that the asymmetry of shocks is endogenous is due to Frankel and Rose (1998) and Rose (2000). These authors argue (a) that forming a monetary union produces a very significant increase in the volume of trade, and (b) that additional trade is associated with a reduction in business cycle divergences. Since EMU will lead to a significant increase in intra-EU trade, the implication follows, it will diminish divergences in business cycle conditions among the participating member states. The magnitudes suggested by the Frankel and Rose studies are large. Joining a currency union increases trade by anywhere from 60 to 200 per cent. Adopting the euro would therefore increase Britain's trade with the euro area by anywhere from 60 to 200 per cent. Even a 60 per cent increase in trade with the euro area would produce a large increase in the coherence of UK and continental European business cycles. To a considerable extent the problem of asymmetric business cycle disturbances would disappear.

8. How seriously should we take these results? Many observers, this author included, find Frankel and Rose's estimates of the effects of a common currency on trade implausibly large. In particular, most of the currency unions on the basis of whose experience these estimates are formed involve small and poor nations, which is hardly Europe's position, or Britain's. Be that as it may, there is no question of the existence of an effect: it is already evident in, *inter alia*, the increase in German trade with the EU (imports plus exports) from 27 per cent of German GDP in 1998 to 32 per cent in 2001, and in France's from 28 to 32 per cent. And there is no longer much serious dissent from the view that additional trade increases the synchronization of business cycles among the trading partners rather than reducing it.

9. Still, as Ireland's recent experience has shown, increased trade intensity by itself does not guarantee business cycle cohesion among the members of a monetary union; Irish trade has been very heavily reoriented toward the euro area, but cyclical divergences have remained pronounced. Ireland experienced a very large asymmetric shock: the combination of reform, a global high-tech boom, an English language labor force, and tax policies unusually friendly to multinationals led aggregate demand to grow much more rapidly than in Continental Europe in 1999-2001, despite the reorientation of Ireland's trade toward the Continent. (Clearly, this shock had an aggregate supply aspect too, but the aggregate demand component dominated in the last few years, which are what matter when evaluating the effects of the euro.) Thus, the point that a common currency by leading to more trade leads to more business cycle conformance should not be overstated, especially in the short run.

10. Finally there is the endogeneity of fiscal arrangements and institutions. Together with Juergen von Hagen, I have conjectured that strict enforcement of Europe's Stability and Growth Pact would create pressure for enlargement of the EU budget, so that there would be scope for transferring fiscal resources from booming to depressed member states when cyclical conditions diverged, emulating the practice in the United States and other currency areas with federal fiscal systems (von Hagen and Eichengreen 1996). While the motivation is understandable, many of us would regard the result as worrisome. The alternative would be to relax the Stability Pact. Countries could then utilize their own automatic and discretionary fiscal stabilizers to address disturbances specific to the home economy that could not be addressed by the single monetary policy. Earlier studies inspired by the theoretical literature on optimum currency areas – including my own – underplayed the importance of national (in the U.S. case, state) fiscal policies, which have more capacity to do good (as well as harm) in Europe because fiscal policy is so much more decentralized there. That the EU seems to be moving to a more relaxed application of the Stability and Growth Pact, reflecting the desire for greater national fiscal autonomy and the growing credibility of the ECB (which diminishes fears that fiscal profligacy will lead the ECB to extend an inflationary debt bailout), is all to the good from this point of view.

11. What does all this imply for the UK's decision? Further reflection and analysis suggest that the first generation of studies based on pre-EMU data, including my own, paint too pessimistic a picture of the difficulties that asymmetric shocks and slow adjustment dynamics will pose for the operation of Europe's monetary union. The optimum currency area criteria are endogenous, and over time they are likely to evolve in ways – toward more symmetric shocks, more flexible wages, more mobile labor, more fiscal flexibility – that will ease the operation of the monetary union. This does not mean that everything will be copacetic in the short run, since this evolution will take time. But the decision to join Europe's monetary union will not be easily reversed. It is not a decision, therefore, that should be taken with the short run in mind.

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ANTONIO FATÁS: THE BENEFITS AND COSTS OF CREATING A EUROPEAN FISCAL FEDERATION

October 2002

HM Treasury invited Antonio Fatas to revisit his 1998 paper 'Redistribution vs. Insurance – Does Europe Need a Fiscal Federation', with particular reference to the quotation: "... there is a very high probability that any system designed to share risk across regions or countries will generate permanent transfers. The nature of these transfers, which might go in any direction (for example, from poor to rich regions), will probably conflict with the redistributive goals of structural funds... the potential to provide additional interregional insurance by creating a European fiscal federation is modest. We find it difficult to argue that these benefits can compensate for the many problems associated with the design and implementation of a European fiscal federation." (p.192).

1. This report, written in response to a request from HM Treasury, presents my current views on the article "Does EMU Need a Fiscal Federation?" which I wrote in 1998 and was published in *Economic Policy*.
2. As my views on this issue have not changed substantially in the last three years, let me spend some time summarizing the main insights of the article before I give an update on its main arguments and results.

A. WHY I WROTE THIS ARTICLE

3. Prior to the launch of EMU, there were many concerns about the ability of EMU members to deal with asymmetric shocks (i.e. shocks that are idiosyncratic to either regions or countries). Since prices and wages are not flexible enough to compensate for the loss of exchange rates and the degree of labour mobility in Europe is very limited, there was a fear that asymmetric shocks could lead to deep regional recessions and large increases in unemployment, which could create a social burden that would be politically unacceptable to many governments.
4. In this context, the example of the US, where automatic interregional transfers take place through the federal budget was presented as an example of a tax system that helps to alleviate the costs associated with a single currency. These transfers play an insurance role that compensates for the lack of internal exchange rates. The estimates of the benefits of interregional transfers in the US are large. A fall in state income causes transfers (or reduction in taxes) that amount to between 30 and 40 per cent of the original fall in income.
5. It is very important to realize that this analysis (and this is true for my article as well) is looking at a fiscal federation only as a tool to provide interregional risk sharing (i.e. insurance). It ignores all other possible reasons to share taxes (e.g. redistribution).
6. This is important to understand my arguments below.

¹ Fatás, A. (1998) 'Redistribution vs Insurance: Does Europe Need a Fiscal Federation?', *Economic Policy* 26 (April) pp.163-203.

B. THE MAIN INSIGHTS FROM THE ARTICLE

7. My 1998 article questioned the traditional analysis of the benefits and costs of a European fiscal federation. The two main insights of the article are:

- **Insight 1. The (Insurance) benefits of a European fiscal federation would be small.**

8. According to my estimates, the (insurance) benefits of a European federal budget are much smaller than previously thought. This is for three reasons:

9. First, some of the previous estimates of the amount of interstate insurance in the case of the US overestimate the true amount of insurance by a factor of 3. This is because the original estimates measured the stabilization effect of the tax system on disposable state income and not the *true* degree of insurance. The two are equivalent only under the assumption that there is no aggregate risk in the federation.

10. When a state suffers a recession, and the fall in its tax revenues is not compensated by revenue increases coming from other states, then the federal budget will run a deficit that will need to be paid in the future by all states. As a result, the state in a recession does not benefit as much as indicated by the smoothing of disposable income and, moreover, the other states suffer because of the future tax payments.

11. I applied the same reasoning to data from countries of the European Union and found estimates of insurance potential that are very close to those for the US. A European-wide fiscal system that managed to reduce the volatility of disposable income by 30 per cent would only be providing less than 10 per cent insurance. The other two thirds would be intertemporal stabilization through counter cyclical budgets, **a tool that is still available to European countries** and will be available to future member countries of EMU.

12. Second, Europe already has national tax systems that partially insure regions from idiosyncratic risk. I found that the current national systems insure more than 50 per cent of what a European fiscal federation would.

13. Third, there is strong evidence that the potential insurance benefits of a European fiscal federation have decreased over time. In the post EMS period, because of increased correlations across countries, the potential for insurance of a European fiscal federation has been reduced. If, as a consequence of EMU, this trend persists in the future the insurance possibilities of a fiscal federation will continue to fall. This is an important finding in itself because it suggests that the perceived costs of abandoning monetary policy are much smaller than previously thought because of the reduction in national business cycles.

- **Insight 2. The implementation costs of a European fiscal federation would be very large.**

14. Even if the paragraphs above suggest that the potential benefits are small they are obviously positive (i.e. there is some amount of insurance that could be achieved by sharing national taxes). However, these benefits should be compared with the large costs of implementing such a system. Two reasons why these costs outweigh the benefits:

15. Not all countries would benefit by the same amount. If this is the case, should countries be allowed to opt out? How feasible is it to have different countries paying a different “risk premium” because they benefit more or less from a European fiscal federation?

16. Second, because we are talking about smoothing business cycles through regional (or national) transfers, we need to have a stable and agreed upon measure of what constitutes a business cycle. Suppose output goes down in a country, how do we know that this is a temporary recession (and therefore qualifies for transfers) or a medium or long-term development that will lead to permanent changes in the level or trend of output. If the latter case is identified as a cyclical fluctuation, the federation will end up producing permanent transfers that will look much more like redistribution instead of insurance. What if those transfers end up happening from poor to rich countries? (there is no reason to believe that the nature of the business cycles will lead to permanent transfers in any specific direction but this is an outcome that is as likely as any other).

17. Because of the little agreement that exists in the academic and policy literature on how to measure the business cycle, I provided some simple calculations that showed how any fiscal federation will very likely lead to large redistributive transfers, which not only are not the goal of the federation but will increase political tensions among the members of the union.

C. MY VIEWS TODAY ON THE BENEFITS AND COSTS OF A EUROPEAN FISCAL FEDERATION.

18. If anything, I think the results are more relevant today than they were in 1998. First of all, there is additional evidence that national business cycles are becoming more synchronized and therefore, the need to find mechanisms of compensation for the asymmetric evolution of national economies is, if anything, smaller than in 1998 (this is good news for the main motivation behind the single currency area – the costs of abandoning monetary policy are small). These results apply to all EU countries. The case of the UK is interesting as in fact the evidence looks much better today than it did in 1998 (the UK business cycle is closer to the business cycle of the other EMU countries today).

19. Second, I have even stronger beliefs that the costs of implementing any insurance mechanism through fiscal transfers are extremely large. As we are seeing in the current discussions on fiscal policy and the Growth and Stability Pact, measuring the cycle or adjusting the cyclicalities of macroeconomic variables is, to say the least, controversial and can lead to endless discussions on whether a country is in a recession or stuck in a low-growth situation associated to lack of structural reforms.

20. In summary the main message of my 1998 article is as valid today as it was back then. One piece of good news for EMU: the costs of abandoning monetary policy are small as national business cycles are vanishing. One piece of bad news for those who think a fiscal federation can take care of the (small) asymmetries that are still left in the Euro zone: the implementation costs are too large to compensate for the small potential benefits.

JEFFREY FRANKEL: THE UK DECISION RE EMU – IMPLICATIONS OF CURRENCY BLOCS FOR TRADE AND BUSINESS CYCLE CORRELATIONS

October 2002

HM Treasury invited Jeffrey Frankel to revisit his 1998 paper co-authored with Andrew Rose 'The Endogeneity of the Optimum Currency Area Criteria',¹ with particular reference to the quotations: "international trade patterns and international business cycle correlations are endogenous" (p. 1009) and "a country is more likely to satisfy the criteria for entry into a currency union ex post than ex ante." (p. 1024).

SUMMARY

1. Recent econometric estimates suggest that currency unions have far greater effects on trade patterns than previously believed. Since currency unions are good for trade, and trade is good for growth, that is one major argument in favor of EMU. If there were evidence that the boost to trade within EMU was likely to come in part at the expense of trade with outsiders, that would imply something stronger, for a neighbor such as the United Kingdom: that life outside EMU would get progressively less attractive in the future. But there is no such evidence, either for currency unions in general (according to Frankel-Rose) or for the first three years of EMU in particular (according to Micco, Stein and Ordoñez). Furthermore, there are the usual countervailing arguments for retaining monetary independence, particularly the famous asymmetric shocks. One possible argument for waiting is that UK trade with euroland is still increasing, probably due to lagged effects of joining the EU and the Single Market initiative. Estimates suggest that the growing trade links in turn lead to growing cyclical correlation. The implication is that the UK may better qualify for the optimum currency area criteria in the future than in the past. On the other hand, if, as a result of waiting to enter, London loses to Frankfurt its position as the leading financial center in the European time zone, that loss may not be readily recoverable in the future.

2. That the creation of a common currency could alter patterns of international trade was one of the motivations of the architects of EMU. Nevertheless, it is only relatively recently that academic researchers have found convincing evidence that this is a major effect. This note will explain what we have learned from recent research on: (1) the effect of common currencies on trade among members, (2) the further implications for long-run growth rates and cyclical correlations, and (3) the effect of common currencies on *non-members*. It concludes with: (4) thoughts on the bottom line for the United Kingdom and the prospects if it does not soon enter EMU.

(I) THE EFFECT OF COMMON CURRENCIES ON TRADE AMONG MEMBERS

3. Until relatively recently, economists had been skeptical whether a reduction in exchange rate variability gives a substantial boost to trade. This has begun to change as the result studies of bilateral trade among a large set of countries, which allow the researcher to control for such other important determinants of trade as country size, bilateral distance, common borders, and so on.²

¹ Frankel, J. and Rose, A. (1998) 'The Endogeneity of the Optimum Currency Area Criteria' *The Economic Journal* 108 (449) (July) pp. 1009-25.

² The gravity model is comprehensively explained in Frankel (1997).

4. The most important discovery was made by Andrew Rose, when he looked at a data set that included many very small countries and dependencies. He found a statistically significant effect of bilateral exchange rate variability on bilateral trade. But, beyond that, he found a large effect of common currencies on bilateral trade. Enough small countries use some other country's currency (most of them either the US dollar, French franc, pound sterling, Australian or New Zealand dollar, or South African rand) that it was possible to isolate the effect. His estimate, which by now he has replicated in various forms many times, was that a common currency triples trade among members.

5. A threefold effect is very large, and the finding was, understandably, greeted with a lot of skepticism. There are four grounds for skepticism. First, the statistical association between currency links and trade links might not be the result of causation running from currencies to trade, but might arise instead because both sorts of links are caused by a third factor, such as colonial history, remaining political links, complementarity of endowments, accidents of history and so forth. Second, one could not infer from cross-section evidence what would be the effect in real time of countries adopting a common currency. Third, the estimated effect on trade (and on income, to be discussed in the next section) just seems too big to be believable. Fourth, Rose's evidence came entirely from countries that were either small (e.g., Ireland, Panama, or African members of the CFA franc zone) or very small (e.g., Falkland Islands, Gibraltar, and Saint Helena), and so it was not clear that the estimates could be extended to larger countries. While each of these four arguments has some validity, to each there is a better response than one might expect.

6. First, regarding the time dimension, subsequent research on time series data finds that a substantial share of the tripling that Rose had estimated from the cross-section data (which is presumably the long-run effect) shows up within a few decades of a change. Using a 1948-1997 sample that includes a number of countries that left currency unions during that period, Glick and Rose (2001) find that trade among the members was twice as high in the currency union period as afterwards. This suggests that roughly two thirds of the tripling effect may be reached within three decades of a change in regime.

7. Second, regarding the possible influence of third factors, Rose has done a thorough job of controlling for common languages, colonial history, and remaining political links. The large estimated effect of a common currency remains. While it seems very possible that there are other third factors (e.g., accidents of history) that influence both currency choices and trade links, the various extensions of the original research – these robustness tests together with the time series results – reduce the force of this critique.

8. Third, regarding the surprisingly large magnitude of the estimates, it is important to take account of something else that we have learned in recent years, which is also surprising in light of all one hears about globalization. That is home country bias. A large number of studies have found that people trade with their fellow citizens far more easily than with those living in other countries. This finding emerges whether one looks at the volume of trade flows between locations, or at the ability of arbitrage to keep prices in line across locations. It holds even when one controls for the effects of distance, trade barriers, and linguistic, social and historical differences. It holds even between the US and Canada. The best-known finding is that Canadian provinces are 3 to 10 times more prone to trade with each other than with US states.³ The bias must certainly be higher for other country pairs.⁴ Similarly, studies of the ability of arbitrage to narrow price differentials find that crossing the US-Canadian border discourages trade more than does traveling the entire length of Canada,⁵ and that the barrier is even greater for other pairs of countries.⁶ What can explain these remarkable findings of home bias in quantity and price data? The difference in currencies is not an implausible explanation, given the paucity of alternative candidates.

9. Regarding the applicability of the results to large countries, we will not know for sure until enough time passes to yield a verdict on the EMU experiment. It would seem plausible that very small geographical units (the Gibaltars) are so dependent on international trade – due either to inadequate scale of the domestic market or to insufficiently diversified factors of production – that measures such as currency unions or free trade areas would have a larger pay-off for them than for larger, more self-sufficient, economies. But there are two counter arguments. First, Rose has tested whether there are any non-linearities among his currency union sample, e.g., any difference between the effects among units that are merely small and those that are very small. He found no significant difference. Second, the home country bias seems to be linear, regardless of the size of the country. That is, if two small units join together, thereby doubling the size of the economy, the ratio of trade to GDP falls – i.e., home country bias increases – as much (roughly .2, in log form) as when two large units join together. To the extent that currencies explain this, the effect does not seem to be limited to small countries.

10. Finally, we now have three years of data since EMU went into effect in January 1999. Econometricians are beginning to update the gravity estimates to see what can be learned from the record so far. Micco, Stein and Ordoñez (2002a) find that for pairs of the 12 countries that joined EMU, trade has increased by a significant 12 to 19 percent (depending whether the data set is limited to European countries, or a larger set of 22 developed countries). The magnitude is less than in the Rose studies. As they quite reasonably conclude, (p.15) “However, the effect of EMU on trade is significant, and economically important, particularly if we consider that our sample only covers the first three years of the EMU, a period in which the Euro did not even circulate.”

II. Other evidence confirms the finding. Bun, Franc and Klaasen (2002) also update gravity estimates, and find that “the euro has significantly increased trade, with an effect of 4 per cent in the first year” and a long-run effect projected to be about 40 per cent. Takata (2002, p. 11) calculates that the UK-euroland intensity of trade rose gradually in the early 1990s, and sharply in 1999-2000. (Trade intensities are more rudimentary estimates than full gravity models, but are much easier to compute and usually give similar answers regarding changes over time.) Studies with price data so far have been confirming that EMU is having an effect in the markets of member countries.⁷ It seems clear that the trade effects of monetary union are not limited to small countries.

³ McCallum (1995), Helliwell (1998), and Wei (1996).

⁴ Using the same gravity methodology, Nitsch (1998) finds that intra-national trade within European countries is about seven times as high as trade with EU partner countries of similar size and distance.

⁵ Engel and Rogers (1998).

⁶ Parsley and Wei (2000, 2001).

⁷ Looking at price data across pairs of European cities, Rogers (2001, 2002) finds evidence of convergence in the 1990s. In the European auto market, Goldberg and Verboven (2001) find gradual convergence over the period 1970-2000.

(2) THE FURTHER IMPLICATIONS FOR LONG-RUN GROWTH RATES AND CYCLICAL CORRELATIONS

12. Boosting trade is of interest primarily as a determinant of economic growth. (Non-economic motivations for encouraging trade, such as binding countries together politically, are outside the scope of this study.) There are three sorts of ways that an increase in trade among members of a group feed into the advisability of opting for a common currency.

13. The first factor has to do with the long-run determination of growth: currency unions raise openness, and openness raises real income. Frankel and Rose (2002) combine estimates of the effects of a common currency on trade and the follow-on effects of higher trade on GDP, to derive estimates of the effects of common currencies on GDP. Joining a currency union with particularly important trading partners (e.g., large and close neighbors) can have a large impact. For example, if the UK were to join EMU and thereby triple trade with euro-countries, its ratio of total trade to GDP would eventually rise an estimated .62 (from .58 to 1.2). Once the increase in trade was realized, the estimated effect would be to raise real income by 20 percent over the subsequent 20 years, quite a substantial effect, if it is believed.

14. The second and third factors have to do with the theory of optimum currency areas, which weighs the advantages of fixed exchange rates versus the advantages of floating.⁸ One factor concerns an advantage of a common currency from the viewpoint of exporters and importers, and one the advantage of monetary independence. The fact that the elimination of exchange rate uncertainty makes life easier for importers and exporters will be more important, the higher is the share of trade in GDP, even if the level of trade does not change. For this reason, McKinnon (1963) argued that a key factor determining the advisability of fixing the exchange rate is the ratio of tradable goods to GDP. One implication is that if trade among the members of the EU is increasing over time, then they will satisfy the optimum currency area criteria more strongly in the future than in the past. A related implication is that even if a country does not satisfy the optimum currency area criteria *ex ante*, if it goes ahead and joins a currency area anyway, and enough time passes to increase trade with other members substantially as a result of the common currency, then again it may satisfy the optimum currency area criteria *ex post*. Frankel and Rose (1998) call this the endogeneity of the optimum currency area criterion.

15. The last factor concerns cyclical fluctuations. What is the attraction of retaining an independent currency in the first place? The most important advantage of flexible exchange rates is to retain the ability to respond to cyclical downturns by means of monetary policy – a reduction in real interest rates, or a depreciation of the currency or both – and to cyclical booms in the opposite direction. But this advantage is less important if the domestic economy is highly correlated with the other countries in a prospective currency area (i.e., if shocks are usually “symmetric”), because the changes in monetary policy that the other member countries choose will also be appropriate for the domestic economy. But cyclical correlations are not timeless unchanging parameters. If trade among members of a currency area increases, then the cyclical correlation is likely to change as well.

16. Artis and Zhang (1995) find that most European countries’ incomes were more highly correlated with the U.S. during 1961-79, but (with the exception of the UK) became more highly correlated with Germany after joining the ERM. Frankel and Rose (1998) find on a broad cross-section of countries that when a reduction in bilateral exchange rate variability encourages bilateral trade, it also raises the bilateral cyclical correlation. That a country is more likely to be suited to join a monetary union *ex post* than *ex ante* is an implication of the cyclical correlation having gone up in the meantime, another instance of the endogeneity of the optimum currency area criteria.

⁸ Mundell (1961) coined the phrase and Tavlas (1992) surveyed the literature.

17. These findings contradict a surmise of Eichengreen (1992, pp.14-16), Bayoumi and Eichengreen (1994, pp.4-5), and Paul Krugman (1993). These authors suggest that, because a higher trade level would lead to greater specialization, it would also lead to lower synchronization of shocks.⁹ Their view that specialization works against common currencies, and that diversification of the economy works in favor of it, goes back to Kenen (1969).

18. Consistent with the Frankel and Rose (1998) findings, however, Rockoff (2000) argues that it took 150 years before the United States met the criteria for an Optimum Currency Area, asymmetric regional shocks having posed severe problems for much of its history. Kim (1997) finds that regional specialization within the United States increased in the 19th and early 20th centuries, and diminished somewhat thereafter, though remaining higher than within Europe. Clark and van Wincoop (1999) find that the lack of cyclical synchronization within Europe, relative to within the United States, is explained by the lower level of internal trade (and to a lesser extent the higher degree of sectoral specialization).

(3) THE EFFECT OF COMMON CURRENCIES ON NON-MEMBERS

19. To inform Britain's decision whether to join EMU, it is necessary to move beyond the usual debate as to whether the advantages of currency unions for their members outweigh the disadvantages. Because EMU is already an established fact, and is likely to expand, regardless what Britain does, the historical status quo is not one of the options. The relevant comparison is not what life would be like for Britain inside EMU versus the status quo. The relevant comparison is, rather, what life would be like for Britain inside versus an alternative future outside the existing EMU.

20. In this light, the most relevant among the trade issues – the subject of this submission – is the effect of the formation of a currency area on trade *between members and non-members*. The natural fear is trade-diversion: that expanded trade within the currency union (the prediction from the literature surveyed in Section 1) would come at the expense of trade with countries outside it, for whom the status quo, however satisfactory, ceases to be an option. There is an analogy with fears of trade diversion resulting from regional trading arrangements such as the European Union: that the enhanced trade among the members will come at least partly at the expense of non-members. Trade diversion is of concern for two reasons. First, in a world that breaks up into currency blocs or trade blocs, trade diversion could mean that everyone is worse off. Second, if a country watches some of its most important trading partners form a bloc, but it remains outside, then it can be damaged particularly by the formation of the bloc. In a model of trade in imperfect substitutes, the negative effect takes the form of an adverse shift in the terms of trade.

21. Do trade blocs such as the EU and currency blocs such as EMU tend to be trade-diverting? For the EU and other Free Trade Areas, the literature is large and inconclusive. Frankel (1997, p. 108-109) summarizes the early literature, as well as a welter of gravity-based estimates from the 1990s. While some estimates show trade diversion, it is at least as common to find that when European countries promote trade among themselves, they also to some extent increase their trade with outsiders. Thus I have found little evidence, overall, of a “fortress Europe” policy. The same is true of NAFTA and other free trade areas. Some of the political economy factors that give rise to regional arrangements also tend to support trade

⁹ “Theory and the experience of the US suggest that EC regions will become increasingly specialized, and that as they become more specialized they will become more vulnerable to region-specific shocks. Regions will, of course, be unable to respond with counter-cyclical monetary or exchange rate policy” (Krugman, 1993, p.260). Hughes Hallett and Piscitelli (1999) call this “the traditional view” (and add some modeling of demand-driven transmission which had otherwise been missing from this debate). The No Campaign (2002, p. 40) is among those asserting that EMU is likely to generate a degree of specialization that undermines the insulation against shocks necessary for a common currency.

liberalization more generally. Others, however, have sometimes found trade-diversion on the part of the EU and some other FTAs.

22. For currency blocs, there are only a few relevant studies. For broad currency groupings (EMS bloc / dollar bloc / yen bloc) the results are inconclusive.¹⁰ For small but genuine currency unions, Frankel and Rose (2002) emphatically reject trade diversion, a reassuring finding. For the case of European monetary integration, most studies predate EMU.

23. I only know of one team of researchers who have up-to-date estimates that can help us answer the question whether EMU has been diverting trade away from the United Kingdom since it went into operation: Micco, Stein, and Ordoñez (2002b). In their pure cross-section estimates, they find that, while EMU promotes trade among members, there is no diversion away from the UK. Indeed the estimated effect on UK-EMU trade is positive in the years 1999-2001, though not significant statistically. One might see evidence for trade-diversion from the fact that the same coefficient is estimated to be larger and statistically significant in earlier years: peaking at .5 (with a t-statistic of 4.1) in 1993, and then declining steadily in magnitude and significance until reaching an insignificant 0.2 in 2000-2001. Some unidentified factor must have been boosting trade across the channel before 1998. But the most obvious factor is precisely anticipation of possible monetary integration between the UK and the Continent. FTAs and monetary unions tend to affect trade patterns while the plans are underway, well before they formally take effect. The intra-EMU effect (independent of an EU effect) is significant from 1986. It declines a bit after 1993, perhaps in reaction to the 1992-93 crises in the Exchange Rate Mechanism, but then jumps in 1999. A likely explanation for the decline in the UK-EMU coefficient during the period 1993-2001 is the steadily diminishing odds that Britain would be a founding member. Notably, 1998 is the first year in which the positive UK-EMU effect is not statistically significant. It is hard to make a case for trade-diversion from these results.

24. Confirming the conclusion that EMU has not diverted trade away from the UK are Micco, Stein, and Ordoñez (2002b)'s estimates of "differences in differences." This technique measures how differences among bilateral trading partners changed between 1992 and 2001. The estimates for the larger set of developed countries are reported in Table 1, with the authors' kind permission. Here the boost to intra-EMU trade is estimated at 18 to 35 percent (depending on whether one uses country-pair dummies, or instead conditions on the standard gravity variables). Crucially for present purposes, the coefficient on UK-EMU trade is of a fairly low level of statistical significance, and positive in sign. There is no evidence of trade diversion.

¹⁰ Frankel and Wei (1995a, b) estimates the effects of such currency blocs on trade patterns.

Table 1: Effects of EMU on changes in trade patterns, as estimated by Micco, Stein & Ordoñez

Dependent Variable: Log of Bilateral trade	Change:1992-2001 <i>among developed countries</i>	
	Formal EMU Dummy	0.178 (11.10)***
UK-Formal EMU	0.031 (1.26)	0.115 (1.77)*
Log of GDP	2.016 (6.72)***	0.768 (87.24)***
Log of GDP per capita	-1.530 (4.85)***	0.309 (8.54)***
Free Trade Agreement	0.025 (1.17)	0.146 (2.59)***
European Union	0.037 (1.85)*	0.214 (4.20)***
Landlocked		-0.216 (5.86)***
Island		-0.050 (1.07)
Log of Distance		-0.645 (29.61)***
Surface Product		-0.004 (0.47)
Contiguity		0.470 (10.06)***
Common Language		1.125 (17.57)***
Year Dummy	Yes	Yes
Country Pair Dummy	Yes	
Observations	2310	2310
R-squared		0.93

Robust t-statistics in parentheses

* significant at 10 per cent; ** significant at 5 per cent; *** significant at 1 per cent

Source: Micco, Stein and Ordoñez (2002b)

(4) THOUGHTS ON THE BOTTOM LINE FOR THE UNITED KINGDOM

25. The first of the five tests for British entry to EMU officially laid out by Chancellor Gordon Brown includes what we have called cyclical correlation, synchronization, or symmetric shocks: “Are business cycles...compatible so that we and others could live comfortably with euro interest rates on a permanent basis?” Takata (2002) surveys ten studies of UK cyclical correlations. All ten find that the correlation between the UK and European (or German) economies has been somewhat lower than either the intra-Europe correlation or the UK-US correlation. This suggests that the UK does not currently meet the test for joining.

26. Most of those studies are based on data from the 1960s, 70s and 80s, however. Trade patterns are changing. Intra-European trade has been rising,¹¹ and with it the intra-Europe

¹¹ As documented in the gravity literature already described. Wei (1996) finds that the home bias in a typical EC member, relative to imports from other member countries, fell by half during 1982-94.

synchronization of business cycles. Angeloni and Delola (1999) find that the UK-Germany GDP correlation was sharply higher during 1993-97 than previously (though still lower than the France-Germany correlation) – perhaps as a lagged result of Britain’s entry to the European Economic Community and of the Single Market initiative.

27. The author’s feeling is that whether EMU proves ultimately beneficial or not depends largely on whether Europe happens to experience a large asymmetric shock within the next few decades. To stylize history: large global shocks happen about once a decade. If there are no major shocks in the next few decades that affect the members of euroland asymmetrically, EMU may be “home free.” By then the trade links will be strong enough that a seriously disruptive asymmetric shock is unlikely. In the meantime, the members can derive benefits such as those discussed in sections 1 and 2 above.

28. What does this imply for the UK, if it rejects or delays entry? If there were evidence of trade diversion from monetary union, it would suggest that Britain would be worse off remaining outside of EMU than it would be if EMU had never happened. Fortunately, there is no such evidence. The Frankel and Rose (2002) estimates of currency union effects reject the hypothesis of trade-diversion in general. The updated-to-2001 results of Micco, Stein, and Ordoñez (2002b) find the same with respect to UK trade in particular. If Britain finds the short-term disadvantages of joining to outweigh the advantages, there is no reason to consider the current situation unsustainable. This leaves aside the important issue of whether the business of the City might be permanently damaged by the rise of a rival financial center on the continent, if Britain stays out.

29. Meanwhile, UK trade links with euroland have risen over the last few decades anyway, and may still be rising. The reason may be the effects of EU membership, which develop with long lags.¹² More precisely, the events that may be driving the gradual shift in trade patterns are as follows: the UK joining the European Economic Community in 1973, the expansion of the membership of the EEC 9 to the 12 in 1981-86, the Single Market initiative which came into effect in 1992, and the further expansion to the EU 15 in 1995. Along with trade links, cyclical correlations rise. The implication is that the UK may meet the optimum currency area criterion for joining the euro-12 better in the future than in the past. Another factor working in favor of waiting is the opportunity to learn by watching the experiment unfold in euroland (and – more unpredictably – among any additional joiners).

30. A final consideration has to do with popular opinion and the famous democratic deficit. After a country gives up monetary independence, in the event of a shock the difference between a moderate recession and a serious crisis could well be whether it is possible to explain to the public that this is what they signed up for and to make the case for difficult short-term adjustment. This will be far easier to do if the public voted to join the monetary union in the first place. If the British public does not yet feel sufficiently “European” to want to join EMU voluntarily, it may be unwise for political elites to force it through at this stage.

¹² The lags appear in the gravity estimates, e.g., Eichengreen and Irwin (1998).

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