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DISCUSSION PAPER

How has the European Monetary Integration Process Contributed to Regional Financial Market Integration?

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How has the European Monetary Integration Process Contributed to Regional Financial Market Integration?

ABSTRACT

European monetary integration was one element in the process of financial market integration but by far not the only one. The paper traces the development of financial markets and systems in Europe from the beginnings of the euromarkets in the 1950s over early exchange rate arrangements and the establishment of the Single Market program to the launch of the euro and its effects. Not surprisingly, the contribution of the common currency to financial integration has been the stronger the more national markets have in common and the greater the importance of currency risk as discriminating factor. It has been most successful in the interbank market for very short-term unsecured deposits and in markets for bonds and derivatives, and played a lesser role for collateralised instruments and equities where differences in institutions and systems as well as cultural aspects impose stronger impediments. Experience has shown that in the process of financial integration a common currency is no substitute for the removal of institutional barriers and other obstacles hindering the free move of financial institutions and services. And, it cannot compensate for the specific information about individuals, firms and products required in some market segments that is a lasting impediment to full integration.

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1. Introduction

European financial market integration has been a stepwise process which is far from completed. Monetary integration has been one important element and driving force in this process, but, as this paper will demonstrate, by far not the only one. Others include the emergence of the euromarkets in the 1950s and 1960s, regional exchange-rate arrangements, individual countries' financial liberalisation efforts and the EU Single Market program. Beside, not all influences were policy induced. At times, market forces played a decisive role.

Discussions of the benefits of financial integration tend to emphasise the link between financial development and economic growth. In general, in the literature, there are two competing views of the role of finance for economic development (Thiel 2001). Neo-classical approaches consider economic growth exclusively driven by input factors and technological progress. In this view, the role of finance is merely an instrumental one in the process of capital accumulation. By contrast, endogenous growth models stress the role of entrepreneurship and innovation. In their world finance may play a more active role in providing direct incentives for research and rent-seeking.

The issue of whether financial development is a pre-condition for economic development or simply emerging in parallel with it is still an open question. Another, related one is whether finance matters only in the early stages of economic development or for the growth of mature economies, too. High growth rates in the United States, the country with the most advanced financial system in many respects, and weaker economic performance in European countries, seem to confirm the latter view. But, widening the horizon to other regions and, for example, taking into account the economic dynamism of Asian countries with backward and underdeveloped financial systems in recent history is blurring this impression.

Empirical studies focus on two linkages between financial development and economic growth. One is the rising efficiency of capital accumulation and its feedback effect on financial markets via the incentives this creates for further financial development. Another is the contribution of financial intermediation to raising the savings rate and thereby investment. Some evidence has been found that the relationship between growth and financial development works in two ways: Higher economic growth may lead to higher financial market activity which then facilitates the creation and expansion of financial institutions. The latter, in turn, is accompanied by rising information efforts that allow investment projects and

portfolio allocations to be undertaken more efficiently which, again, becomes an important stimulus for further growth. By contrast, inefficiencies in the financial system and borrowing constraints can reduce the incentives for capital accumulation and investment ending up in lower economic activity (London Economics 2002).

None of the described linkages between finance and growth requires financial integration beyond national borders. Usually, growth theories are neglecting the international dimension of finance. When it is discussed, it is in the context of capital account liberalisation (Arteta et al. 2001, Edison et al. 2002). The degree of openness of the whole spectrum of domestic financial markets and services, the adjustment of financial institutions and systems to a competitive international environment and to international standards and practices, and the presence of domestic banks in international markets are growth factors which are widely disregarded in the growth literature. On the other hand, research on the welfare gains of a convergence of financial systems and markets in the context of the European Single Market program tends to equate financial growth with financial integration. The latter is considered as beneficial due to the effects it has on competition. Financial integration is expected to increase competitive pressures on exchanges and market places thereby reducing transaction costs and raising the incentives for technological innovations. In addition, an increased competition among financial intermediaries is thought to result in lower brokerage and transaction fees and a greater variety of financial products. Other potential benefits are lower costs due to scale economies, an improved price transparency, an increased market depth and liquidity and a greater availability of venture capital.

But, these outcomes of the integration process are far from certain. Increasing competition may produce undesirable results if it becomes ruinous ending up in markets dominated by a small number of oligopolistic players. The removal of national barriers may lead to mergers and alliances creating mega financial institutions with doubtful market performance. And, instead of prices becoming more transparent, a rising number of new market entrants and growing market segmentation and product differentiation may lead to an increasing range of prices for similar products and rising volatility and trading volumes induced by the search processes of more market participants who, confronted with an ever growing flood of data and analyst results, become less and less informed.

Experience in Europe has demonstrated that the benefits of financial integration are greater for some countries than for others. There were – and still are – considerable differences between EU member states concerning financial systems, structures and institutions, and the question is on which level adjustment and convergence are taking place. The common assumption implicitly or explicitly made in many regional integration debates is that financial systems adjust to the highest existing standard. But, of course, other scenarios can be imagined as well. An increasing inward orientation in the region may shift the focus from an overall strive for excellence towards winning market share in lesser developed systems, and the need for compromise in the policy dialogue on integration may water down principles of efficiency.

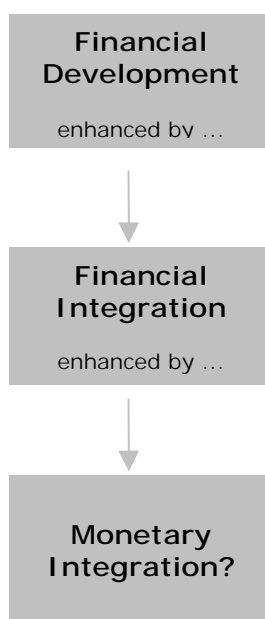
The important point here is that the role of monetary integration in different scenarios may differ, too. In highly efficient financial systems it may facilitate integration and provide a further stimulus for the convergence of rules, institutions and markets. In a less developed environment it is probably creating more problems than contributing to solve the existing ones. Apparently, the analysis of monetary integration as a motor of financial integration in Europe has to proceed in two steps (Figure 1). The first is to look at the way in which financial development was enhanced (or hindered) by the process of financial integration, and the second to study the importance attached to monetary integration in this process.

The paper is divided into five sections. Section 2 will turn to the changes financial markets in Europe experienced in recent years. What were the early beginnings of financial growth and integration and how did the European financial landscape look like before monetary union? What kind of linkages existed between financial centres and what kind of synergies were already exploited? How did the region-wide network interconnecting financial hubs and spokes in Europe emerge? Who were the main actors in the markets and how and why did their composition change in time? How did the integration process influence the international competitiveness of European markets? What kind of international ties had been established before? How was the influence of official exchange-rate arrangements on the financial integration process? Which adjustments took place in various market segments as EMU approached anticipating the new regime?

Then, Section 3 will deal with the changes monetary union itself brought about. As will be demonstrated, so far, the impact of the introduction of a common currency and the elimination

of exchange risk on financial integration is a limited one. The most immediate effect was on money markets, although even in this case the degree of integration differs between market segments. Other spectacular influences were on bond markets and derivatives trading. The effects on other market segments such as those for equity and retail finance were less marked as they were on payment and settlement systems. And, they were hardly visible for institutional arrangements and issues like legal systems, tax regimes and corporate governance practices where the adjustment of structures and rules is evolving painfully slowly. In some respects, the final outcome of the integration process, and the way it is affected by monetary union, is still an open question. This holds in particular for the hierarchy of financial centres in Europe where monetary unification intensified the competition between places in and outside the euro area.

Figure 1:



In Section 4, the lessons to be learned from the effects of EMU on regional financial integration are discussed. This has two aspects. The first is EU enlargement. To what extent will monetary integration contribute to greater financial integration into the Single Market of future member states in Central and Eastern Europe and where are the main problems? What are the prospects for the existing members Denmark, Sweden and the UK, that are not participating in the common currency? The second aspect concerns monetary unification in other parts of the world and in particular in East Asia. Given the European experience, does monetary unification appear an indispensable prerequisite for financial integration in East

Asia? In which respects and to what extent could it facilitate or speed up the integration process? What does the European example tell about foreseeable obstacles to the monetary integration process in Asia? Section 5 will draw some tentative conclusions about policy implications in the light of these discussions.

2. Early integration patterns

The end of World War II left Europe as a scattered landscape both in real and financial terms. The European capital markets were virtually nonexistent. London's supremacy was broken and New York had become the most important financial centre in the world, a position the city already had held once between the end of the First World War and the stock market crash in 1929. Finances were in disarray. In many parts of the region, banks' functions were widely reduced compared to pre-war circumstances and many international financial relations were broken down. With the exception of the Swiss franc currencies were not convertible and no markets for foreign exchange existed. Cross-border payments were settled through the European Payments Union, an intra-European clearing mechanism that had been established in 1950 and lasted until restoration of convertibility for major European currencies in 1958 (Kawai and Takagi 2002).

European and international economic policy making in those years focused on reconstructing European economies. European economic integration started with the European Coal and Steel Community in 1951 which was succeeded by the European Economic Community (EEC) established by the Treaty of Rome in 1957. Monetary and financial integration was no explicit aim in these first postwar initiatives. After the creation of the Bretton Woods system European currencies were embedded in the worldwide system of fixed exchange rates with little incentives for an own active exchange rate policy. Cross-border capital mobility remained widely restricted. But, it was as early as in the late 1950s and early 1960s that the first signs of rising financial activities across national borders began to show in the region. These were the years when the first euromarkets for currencies and bonds emerged.

- **The Euromarkets**

There are several explanations for the beginnings of the euromarkets. The most common relates to the restraints on foreign portfolio investment in the United States (the interest equalization tax), and on US bank lending abroad, in the 1960s. But, the roots of the markets

date back to the late 1950s, to the rising US balance-of-payments deficit and the widespread use of the US dollar as a vehicle currency in international transactions, the growth in European business after the formation of the Common Market in 1958 and the sterling crisis in Britain in 1957. The latter led to a tightening of British exchange restrictions that prevented London-based banks from financing third-country trade in sterling and the authorities encouraged the use of dollars instead (Dufey and Giddy 1994).

The first euromarkets were external markets for foreign currency loans and deposits that had their beginnings in London in the late 1950s. At that time, local corporations, subsidiaries of non-European firms, central banks and other financial institutions began to deposit dollars accumulated outside the United States with banks in London that would retain them as dollars and pay dollar interest rates. The most prominent examples include the financial arm of the Soviet Union and other East-bloc states that in this way circumvented placing their holdings in the US (Walter and Smith 2000). Since those deposits were beyond the reach of US regulation no liquidity reserves had to be held against them and, although related to US deposit rates, this relation was a loose one encouraging interest arbitrage by US banks.

Markets for other currencies soon followed. As an equivalent of reference rates in the national markets banks, securities houses and investors used the London-Interbank Offered Rate, LIBOR, as primary benchmark to determine the cost of borrowing. LIBOR was fixed for 12 currencies, and still is for euro-out currencies, daily for maturities of one week and from one month to 12 months inclusive by the British Bankers' Association (BBA). There is a panel of Contributor Banks selected by the BBA on the basis of market activity and perceived market reputation with each bank contributing the rate at which it could borrow funds in the interbank market (Kettell 2000).¹

A eurocurrency is a currency deposited in a bank outside its country of origin. Examples are US dollar deposits outside the United States or pound sterling deposits outside the UK. Eurocurrencies and euromarkets are not restricted to the European area. An example are euroyen traded outside Japan. The euromarkets introduced two principles that changed the world of finance. One is the principle of revolving credit facility: Although long commitment

¹ With the introduction of the euro, a new benchmark sponsored by the European Banking Federation was introduced, the EURIBOR. This is the rate at which euro interbank term deposits within the euro zone are offered by one prime bank to another. There is also a new overnight reference rate which is the Euro Overnight Index Average or EONIA.

periods exist in the markets, in general, lenders are unwilling to carry the interest rate risk normally associated with those kinds of engagements. Thus, typically, for short-term borrowing a line of credit is pre-arranged determining the maximum amount that can be borrowed within the commitment period, which is usually one year but renewable, with drawdowns carrying interest charges based on current short-term market rates that are adjusted every 1, 3 or 6 months. Medium-term lending is usually done in the form of a revolving loan facility. In this case, commitment periods are up to 15 years or longer – the majority of loans is in the range of 3 to 7 years – but the pricing period rarely exceeds 6 months. In all these cases, the maturity date or commitment period matters only as a decision point determining the date at which the bank has to decide about the renewal of the contract or an alternative use of funds (Dufey and Giddy 1994).

The second principle is loan syndication in large-scale, medium-term financing. In syndication it is not an individual bank but a group of knowledgeable and well-capitalised institutions that provide the entire loan and then sell portions of their share of the credits to a wide range of smaller or less knowledgeable banks. Again, the aim is risk reduction. In contrast to traditional bank business, in the euromarkets lenders come from many nations and instead of doing a thorough credit analysis and monitoring, and control of issuers from countries with diverse regulations and accounting norms, the banks reduce risks by taking a smaller amount of more diversified assets and relying on the monitoring role of the lead banks.

Beside eurocurrency markets soon markets for other financial instruments like eurobonds, eurocommercial paper and euroequities emerged. The most important one is the eurobond market centered in London. This is a market for long-term debt instruments issued through international syndicates of financial intermediaries and sold outside the countries of the currency in which the bonds are denominated. The equivalent to loan syndication in this market is underwriting, which is an agreement of a group of financial institutions guaranteeing to subscribe to a set proportion of a new issue at a specified price in order to ensure the issue's full subscription. The first bonds were eurodollar bonds which from 1963 to 1973 were issued exclusively in Europe. After the US abolished the interest equalization tax and restrictions on capital movements out of the country in 1973, dollar bonds could be issued simultaneously in New York and Europe (Kindleberger 1993) and a true international market emerged giving a strong impetus to London's revival as world financial centre. These days,

about 60 per cent of international bonds in the primary market, and 70 per cent in the secondary market, worldwide are traded in London (IFSL 2001).

The rise of the euromarkets and the concomitant growth of international business in London from the 1950s on compensated the City for a loss of home business as a result of the decline of the British economy after the war. But, above all, it served to reestablish its leading role in the world of finance. While before 1914, 30 foreign banks had been established in London, and another 19 came between the wars, in 1969, 87 more arrived. In the 1970s, 183 institutions followed, and still another 115 in the first half of the 1980s, so that all in all, between 1914 and 1985 the number of foreign financial firms in the City grew more than fourteen fold (Hall 1998). But, despite this revival, during these years, the place remained a remarkably conservative one rarely inclined to financial and technological innovation (Hamilton 1986). European banks were dominating the scene. To cite one observer:

"Prior to 1983 the American commercial and investment banks had paid little attention to London, regarding it as the 'Siberia of investment banking, a place to banish those the firm wished to forget.' There was hardly any need to be in London. Cross-border business in equities and corporate finance was limited and entry to the Stock Exchange was barred. The Eurobond market had moved from New York to London in the 1960s but the participants formed their own tight community and for many years the investment banks did not seek to build more rounded businesses on top of them". (Augar 2000: 70)

With the establishment of the euromarkets came the first pan-European institutions. For example, the emergence of an international bond market led to the creation of two international clearers – Euroclear and Cedel. For interbank transactions the SWIFT (Society for Worldwide Interbank Financial Communication) network was established. SWIFT is a private international telecommunications service for member banks and qualified participants. It provides a network for a large range of interbank communications including money transfers, letters of credit and many more. SWIFT was founded in 1973 as a cooperative nonprofit organisation with headquarters in Brussels. In the beginning, it had 239 member banks from 15 countries. Operation started in May 1977 with 15 banks in Belgium, France and Britain. Meanwhile, there are over 7000 members from 194 countries.

The euromarkets can be regarded as the first step towards concentration and integration of financial activities in the European region that goes beyond the traditional foreign funding of domestic financial needs known in European trade at least since the Middle Ages. This process was entirely market-driven. Monetary authorities rather distrusted the markets as a potential source of instability and a source of financial liquidity outside their control. In their reliance on special techniques of risk sharing and risk reduction the euromarkets showed financial institutions the way how to act in an unfamiliar international environment coping with different systems and standards and, at the same time, made them become aware of the benefits of a market without borders. In this they created a climate in which future ideas of a convergence of rules and regulations, and the establishment of common institutions, would thrive.

- **Early exchange-rate arrangements**

Another influence contributing to this climate of building common markets and institutions in the realm of European finance was exchange rate policy. Since the early beginnings the EEC members had defended the exchange rates of their currencies vis-à-vis the US dollar within the Bretton Woods system within margins of ± 0.75 per cent, a rule that was abandoned only with the worldwide agreement to widen bands in 1971.

With the breakdown of the Bretton Woods system the need for a common European approach to fixed exchange rates became more urgent. Since 1969 there had been plans for a stepwise reduction of fluctuation margins in Europe (Werner Plan), and in 1972, six European countries – the Benelux countries, France, Germany and Italy – agreed to establish the "snake in the tunnel", a system of narrow fluctuation limits within the wider bands of the still existing Bretton Woods system. They were followed by Denmark, Ireland and the United Kingdom within a couple of months. In 1993, when the Bretton Woods system collapsed, the European countries decided to stick to the "snake" but their success was not a lasting one. Of the system's initial eight members only five were left in the so-called "mini snake" consisting of the Benelux countries, Denmark and Germany when it was replaced by the newly established European Monetary System (EMS) in 1979 (Table 1).

Table 1: Chronology of exchange-rate arrangements in Europe

Year	Event	Details
- 1972	Begin of the "snake in the tunnel".	Fluctuation margins of 2.25% between member currencies and 4.5% against the US dollar.
- 1979	EMS start.	Establishment of the ECU.
- 1990	EMU: begin of the first stage.	Removal of capital controls,
- 1993		widening of fluctuation margins to 15%.
- 1994		Establishment of EMI,
- 1998		fixing of irreversible bilateral exchange rates, establishment of the ECB.
- 1999	Begin of the third stage.	Introduction of the euro,
- 2002		national coins and notes are no longer legal currency.
And for the future:		
- 2004	New entrants' participation in EMS II.	The new members will be Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia.
- 2006	Ecofin examines Maastricht criteria of the new member states.	
- 2007	Earliest possible introduction of the euro as unit of account in new member states.	
- 2008	Issue of euro coins and notes in new member states.	

The new system differed fundamentally from its predecessor. The intervention mechanism was much more complex consisting of two components. One was a bilateral grid of parities for the member currencies specifying central rates for each exchange rate as well as the maximum range of fluctuations. The other was a basket of member currencies, the ECU, which served as a unit of account and parallel currency to the system and was intended to become a single currency substituting for the national monies of the European Community later on.

The EMS did not last either. It disintegrated in two stages after the details of full European monetary union were decided in the Maastricht Treaty in December 1991 inviting currency traders to test the new agreement in several waves of speculation. The first wave came in summer and autumn 1992 with the result that Britain and Italy left the system. The second wave occurred in the following year with devastating attacks on the French franc. After this,

the EMS was formally preserved in a wide-band version of ± 15 per cent until the start of monetary union in 1999 (Copeland 2000).

Like the euromarkets European exchange rate policy contributed to creating the first building blocks of a common monetary and financial culture in Europe that paved the way for further integration and harmonisation. It was the first policy-driven effort, and the currency crises on its way demonstrated that the markets did not always agree with, or believe in, the results. Over the years, there was a growing understanding that, given transaction volumes and the capacities to find leeways and leakages for circumvention, in order to be efficient, rules governing financial markets must either completely rule out market interference or leave a wide degree of flexibility and scope for market forces to find their own way. In Europe, in the realm of monetary policy, with the introduction of the common currency the first approach was chosen. In financial market development, for a long while the second one appeared more promising with the pendulum swinging back in the other direction only recently.

- **Big Bang ripples**

Liberalisation of European financial markets started with deregulation in Britain in the early 1980s as a by-product of a series of economic reforms aimed at reducing state influence. In 1983, the London Stock Exchange (LSE) abolished membership restrictions and open itself to competition abandoning the separation between jobbers (dealing in stocks held on their own books) and brokers (buying and selling stocks solely on clients' orders), and removing the system of fixed commissions. The consequences were far-reaching and in their dimensions hardly foreseen by anyone involved in the process:

In preparation of the "Big Bang", which came into force in October 1986, mainland European and, in particular, American and Japanese financial institutions strongly expanded their presence in London. This put considerable competitive pressures on the 225 broking and jobbing firms belonging to the LSE in 1986 and led to a wave of mergers and acquisitions. Very few survived (Table 2). Within a year of the Big Bang announcement eighteen of the top twenty brokers and all the major jobbers had made a merger (Hall 1998).

The Big Bang changed the face of the City. Before, the total number of people in stockbroking was around 10,000 and individual firms in London comprised 200 or 300 people at most. With a staff of 1300 James Capel was by far the largest of them. As a result of mergers, broking firms increased to 600 or 700 and became part of large organisations employing thousands of staff (Augar 2000). All invested heavily in office space. One of the most disputed outcomes of this development was the transformation of the Docklands. The City, which over centuries had been the "square mile" was losing shape. Between 1985 and 1989 alone 2.6 million square feet of office space were completed in the Docklands and another 16.5 million square feet in the City itself (Hall 1998).

Table 2: Big Bang acquisitions

Brokers and jobbers	Acquiring firm
Laing & Cruickshank	Credit Lyonnais
Grievson Grant	Kleinwort Benson
de Zoete & Bevan	Barclays
Wedd Durlacher Mordaunt*	"
Pinchin Denny*	Morgan Grenfell
Pember & Boyle	"
Philips & Drew	Union Bank of Switzerland
Moulsdale*	"
Smith Brothers*	Smith New Court
Scott Goff, Layton & Co	"
Giles & Cresswell*	"
Savory Milln	Swiss Bank Corporation
Rowe & Pitman	S.G. Warburg & Co
Akroyd & Smithers*	"
Mullens	"
L. Messel	Shearson Lehman
Vickers da Costa	Citicorp
Scrimgeour Kemp Gee	"
Fielding Newson Smith	National Westminster Bank
County Bisgood*	"
Wood Mackenzie	"
W. Greenwell	Midland Bank/Samuel Montagu
James Capel	Hongkong and Shanghai Bank
Hoare Govett	Security Pacific
Henderson Crosthwaite (Far East)	Barings

* Jobber.

Source: Financial Times.

Market culture changed as well. American ways of doing business gradually took over ringing in the slow "death of gentlemanly capitalism" (Augar 2000). Until the Big Bang the City had been a highly stratified system characterised by dense social networks and recruitments of 'old boys' from private schools and Oxbridge. With the arrival of a growing number of foreign

financial institutions market culture became a mixture of old English and new, largely, American rites. The more "cut-throat" habits prevailing in New York dealing rooms now began to show up in London as well and traders were more and more explicitly encouraged to demonstrate their willingness to take risks and "move for the kill" (Crang 1998). At the same time, the market became more innovative and ready to compete with others on an international level.

Soon other European markets began to sense the winds of change, too. State intervention became widely discredited. Extensive reforms were undertaken in France, Germany, Italy and Switzerland. In Germany, the first of several successive Financial Market Promotion Laws was launched.² But, the outstanding example is France, a country where government traditionally played a much larger role than elsewhere through direct state ownership of financial institutions. Between 1984 and 1986, in France an entirely new market culture developed. Controls were lifted, new financial instruments created and new markets, in particular for futures trading, established (Allen and Gale 2001a).

Table 3: European banks and markets in comparison*

	Banking Assets/GDP	Equity Market Capitalisation/GDP
UK	259	140
France	151	36
Germany	152	24
<i>in comparison:</i>		
• US	53	82
• Japan	150	71

* As of 1993, in per cent.

Source: Allen and Gale (2001b), Table 3.

² This first law brought among other things the admission of financial innovations such as floating rate notes, zero bonds, dual-currency issues and certificates of deposits. The reforms of the second included the outlawing of insider trading, tightening of share disclosure requirements and the establishment of a centralised regulatory body for Germany's securities markets. The third of February 1998, aimed at increasing access to venture capital for small and medium-sized unlisted firms, facilitating to raise capital for listed companies and widening the range of investment instruments for private savings. The fourth law which came into force in July 2001 includes measures to tighten financial market regulation, improve investor protection and fight against money laundering (Reszat forthcoming).

Table 4: Mergers and acquisitions in European banking¹

Countries	1989-90		1991-92		1993-94		1995-96 ²	
	Number	Value	Number	Value	Number	Value	Number	Value
Belgium	11	0.0	22	1.0	18	0.6	12	0.4
Finland	6	0.4	51	0.9	16	1.0	4	0.8
France	52	2.7	133	2.4	71	0.5	43	3.2
Germany	19	1.1	71	3.5	83	1.9	27	0.7
Italy	41	8.2	122	5.3	105	6.1	65	3.0
Netherlands	12	10.9	20	0.1	13	0.1	7	0.8
Norway	12	0.4	23	0.1	24	0.2	2	0.4
Spain	30	4.0	76	4.3	44	4.5	26	2.1
Sweden	10	2.0	38	1.1	23	0.4	8	0.1
Switzerland	31	0.5	47	0.4	59	3.9	14	0.7
United Kingdom	86	6.4	71	7.5	40	3.3	28	21.7
<i>By comparison:</i>								
Japan	8	31.2	22	0.0	8	2.2	17	33.8
United States	1,501	37.8	1,354	56.8	1,477	55.3	1,176	82.5

1 Value in billions of US dollars.

2 As of April 4, 1996.

Source: Folkerts-Landau et al. (1997), Table 59.

The Big Bang was only the beginning of a Europe-wide financial consolidation – a process that is still going on. However, while in the UK reform largely concentrated on the stock market, on the Continent the focus was more on banking systems. This is explained by the fundamental differences existing among European banks and stock exchanges in their respective importance for national economies (Gros and Lannoo 2000). For example, in bank-based systems like France and Germany exchanges played – and still play – a minor role in financing economic activity. In market-based systems their importance is high. The outstanding example here is the UK where the ratio of market capitalisation to GDP exceeding by far one hundred per cent is also reflecting London's importance as an international financial centre. (Table 3).

In the 1980s, European countries were widely considered as overbanked with bank loans providing the primary source of corporate finance. Efficiency in banking was low and of less concern than bank stability and solvency. In many cases, the relation between banks and government was close and protective barriers were high (Walter and Smith 2000). Pressures for restructuring and consolidation were heightened by the fact that, during the 1980s, many banks – not only in Europe – experienced large losses from a mismatch of assets and

liabilities and from non-performing domestic and international loans, and many weaker ones sought to merge with stronger institutions.

Consolidation was a stepwise process. When the Second Banking Directive, aimed at creating a single market for banking services in the EU, was implemented in 1993, the first big wave of mergers and acquisitions in European banking was already completed (Table 4). Nevertheless, severe weaknesses remained. Despite a number of privatisations in some countries, public influence on banking was reduced only gradually. Beside, EU financial markets remained overbanked. In 2001, the average population per branch in the EU was still 1,960 with wide discrepancies between countries ranging from 4,390 in Sweden to 1,008 in Spain (Table 5).

Table 5: Banks in Europe¹

Country	Number of banks	Population per branch
Austria ²	836	1,500
Belgium	112	1,785
Finland ³	369	2,630
France ⁴	1,050	2,375
Germany	2,526	1,450
Greece ²	61	4,305
Ireland	88	n.a.
Italy ⁴	843	2,125
Luxembourg ²	212	1,395
Netherlands ²	561	2,315
Portugal ⁴	212	1,820
Spain	366	1,008
Denmark	203	2,550
Sweden	149	4,390
UK ²	452	3,854
EU	8,022	1,960

1 As of 2001.

2 In 1999.

3 In 1998.

4 In 2000.

Source: Bundesverband deutscher Banken 2002.

With the Big Bang the composition of actors in European markets changed opening up a new international dimension: For the first time in the financial history of Europe, institutions from other world regions began to compete with European ones in their domestic field on a large scale and on an equal footing. Beside, there was a rising awareness of the financial services sector as motor of economic growth and source of income and employment at a time when traditional industries in manufacturing were in decline. As a consequence, a fierce

competition for financial business and the location of financial institutions started between European cities. This rose widespread expectations to markedly alter the financial landscape of Europe ending up in a state of concentration of financial activities in fewer places that would further promote the integration process.

- **Financial centres and networks**

Competition between European financial centres is not an entirely new phenomenon. From the first financial places in Italy and France in the Middle Ages to the rise of Bruges, Antwerp and Amsterdam later on European financial activities had been largely concentrated on the Continent. London's importance as a centre of European merchant banking started comparably late in the 17th and 18th centuries in course of political and economic turbulences in mainland Europe. The City's international role strengthened with the rise of the British Empire. But, even at the height of its predominance London was never without rivals and Paris, Frankfurt and other places were constantly challenging its predominance (Reszat 2002b).

On the other hand, there had always been financial linkages between European cities. Prior to the invention of the electric telegraph in the 19th century information flows were slow and depending on the prevailing transport system, and price differences in various locations offered huge arbitrage opportunities. Communication improved considerably with the first submarine cables – not only within Europe but also worldwide³ - and, later on, with the first telephone lines. The telephone facilitated all kinds of financial and foreign exchange transactions. By the 1950s "it could be said with very little exaggeration that it was almost as easy to transact business with a bank in a foreign centre as with one just across the road." (Einzig 1970: 239)

But the biggest boost to the rise of financial trades, networks and relations was the beginnings of electronic dealing. Talks about the IT revolution of the 1990s make easily forget that the roots of electronic dealing and communication in the financial services industry date back to the 1970s and 1980s. At the beginning of the 1970s videotext technique allowed firms such as Reuters, Extel and Datastream in Europe, and Telerate and Quotron in the US, to install terminals on dealers' desks displaying prices fed in by banks and brokers. Simultaneously,

³ London became linked to Paris by cable in 1851 and to New York in 1866. See Reszat (2000a) and the references provided there.

another "revolution" took place in stock markets where in 1971 the National Association of Securities Dealers installed NASDAQ, an electronic dealing system consisting of 20,000 miles of leased telephone lines connecting dealers with a central computing system. When in London the London International Financial Futures Exchange (LIFFE) was founded in 1982, although keeping the open-outcry system for floor trading, it became a leader among European exchanges with its high degree of automation in quotation and settlement (OECD 2001).

Electronic trading and automation paved the way for the first linkages and strategic alliances between exchanges both on a regional and global scale. One step in this direction was the establishment of a trading link between the Singapore International Monetary Exchange (SIMEX) and the Chicago Mercantile Exchange (CME) in 1984. This was the first of several networks and systems of an increasingly globalised automated securities trading and a forerunner of Globex, the system jointly developed by the CME and Reuters which allowed to electronically match buy and sell orders from computer terminals around the world. The first fully electronic exchange in Europe was the Swiss Options and Financial Futures Exchange (SOFFEX) founded in 1988.

Strategic alliances and mergers of stock exchanges became the first visible signs of the changing financial landscape in Europe. But, competition between European financial centres remained not restricted to the securities markets. Slowly it started to comprise a wide range of financial services and many facets of the financial business and related industries. Beside trying to influence costs and efficiency considerations cities efforts' to attract financial institutions increasingly focused on other aspects of the world of finance, including the building of infrastructure, the enhancement of amenities of central business districts and even the promotion of lavish cultural programs. Symbols of financial success became more and more important in the rivalry of places, and one new sign of cities' prosperity and importance in this context was the "skyline": In the early 1980s, before London and Frankfurt began to compete openly for having the highest buildings, none of the big European centres had an accumulation of structures worth calling a skyline (Reszat 2000b). However, since then, buildings have become ever higher and architects' ambitions ever bolder (Appendix, Figure 1).

Since the 1990s, European places managed to increase their importance as financial hubs and spokes in the world system, a process owing much to their exchanges' strategic alliances and mergers in search to exploit scale economies and synergies (Appendix, Figure 2). Cooperation included the adoption of a common trading system or implementation of a common system to access multiple trading systems (McAndrews and Stefanadis 2002). In 1998, the Swiss SOFFEX merged with Deutsche Terminbörse to become EUREX, Europe's biggest derivatives market measured by the number of contracts traded. These days, outside of Switzerland and Germany, EUREX has access points in Amsterdam, Chicago, New York, Helsinki, London, Madrid, Paris, Hong Kong and Tokyo. In March 2000, the bourses of Paris, Amsterdam and Brussels merged to form Euronext which then won the battle for LIFFE in October 2001. But there were also failures as the examples of the hostile takeover bid for the London Stock Exchange by OM Gruppen of Sweden, and the equally unsuccessful plan to create iX by merging the London and Frankfurt stock exchanges, demonstrated.

Efforts are no longer restricted to the traditional big centres. In January 1998, the exchanges in Stockholm and Copenhagen signed a cooperation agreement to form NOREX, a common Nordic equity market later joined by Oslo and Helsinki. Beside, new electronic markets emerged. Examples are Virt-X, a joint venture of the London-based electronic market Tradepoint and the Swiss Stock Exchange, and Jiway, a retail-focused centre launched by OM Gruppen and Morgan Stanley Dean Witter in 2000 as an online cross-border exchange for retail investors.⁴

In addition, international links widened. A tendency emerged to build worldwide alliances by establishing markets in various countries with local partners using a common technology. For instance, this strategy is applied by NASDAQ, which so far, beside NASDAQ Europe, also established NASDAQ Japan and NASDAQ Canada. A German variant in collaboration with Dresdner Bank and Commerzbank is in preparation. Another example is the Globex Alliance which in Europe includes Euronext-liffe and derivatives exchanges in Italy, Portugal and Spain.

Despite considerable competitive pressures, London managed to stay the Number One both on a regional and international level. The City still attracts the largest part of international

⁴ Jiway was bought out by OM in September 2001 in an attempt to cut costs by integrating its exchange operations with those of the OM London Exchange. Beside, there are plans of the London Stock Exchange and OM to form a new derivatives exchange, a joint venture called EDX London.

financial business in Europe. Compared to its rivals in Paris and Frankfurt, it has by far the highest number of foreign banks and the highest share of cross-border lending, foreign equities turnover, foreign exchange and OTC derivatives dealing, and the highest incomes in marine and aviation insurance, and it is the most important centre of international bond trading, both in primary and secondary markets (Table 6).

Table 6: European financial markets in comparison*

	UK	France	Germany	US	Japan
Number of foreign banks	481	187	242	287	92
Cross-border bank lending (March 2001)	20	6	9	10	11
Foreign equities turnover (2000)	48	-	6	36	-
Foreign exchange dealing (April 2001)	31	3	5	16	9
Derivatives turnover					
- exchange-traded (2000)	8	8	15	43	5
- OTC (April 2001)	36	9	13	18	3
Insurance net premium income (1998)					
- marine	19	5	12	13	13
- aviation	31	14	3	23	3
International bonds (2001)					
- primary market	60	...	...	...	...
- secondary market	70	...	...	...	...

* If not stated otherwise as percentage share of world total.

Source: IFSL.

But, the figures also demonstrate that this position is not unchallenged. These days, other European places, too, attract a notable share of foreign institutions and activities, and in some markets are even taking the lead. For example, this holds for exchange-traded derivatives which are primarily traded in Frankfurt and – not shown in the table – for the insurance industry as a whole. The latter is largely concentrated in Munich where total premium income is exceeding those in New York and London, the Number Two and Three respectively.

Financial places in Europe built up the first linkages and networks long before official programs of financial and monetary integration came into force and managed to keep their position as hubs and spokes of regional and international financial activity or even widen it in recent years. So far, expectations that increasing competition would leave Europe's financial landscape reduced to fewer centres did not materialise. On the contrary, technological progress allowed smaller places to start competing with the big ones on an equal footing.

Rivalry between financial centres enhanced financial integration but not through their decline in number but through the creation of strategic alliances and mergers beyond borders. The Single Market program sped up these developments.

- **The Single Market program**

The Big Bang in the UK rose the appetite of other countries for a Europe-wide financial liberalisation which was reflected in the EU Single Market program for financial services. There had been official European integration efforts before. For example, the internal market in banking had been established with the first banking directive of 1977 which enabled banks in the European Community to establish branches or subsidiaries in member countries. But, after the Single Market Act of 1985, there was widespread agreement that more progress was needed. A borderless market with unrestricted movement of people, goods and services would require further liberalisation of financial flows and payments and the convergence of financial market legislation to fully exploit the benefits of integration. The aim was to make both individuals and firms take advantage of deeper and more liquid financial markets, and a wider range of financial instruments available for risk management and portfolio diversification, and of more intense competition between financial institutions ensuring better prices and higher efficiency. In addition, banks, securities firms and other financial intermediaries should be opened up more opportunities to realise scale economies.

Full liberalisation of capital flows in the EU was reached in mid-1990. The integration process that followed was based on four principles: The harmonisation of standards, home-country control and supervision, the provision of a single European passport for financial institutions, and mutual recognition.

In the Single Market framework financial services are divided along functional lines focusing on the banking, securities and brokerage sectors. Four key directives set the rules for EU-wide harmonisation in these sectors (Gros and Lannoo 2000):

- The second banking directive of December 1989 that came into force in 1993 introduced the single EU banking licence allowing credit institutions authorized to do business in one member state full access to other EU markets.

- The investment services directive of 1993 defines the modalities for the free provision of services by brokers and securities markets.
- The third life and non-life directives of 1992 were established to coordinate laws, regulations and administrative provisions relating to the various parts of the insurance industry and set minimum rules for the qualitative and quantitative investment of assets.

In addition, there were directives defining more specific subjects such as the solvency and own funds directives implementing the rules of the 1988 Basle Accord that called for minimum capital standards for internationally operating banks. The capital adequacy directive (CAD) of 1993 set solvency ratios for investment firms and banks' trading books. These two marked the beginnings of EU financial regulation. The CAD was amended in 1998 (CAD II) in order to take into account new international developments in the supervision of trading activities of banks and investment firms based on the control of market exposures through internal models or Value-at-Risk (VAR) approaches.

In 1998, the EU launched the Financial Services Action Plan (FSAP) in an attempt to capitalise on the introduction of the euro. The plan includes 43 new laws establishing a unified set of rules for investors and consumers under a strict timetable. The aim is to complete the legislative framework for the internal market in financial services and to eliminate remaining deficits in the substance of EU legislation.

The various components of the FSAP can be divided into four broad areas. The first is the creation of a single European wholesale market for financial products and services. This includes the issues of EU-wide capital raising, of stock market listings and prospectuses, and regular reporting. Other measures in this group are the establishment of a common legal framework for integrated securities and derivatives markets and of a single set of financial statements for listed companies, the containment of systemic risk in securities, the creation of a secure and transparent environment for cross-border restructuring, including takeovers, and of a single market for investors (Table 7). There is also a pension funds directive and a new UCITS directive replacing the one that had been established in 1985 setting minimum standards for a single licence for unit trusts throughout the community.

Table 7: FSAP components

Objective	Subject areas
1. Single wholesale market	<ul style="list-style-type: none"> - EU-wide capital rising - Common legal framework for integrated securities and derivatives markets - Uniform financial statements for listed companies - Containing systemic risk in securities settlement - Cross-border corporate restructuring - Single market for investors ...
2. Open and secure retail markets	<ul style="list-style-type: none"> - distance selling of financial services - financial service providers' duty of information towards purchasers - cross border payments - e-commerce policy for financial services ...
3. Prudential rules and supervision	<ul style="list-style-type: none"> - reorganisation and winding-up of insurance undertakings and banks - disclosure of financial instruments - supervision of financial conglomerates ...
4. Wider conditions for an optimal single financial market	<ul style="list-style-type: none"> - harmonisation of tax regulations - creation of an efficient and transparent legal system of corporate governance ...

A second group of components aims at creating open and secure retail markets. This consists of nine measures such as those on the distant selling of financial services, on clear and comprehensible information for purchasers, on insurance intermediaries, a single market for payments, and e-commerce policy for financial services. The third area deals with prudential rules and supervision including the re-organisation and winding up of insurance undertakings and banks, the disclosure of financial instruments and the supervision of financial conglomerates. The last group contains issues of wider conditions for an optimal single financial market such as harmonisation of tax regulations or the creation of an efficient and transparent legal system of corporate governance (Deutsche Bank Research 2002).

Under the EU timetable, by the end of 2003, the new laws to create a single capital market must be in place and by 2005 national rules for other financial services such as insurance and pensions must be completed. At first view, the progress reached so far is impressive. In mid-2002, about 58 per cent of actions planned under the FSAP were already completed successfully and in 33 per cent of all cases at least some progress has been made. But, these

outcomes cannot hide the fact that in qualitative terms there have been minor improvements and mostly on issues the Commission was able to decide on its own without involving other EU institutions. There has been little advance on politically sensitive issues where the outcomes have to be negotiated between Commission, Council and European Parliament, and the agreement of rules on the taxation of savings incomes of January 2003, for which the first proposal had been tabled in 1989, can be regarded as milestone.

Financial integration in Europe is far from complete, and in cases where rules are established the compromises found in the policy dialogue are often criticised as watering down principles of efficiency. One example is the investment services directive ruling share trading in the EU. The directive, which was approved in November 2002, allows banks to bypass stock exchanges and trade directly with investors – a practice called internalisation. Before, this was only possible in Germany and the UK. But, according to the directive, investment banks will have to disclose prices of those trades to the market before they are executed. The risk of triggering reactions of rival institutions might prevent them from trading at all – which would be a change for the worse defying the purpose of the directive.

A perhaps even more striking example is the prospectus directive agreed in November 2002. Aimed at making it easier for companies to raise funds Europe-wide by allowing prospectuses approved by national authorities to be used across the EU it has at least two drawbacks: First, for bond issues worth less than €50,000, companies will not be able to choose between regulators in the home country, those in countries where the securities are listed and those where the offer is made. One example may illustrate the consequences:

Since the majority of international bonds are traded in London, British regulators are widely considered to be more competent in this field than others. But, under the new rules, an issuer outside the UK will have to have its prospectus approved by the authorities of its home country who are less familiar with the matter. The directive searches to prevent a "race to the bottom" in banning issuers to shop around for easy approvals. But, at the same time, the measure will hinder smaller issuers to raise their reputation by turning to tougher regulators. As a rule, there is no national regulator with experience of the full range of financial instruments in Europe. Until the end of 2002, London's Financial Services Authority has never approved a prospectus for Pfandbriefe, Spain's regulator never a medium-term note and Greek and Portuguese ones never a securitised bond (Huhne 2002). Since about 70 per cent of

bonds issued are in denominations below €50,000, the rule will impose considerable impediments to efforts to diversify risk across the EU. Besides, it will restrict existing practices in Europe's most integrated markets such as eurobonds and derivatives.

A related point widely criticised is the decision to request only a simplified prospect from companies selling securities to investors who buy more than €50,000 worth in private placements. The argument is that these investors do not need the same level of protection as smaller ones. But, this way of dividing wholesale and retail business is neglecting the fact that large institutional investors are often buying less than €50,000-worth securities. Again, the opportunity to stimulate cross-border investment by adequately facilitating the process seems largely missed.

All in all, national barriers to reform in the EU are still high. The wish list is long containing access to portable European pension schemes for citizens working across the Union, the removal of local marketing and administrative restrictions on EU investment funds (UCITS), balanced business rules for investment firms marketing their products in multiple EU states, or the abandonment of inconsistent national tax treatments of pension funds. Further, there are calls for a more efficient approach to financial regulation. One important point is the creation of a single national regulatory authority in each member state covering all financial services and consolidating the various national supervisory authorities to facilitate consistent implementation and enforcement of European regulations. While for the conduct of monetary policy a single institution, the European Central Bank, has been established, no comparable provision has been made for the creation of common institutions to supervise the financial sector. There are debates on whether the EU would actually need a decentralised structure similar to the European system of central banks, or even a geographically integrated European regulation and supervision, or whether the present Lamfalussy approach (Lamfalussy Group 2001), as vague as it may be on implementation, will suffice. But, there are few doubts that the current practice of about 40 public bodies in the European Union dealing with securities markets regulation and supervision has to be reformed.

There are also critics who hint at the drawbacks of the whole approach of the FSAP referring to the gap between the broad political commitment to financial reform and integration in the EU and the pace of progress at the lower level at which individual measures have to be adopted. Still the main difficulties result from the different stages of financial market

development in the 15 member states including different values, conventions and business cultures that are hard to harmonise. Long-established structures and traditions and national interests largely explain why, in practice, governments as well as market operators, supervisors and regulators in some countries resist reform more than in others.

According to a study by the European Commission, a single financial market would add 1.1 per cent to EU growth over the next decade and lower the cost of capital for companies by up to 0.5 per cent (London Economics 2002). But, this and other scenarios are based on the assumption that the current framework will improve, and not markedly worsen, business conditions in financial services. However, in the financial industry itself fears about the damage that can be done by inappropriate or excessive regulation in the harmonisation process are widespread. For example, there have been complaints about the low number of financial services specialists involved in the reform process both at EU institutions and in member countries. Regulation bears a constant risk of stifling innovation and entrepreneurial spirit that is the higher the less rules and practices correspond to financial market realities. The envisaged long-term benefits of the Single Market program may well be reduced, or even turned into massive disadvantages, if those fears materialise worsening market performance and endangering the international competitiveness of European financial places and institutions.

3. The effects of EMU

The issue to which extent the Single Market program will contribute, and has already contributed, to financial development in member countries and to European financial integration cannot be separated from the effects the introduction of the euro itself had on financial markets, systems and institutions.

There are several measures of financial integration (Adam et al. 2002). The most common indicators are based on price and return data. Their main advantages are broad availability and a clear-cut interpretation founded in the logic of the law of one price: In financially integrated markets with perfectly mobile capital any difference in prices for equal financial instruments is eliminated by arbitrage instantaneously. Persisting differences are generally attributed to legal barriers and institutional impediments preventing capital from freely flowing between countries.

Other possible measures of financial integration are quantity-based indicators. Although the rationale behind their use is less obvious there is some interpretation derived from portfolio theory. Accordingly, borrowers and investors face a range of financial instruments with varying risks and returns enabling them to optimise portfolios by diversification. A change in the risk or return of one instrument will necessarily alter the portfolio composition in course of re-optimisation resulting in an overall adjustment of markets. In equilibrium, any deviation from optimal diversification implies the existence of market imperfections and barriers to integration. Quantity-based indicators are most easily constructed for stock data allowing to infer investors' portfolio composition and then confront it with an efficient benchmark portfolio.

In reality, both kinds of indicators are not available for the whole range of European financial instruments and many constructions have drawbacks with respect to reliability and economic meaning. This is one reason why, in addition or instead, scholars tend to focus directly on institutions such as the legal system, the tax system or corporate governance arrangements. Financial structures are complex and vary considerably from country to country. Systematic long-term information across countries on some important items is missing at all, such as non-quoted shares and venture capital, or firms' internal financing which, for instance, in Germany accounts for over 50 per cent of the investment of non-financial corporations (Thiel 2001). Nonetheless, evidence can be found at least for some changes – or lack of change.

- **Markets**

Before the launch of the common currency, the most obvious and immediate effect observers expected was on foreign exchange markets. In January 1999, foreign exchange trading in euro replaced that in 12 national currencies. There was widespread agreement that this would considerably reduce market volumes. But, there were also voices expecting rather a constant or even rising foreign exchange turnover. Those pointed to the inevitable shifts in international portfolios whose direct and indirect effects would induce further trading and stimulate market activity, and to the uncertainties among dealers and financial institutions facing this unique historic experiment which would result in ever new rounds of search, learning and adjustment processes (Reszat 1998a).

The case is still ambiguous. According to BIS statistics, daily estimated foreign exchange turnover worldwide declined from \$1.49 trillion in 1998 to \$1.21 trillion in 2001. But, the data are not very reliable. The BIS survey allows only a momentary glimpse at a market which is permanently in motion and where actors, amounts, and types of transactions can vary considerably from month to month. The survey is conducted in April every three years by central banks and monetary authorities of countries with large and medium-sized foreign exchange markets under BIS auspices. Aware of the fleeting nature of the results, the BIS asks the countries' representatives to characterise turnover in their respective market in the month the survey is conducted as well as in the preceding six months – which is not necessarily of much help either (Reszat 1998b). Thus, when observers claim that trading volumes have not fallen at all – although they may have been five to ten per cent higher without EMU (Persaud 2001) – there are few reasons to doubt their impression. According to informal estimates of market participants in several foreign exchange centres the euro's role in the markets resembles that of the German mark in several respects: its share in foreign exchange trading, the tightness of spreads, its volatility vis-à-vis other major currencies and its role as an anchor currency (Galati and Tsatsaronis 2001).

With the euro came the European System of Central Banks (ESCB) and a common monetary policy and money market in Europe. In the interbank market, during the first weeks after its introduction, spreads across national markets in the euro zone declined rapidly indicating that banks had started to manage their liquidity more centrally operating in a single market area. A two-tier market developed with larger banks trading directly with each other across borders and smaller institutions operating at the national level.

In Europe, the interbank money market consists of unsecured deposits, short-term repos, in which short-term liquidity is exchanged against collateral, and foreign currency swaps in which future payments in one currency are exchanged for payment in another currency. In 1999, unsecured deposits accounted for 53 per cent of the market, repos for 24 per cent and currency swaps for 23 per cent. A breakdown by maturity shows that in overnight transactions deposits played by far the biggest role with over 70 per cent market share while for longer maturities repos and swaps have a greater importance as they provide greater security (Santillán et al. 2000).

With the launch of the euro the share of currency swaps declined markedly. At first glance somewhat surprisingly, integration advanced most rapidly in the riskiest market segment, the unsecured deposit market. Its share rose from 48 to 53 per cent. But, at closer inspection it turns out that most of this change occurred in the overnight market. For longer maturities, the share of repos rose while that of deposits even declined. Nevertheless, participants agreed that the repo market did not become as integrated as the unsecured market. Conditions for repos still show a diverging pattern across euro area countries. One reason is the costs of managing the collateral involved. There are differences with respect to the reduction of risk achieved by the cash lender, the opportunity cost incurred by the collateral lender (i.e. the cash borrower) and the cost of cross-border management of the collateral borne by both parties such as settlement, marking to market, coupon treatments or legal arrangements. Other factors leading to an ongoing preference for deals in domestic assets include national investment guidelines limiting holdings of foreign securities, differences in tax treatments of bonds and an uneven distribution of collateral throughout the euro area.

In securities markets, too, integration patterns differ. In the market for short-term securities such as Treasury bills, commercial paper (CP) issued by corporations, and bank certificates of deposits (CDs) adjustment was comparably slow with a strong remaining domestic orientation. One explanation is the traditional focus of money market funds on domestic retail markets. Another is lack of infrastructure and a harmonised trading environment which is reflected in the segmentation of clearing and settlement systems, differences in fiscal treatment and a lack of uniform legal documentation.

There was a shift between public and private issues. After the introduction of the euro privately issued securities overtook the short-term government paper market. The latter slowed down in reaction to reduced government deficits in many euro area countries and Treasuries' efforts to lengthen average maturities of liabilities in order to take advantage of lower interest rates. At the same time, private issues increased markedly, but the markets remained strongly fragmented: Throughout the euro area the supply of CDs and CP is not standardised and largely tailored to domestic investors' needs. Before EMU, in Europe these instruments were rarely used except in countries where CP issuance is part of business relations between banks and corporations serving as close substitutes to other forms of short-term funding such as credit lines. In general, only very big internationally operating firms issued securitised money market instruments to finance short-term operations. The recent

change is partly explained by the direct influence of the euro on firms' financial environment and a growing attractiveness of the euro market for non-resident issuers, in parts it is the result of rising mergers and acquisitions that to some extent were financed by CPs.

At the other end of the maturity spectrum, with the introduction of the euro the second-largest market worldwide for medium- and long-term bonds emerged in the region. European bond markets, too, were long dominated by the government sector. As a rule, in contrast to the US, only few large firms with high ratings were issuing corporate bonds. This changed in recent years and meanwhile non-government securities have overtaken government securities as the larger market segment. One explanation, again, is the development of public finances in Europe and elsewhere. In recent years, many governments have made substantial progress in budget consolidation. In the euro area, this tendency was reinforced by commitment to the Maastricht Treaty, and the Stability and Growth Pact of 1998, calling for a reduction of government debt levels to 60 per cent of GDP and limiting fiscal deficits to 3 per cent of GDP.

On the other hand, the euro opened up new opportunities to corporations, financial institutions and other non-government borrowers (Table 8). Typically, the market in non-sterling European currencies was dominated by banks – in particular German banks – which remained the largest issuers after the introduction of the common currency. But, nonbank corporations showed the highest dynamism more than doubling their share of outstanding euro-denominated securities between 1995 and 2000.

One form of finance of growing importance that emerged as monetary union approached is collateralised debt. Traditionally, this kind of instruments which include asset-backed securities (ABS), one of the most dynamic markets in the US financial system for almost 30 years, played a negligible role in Europe. Explanations are the fragmentation of national markets, regulation and taxation barriers, and the absence of large institutional investors in search of attractive asset classes (Walter and Smith 2000). The exception is the Pfandbrief market which in recent years has become the biggest segment of the euro-denominated private bond market (Mastroeni 2001). Originated in Germany from where it spread to other European countries this is a market in bonds backed by mortgages or local government loans and usually issued by state-controlled savings banks and mortgage institutions. Pfandbrief debt, which in bond market statistics is counted as part of the corporate bond sector, is rated

highly and combines low levels of risk with comparably high returns. The market achieved its current predominant status not least as a result of the introduction of the Jumbo Pfandbrief in 1995 with a minimum issuance volume of €500 million. End of 2000, with business worth more than €1,000 billion, the Pfandbrief market exceeded the total amount of sovereign debt outstanding of France, Germany and Italy combined (Walter and Smith 2000).

Table 8: Shifts in euro non-government securities markets¹

Instruments/institutions	1995	2000
Corporations	8.2	17.7
Financial institutions	57.0	53.6
Commercial banks	49.6	44.7
Other	7.4	8.9
Collateralised debt		
ABS	...	...
Pfandbriefe	18.6	19.6
of which: Jumbos	1.2	8.8
Government-sponsored enterprises	11.8	5.8
Supranationals	4.5	3.4
Total (in trillions of US dollars)	3.4	4.0

¹ Percentage of outstanding non-government securities, end of period.

Source: Study Group on Fixed Income Markets 2001, Table 2.

Concerning the composition of market participants, activity in non-government securities markets in the euro area still largely concentrates on non-resident issuers. End of 2000, they accounted for 15.8 per cent of the outstanding stock of issues denominated in euro with the largest group being UK borrowers, followed by those from the US. One explanation is that most continental European firms so far lack credit ratings, a situation that is changing slowly.

The replacement of national currencies opened up new opportunities on the demand side, too. Institutional investors such as pension funds and insurance companies, and other financial institutions facing restrictions on their investments in foreign currency instruments, suddenly faced a much wider choice of assets available. In particular, French and German institutional investors became a driving force in the market with German institutions already strongly increasing their purchases of euro-denominated securities in 1998, ahead of the formal introduction of the euro (Galati and Tsatsaronis 2001). Their presence is not only considerably adding to market liquidity but, due to the peculiarities in investor behaviour, also contributing to market stability. In general, institutional investors are following relatively

passive asset management strategies. They tend to have longer investment horizons than other market participants and are trading positions less often or hold them until maturity.

The launch of the euro made it necessary to find a euro-denominated benchmark replacing benchmarks in the legacy currencies. The obvious solution, a unified market for government paper in the euro area, did not exist. The alternative, one country assuming benchmark status did not exist either because no individual government's securities offered the depth and range of issuance required to assume benchmark status across all maturities. Instead, a benchmark yield curve emerged made up of more than one issuer with German bunds at the 10-year maturity, France in the mid-range between five to seven years, and again at 15 years, and a group of countries including France, Greece, Italy and Spain competing for very long maturities up to 30 years.

What makes benchmark status so attractive to governments – and not only to governments as various efforts of private borrowers to mimic government issuance programs demonstrate – is, above all, borrowing cost. Markets for benchmark securities are characterised by low risks, a most efficient functioning and a high degree of liquidity making fund raising comparably cheap. Government debt is special in many respects. It is considered to be essentially free of the risk of default. Trading is facilitated by the often large amount of debt outstanding and the fungibility of issues. Large borrowing needs and a long life enable governments to offer a wider range of maturities than many other borrowers which, in turn, facilitates the construction of yield curves. And, as a rule, there exist well-developed repo and derivatives markets for government securities allowing market participants to take short and long positions that reflect their expectations of future interest rate movements.

In addition, securities with benchmark status provide a couple of positive externalities. They serve as benchmarks for pricing and quoting yields on other securities, and as hedging instruments, and they are the most common form of collateral in financial markets. Investors tend to choose them as "safe havens" during periods of financial turmoil. In addition, government securities markets' infrastructure, including the legal and regulatory framework, trade execution arrangements and clearing and settlement systems, are considered to enhance the development of non-government markets which is one reason why governments with a history of financial surpluses such as Hong Kong, Norway and Singapore were issuing debt even at times when it was unneeded (Study Group on Fixed Income Markets 2001).

Benchmark considerations were also one explanation for the strong growth of derivatives markets since 1999. Trading volumes in euro-denominated bond futures increased dramatically with liquidity at first almost exclusively centred on German bund contracts indicating the instrument's wide use as hedging vehicle for all euro-denominated issuance (Santillán et al. 2000). Beside, benchmark aspects were also the reason for the rise of another market segment: interest rate swaps. Up to the late 1990s, dealers routinely hedged positions in non-government securities with government bonds and related derivatives taking advantage of the usually stable relationship between yields in both markets. But then a number of events highlighted the risks of this strategy. One was the near-collapse of Long-Term Capital Management (LTCM) in September 1998. Another was occasional squeezes in German government bond futures contracts. Those and other events demonstrated that the features accounting for government bonds' uniqueness – quality and liquidity – may cause their prices and those of other credit products to move out of sync, in particular during periods of financial turmoil. This reinforced the search for new hedging vehicles and made market participants increasingly turn to derivative products to construct yield curves. One obvious solution was interest rate swaps.

In principle, an interest rate swap is a contractual agreement between two counterparties to exchange a fixed rate instrument for a floating rate instrument. No principal amount is changing hands. Instead, basically, a series of payments is calculated by applying a fixed interest rate to a notional principal amount, and another stream of payments using a floating rate of interest, and then both are exchanged. The pricing of swaps is typically based on LIBOR, and for euro-denominated instruments on EURIBOR. Swaps are used by a wide range of financial intermediaries and corporations, government agencies and sovereign states for a variety of reasons. Those include the reduction of funding costs, the hedging of interest rate exposures and the creation of types of assets not obtainable otherwise.

Between 1998 and 2000 the interest rate swap market expanded by 34 per cent in notional terms to \$48.8 trillion (Study Group on Fixed Income Markets 2001). In the euro area average daily transactions grew by 72 per cent in the second quarter of 1999 compared to the fourth quarter 1998. Bid-ask spreads narrowed to between one and two basis points and the average transaction size increased to €50 million with amounts of €5 billion being no longer exceptional (Santillán et al. 2000).

The emergence of swaps as benchmarks added a new element of credit risk. Usually, benchmark government debt has a triple-A credit rating. In December 2002, Germany caught the headlines when its status as benchmark in the eurozone debt market came under threat after leading rating agencies expressed concerns about the country's fiscal position. By contrast, banks in the LIBOR contributor panels are mostly rated double A. This can be an advantage: Swap rates tend to move more closely with prices of other credit products, including during periods of financial turmoil.

Another advantage is the absence of an underlying asset. There are no limits to entering into swap contracts, and reverse price movements due to demand and supply imbalances are rare (Study Group on Fixed Income Markets 2001). But, there are also disadvantages that help explain why, so far, government securities have not lost their dominance. Debt issued by industrial country governments is still among the most liquid instruments. As a consequence, transaction costs for hedging with government securities are often lower than those associated with other hedges, in particular over shorter periods where the risk of widening spreads between government and non-government securities (credit spread risk) is low. Besides, swaps have a credit risk in that a counterparty may default at the end of the agreement.

The introduction of the euro is not the only explanation for the recent increasing interest in swaps. Observers note a general shift to off-balance-sheet instruments that is in particular reflected in the use of EONIA swaps which provide an opportunity to reduce all short-term interest rate risks to an overnight basis. In addition, since swaps spare capital and do not consume large amounts of credit limits they are more and more used for funding (Santillán et al. 2000). Besides, their development cannot be seen detached from the influence of digital and telecommunications technologies on markets in the second half of the 1990s (Study Group on Fixed Income Markets 2001).

Another market segment strongly growing since the late 1990s is credit derivatives (Kiff and Morrow 2000). Originated in the early 1990s, in 1997, the total global credit derivatives market had been \$180 billion. In 2001, it was over \$1 trillion with London and New York as the main centres of activity (Financial Services Authority 2002). In June 2002, the market was worth \$1.6 trillion, a 44 per cent increase from the end of 2001. The most common form of credit derivative is the credit default swap, a contract which enables one party to buy

protection against the risk of default of an asset paying a fee or premium for the cover until a credit event occurs or – if this does not happen – until maturity. Credit events include bankruptcy, failure to pay interest or debt and restructuring of obligations, but the documentation of these instruments, and of what counts as a credit event, is still fraught with uncertainties. In this market, banks are the main sellers of protection, but there is a growing involvement of corporations and, in particular, insurance companies (Financial Services Authority 2002).

The success of credit derivatives is largely explained by the fact that in recent years financial market participants in general have increasingly become aware of the need to take both market risks and credit risks into account. Again, the euro is but one reason for this development. The disappearance of currency risk in the euro area drew the attention to other risk features with the result that investors put more emphasis on the characteristics of individual borrowers rather than nationality. Other events focusing attention on credit risks were the financial crises in emerging markets, the terrorist attacks in the US and bankruptcies of high-profile corporations such as Enron and WorldCom.

While bond and derivatives trading showed strong integration tendencies since the late 1990s, other markets seemed less affected by the launch of the euro. This holds in particular for equities. The contribution of the common currency to the process of consolidation that undeniably is under way among European stock exchanges appears a rather modest one. Fragmentation across national lines remained high. Each country still has its own legal and regulatory apparatus and the number of cross-country alliances is still small. As a consequence, institutions and arrangements required to execute and settle stock trades are replicated numerous times, trades are still mainly conducted among local investors, and trading volumes and liquidity for individual stocks are low. Trade execution fees are much higher than, for example, in the US thereby reducing the ability of European exchanges to attract listings from other parts of the world (Goldberg et al. 2002).

One effect of the euro is that, even before its introduction, it heightened overall awareness of the opportunities of cross-border trading in the region giving stock exchanges greater incentive to expand across national boundaries thereby contributing to the first signs of emergence of an equity culture across Europe. But, impediments remain high (McAndrews and Stefanadis 2002). One is legal and regulatory differences. Those include listing

requirements, accounting rules and tax treatment with the latter not only referring to different taxes but also to mechanisms for tax collection and double-taxation treaties. Another is the home-country bias investors show due to information costs associated with international trading. Cultural differences and language barriers make it still difficult and expensive to obtain information on foreign companies and developments and, although its introduction eliminated some intra-European currency risk and simplified cross-country comparisons of corporate data, the euro is but one factor in a vast variety of influences determining demand and supply in stock markets.

Another impediment is the fragmentation of clearing and settlement systems. What makes cross-border transactions in Europe so expensive is that national markets have their own securities depositories and settlement systems intimately connected to the national payment infrastructures (Schmiedel et al. 2002). There are estimates that clearing and settlement costs for transactions in Europe are nine times higher than in the US, and may be up to forty-six times higher for cross-border trades. Consolidation is under way, albeit slowly. In recent years, Cedel and Deutsche Börse Clearing merged to form Clearstream. Sicovam, the Paris settlement system merged with Euroclear, which was then joined by CIK and Necigef, the central securities depositories of Belgium and the Netherlands, and in London the CCP, a central counterparty for stocks, has formed as a joint initiative by the London Stock Exchange, the London Clearing House and London's settlement house, Crest. The latter, in turn, merged with Euroclear, and (as of January 2003) there is an imminent merger of the London Clearing House with Paris-based Clearnet, 80 per cent owned by Euroclear.

In principle, there are two competing approaches in Europe to reforming clearing and settlement. One is directed at achieving economies of scale by vertically integrating trading, clearing and settlement services as in Clearstream. The other is the attempt to integrate domestic trading, clearing and settlement systems in a process of horizontal consolidation, an approach chosen by the Euroclear Group. But, despite these initiatives, clearing and settlement in Europe remains fragmented. This holds in particular for equities settlement, where varying market practices, technical requirements, fiscal procedures and legal environments make hinder cross-border consolidation.

In reaction to the euro there were major changes in the way shares are traded. Months before the introduction of the common currency, institutional investors, investment banks and asset

managers started to disband country desks and reorganised their equity and trading operations on an area-wide basis focusing on industrial sectors instead (Galati and Tsatsaronis 2001). The idea was that in eliminating currency risk the euro would further accelerate the process of European economic integration which – together with the unified monetary policy stance through the creation of the Eurosystem and an increasing cohesion of fiscal policies through the provisions of the Maastricht Treaty – would make economic conditions become more synchronised across countries thereby diminishing the relative importance of country-specific influences on share prices.

In a sense, those expectations are more and more becoming self-fulfilling. As cross-border equity trading grows, trading infrastructures within Europe become increasingly linked, and the results of analyst reports and high-quality securities research are more widely circulated pricing mechanisms are converging. Of growing importance in this process are practices such as block trading and portfolio insurance. Block trading was introduced in the UK after the Big Bang in order to accommodate institutional investors that sought to build up large positions in European stocks without causing market prices to rise, and spread to other European markets subsequently. In recent years, a special variant emerged that further sped up price convergence: accelerated trades. Those are coordinated actions of hundreds of traders of big brokerages designed to build momentum selling millions of shares within hours to large numbers of international institutional investors.

Practices such as block trading and portfolio insurance are but two facets of a growing presence and influence of both international firms and investors from outside Europe. In the past, European stock exchanges differed significantly in their interest and ability to attract foreign listings and on the other hand, with few exceptions, investing in European shares appeared not very attractive from outside. In some exchanges, foreign listings did not exist at all, in others such as Germany the number of foreign listed companies was higher than the domestic, but trading volumes were low. In the UK, the value of trading in foreign equity is traditionally high. In 1998, it accounted for 93 per cent of all foreign trading in the EU reflecting the City's competitive strength (Gros and Lannoo 2000). The advent of the euro has increased both competition between European exchanges for foreign listings and the awareness of investors from outside Europe of their growing attractiveness.

A wholly distinct source of equity finance that has gained growing importance in Europe since the late 1990s is private equity. This is equity investment made through "private placements" with sources of capital coming from private equity investment funds or limited partnerships and investments directly undertaken by banks and other sophisticated investors, including informal arrangements involving wealthy individuals. Funds are provided to finance start-ups as business angels, to engage in traditional venture capital investments or finance leveraged buyouts or certain real estate investments. The concept of private equity finance was developed in the US, and so far – attracted among other influences by the prospects of the euro – the European market is still dominated by US investors. But, as two authors put it with a glance at the future of European venture capital: "The important thing is not who does the work to establish a risk capital market in Europe but that a market gets established. This is under way." (Walter and Smith 2000: 121)

- **Banks**

Another sector where the influence of the euro was felt is banking. In the beginning, aspirations had been high. With the advent of the common currency, the banking sector was expected to become far more efficient. Monetary integration would allow financial institutions to exploit economies of scale from at least two sources. One is geographic widening of business across Europe, the other growth by mergers and acquisitions. Both were said to bring bank profitability closer to the levels prevailing in the US. But, both did not materialise in the expected way.

Banking structures in Europe differ from those in other parts of the world (Bundesverband deutscher Banken 2002). End of 2001, there were about 8,000 banks in the EU. In the euro area, the majority of banks is small. End of 1999, around 80 per cent had assets worth €1 billion or less. Among them, the biggest numbers of banks are found in France, Germany, Italy, the Netherlands and Spain. There are only 21 big banks with total assets worth €100 billion or more, 10 of which are located in Germany, another 6 in France, 2 in Belgium and one in Austria, Italy and Spain respectively.

Table 9: Examples of cross-border penetration of banks in the euro area

Country of origin	France		Germany		Italy		Netherlands		Spain	
Host country	1998	2001	1998	2001	1998	2001	1998	2001	1998	2001
Belgium	7	10	6	7	1		6	8	3	2
Finland	1	1		2						
France			10	14	5	6	3	4	9	7
Germany	10	17			5	5	7	8	2	1
Greece	4	4	2	2	1	1	2	2		
Ireland	2	5	1	3			3	4	2	2
Italy	10	13	11	12			5	7	4	3
Luxembourg	7	6	36	30	9	7				1
Netherlands	3	4	4	8	1	1				
Austria	1	1	3	6	1	1	2	3		
Portugal	5	5		3			1	1	6	7
Spain	10	16	4	7	5	4	3	4		

Source: Bundesverband deutscher Banken 2002.

Traditionally, cross-border activities of banks depend, above all, on country size and economic relevance. With the advent of the euro, the number of banks with cross-country operations increased markedly as the data for the five countries with the biggest numbers of banks demonstrate (Table 9). Target countries were above all those countries that already had a larger number of foreign banks before such as Belgium, France, Italy, the Netherlands and Spain. The exception is Luxembourg which saw a decline in foreign bank presence from many countries. Above all, banks tended to strengthen their presence in neighbouring countries. But, cross-penetration was not restricted to the euro area. Even before EMU banks from nonmember countries operated in other European countries and, as a group, further increased their presence in reaction to the euro and other developments (Table 10). This holds in particular for British banks that are competing with other European ones on their home territories.

Despite the increase of cross-border activities, Europe remains largely divided by national barriers. Even the big banks still derive 50 to 75 per cent of their profits from domestic markets. This holds not only for the interbank market but in particular for retail business. Except for Ireland and the Benelux countries, the share of loans from banks in the euro area to nonbanks in other member countries is traditionally less than 2.5 per cent, and this did not change with the euro introduction (Bundesverband deutscher Banken 2002).

What has happened is an adjustment of systems. One concomitant of the restructuring process in the banking industry in recent years is a shift in Continental Europe from traditional bank

lending to investment banking, with the consequence that the dichotomy between bank-based and market-based systems is eroded steadily. Competition in the market for investment services increased as the convergence of underwriting fees indicates (Study Group on Fixed Income Markets 2001). These days, for banks it is often a matter of survival to adapt to a changing environment by becoming engaged in bond underwriting, selling capital market products to households and securitising bank loans in bundling them into packages to be sold in the market.

Table 10: Examples of cross-border penetration of banks from outside the euro area

Country of origin Host country	Denmark		Sweden		UK	
	1998	2001	1998	2001	1998	2001
Belgium					2	6
Finland	2	1	2	12	1	2
France			1	2	15	17
Germany	5	4	1	1	8	10
Greece					5	3
Ireland					9	12
Italy					8	9
Luxembourg			2	2	5	4
Netherlands					4	6
Austria				1	2	3
Portugal					2	3
Spain	1	1			7	9
Denmark			3	3	2	2
Sweden	2				6	6
UK	3		3	3		

Source: Bundesverband deutscher Banken 2002.

But, this process is less an impact of the euro introduction than reflecting an overall international trend (Turner 2001). The same holds for mergers and acquisitions in the banking industry. The wave of pan-European mergers that was supposed to follow the introduction of the euro, "with a new breed of super-banks emerging, sweeping inefficiencies before it" (Skorecki 2002), did not happen. There have been some spectacular cases such as HSCB's acquisition of Crédit Commercial de France and HVB's purchase of Bank Austria in 2000. But consolidation has mostly taken place within countries, and after the first experiences with foreign takeovers states have become more, rather than less, protective towards outsiders. Most "mega-mergers" since the late 1990s in Europe took place domestically. In Switzerland, Swiss Bank Corporation and Union Bank of Switzerland formed UBS with combined assets of \$749 billion. In France, BNP took over Paribas. In Spain, Banco Santander and Banco Central Hispanoamericano formed BSCH and then the latter took over Banesto. In Britain,

there were the takeovers of NatWest by Royal Bank of Scotland and Halifax by Bank of Scotland. In Germany, examples are the merger of Bayerische Vereinsbank and Bayerische Hypotheken- und Wechselbank to become Bayerische Hypo- & Vereinsbank and Dresdner's acquisition by Allianz that kept the bank "in the family" (Reszat forthcoming).

Instead of cross-border consolidation within Europe, banks have turned to the US. HSBC's acquisition of the US lender Household International end of 2002 is but one example. Others are BNP Paribas, ABN Amro, Royal Bank of Scotland and Société Générale. The case of BNP Paribas may serve to demonstrate the difficulties European financial institutions faced in their search to become more competitive through mergers and cross-stakes before the euro arrival. For the French bank cross-border expansion turned to be ruled out by the defensive nature of banking sectors in other EU member states. On the other hand, foreign entry into France was permitted solely under the condition that the centre of decision-making of the new entity remained inside the country. In its frustration at the prospects of a deal in Europe the bank eventually shifted focus to the US acquiring assets in Honolulu and California where it became the fourth-largest bank.

Banks' efforts towards an international consolidation and increase of competitiveness outside Europe are not restricted to activities in the US. One example is ING. The Dutch group is constantly building up strategic alliances in other parts of the world. For instance, its stake in Kookmin Bank, South Korea's largest bank, serves to deepen a relation that allows it to offer ING-branded financial services to Korean retail customers thereby strengthening its presence in one of Asia's fastest-growing markets. Similar alliances exist with ANZ Bank in Australia and Vysya Bank in India.

Strategic alliances are an alternative to cross-border mergers and acquisitions which have gained more and more attraction with the concerns raised about the efficiency of ever bigger financial institutions in recent years. In contrast to a view widely held in the industry and outside, little empirical evidence has been found so far of scale economies for large banks, and no evidence whatsoever for the largest ones (Walter and Smith 2000). The same appears to hold for insurance companies and brokerages. Beside, there is a growing awareness of the danger that the tendency towards allfinance conglomerates might magnify operations risks as the result of incompatible systems and an unforeseen rise of exposures in merged credit portfolios (CSFI 2002). For Europe, these findings are of particular importance since, on

average, the top European financial institutions are already much larger than, for instance, those in the US – a fact that apparently did not help improve their performance in the past.

- **Systems**

Experience with financial developments in the euro area since the late 1990s has shown that many of the remaining obstacles to financial integration are rooted in the institutional environment. In the banking industry state influence is still high and national structures hinder further consolidation. One example is Germany where the banking system's "three pillar" structure of commercial banks, public sector banks and mutually owned institutions has so far inhibited mergers between different sectors. Securities markets are still strongly fragmented: In 1998, there were 32 stock exchanges in Europe (compared to eight in the US) and 23 derivatives exchanges (in the US: seven). In the government securities market, there are still 12 different issuers, and differences in governments' credit ratings, issuance techniques and instruments remain a hindrance to the fungibility of euro area government securities (Study Group on Fixed Income Markets 2001). One prerequisite for the smooth functioning of securities markets is an efficient clearing and settlement process. But, in the EU, clearing and settlement, too, is still highly fragmented. In 2001, there were 19 different national Central Securities Depositories (CSDs) and two international ones (The Giovannini Group 2001) and the changes since then had been slow.

Many of the existing institutional differences between countries have their roots in recent history and in the reactions to the financial crises of the past. The suppression of financial markets that has historically occurred in France and Germany has been one response to market failures, the self-regulation that has been characteristic of the UK system was another one (Allen and Gale 2001a). But, above all, in contrast to the US, European countries have different legal origins and systems. Traditionally, a distinction is made between civil law countries and common law countries. Broadly defined, the former rely on professional judges, legal codes and written records while common law countries have lay judges, broader legal principles and oral arguments. In principle, laws in civil law countries set a minimum standard of expected behaviour with citizens obligated to comply with the letter of the law. In contrast, common law countries have a "nonlegalistic" orientation. Their laws establish the

limits beyond which it is illegal to venture and within which latitude and judgment are permitted and encouraged.

Differences in legal systems are one explanation for differences in the protection of outside investors and in the judicial efficiency observed across countries (La Porta et al. 2000). The latter affect enforcement costs and thereby the cost of financial intermediation. For example, other things unchanged, a rise in judicial efficiency can increase the availability of credit and lower collateral requirements. In the EU, all countries but Ireland and the UK are common law countries. International comparisons found that countries with common law tradition tend to have a higher judicial efficiency than civil law countries. This makes an initial advantage of the euro area, a common legal tradition of most of its members, turn into a disadvantage of the region if its widening meant an adjustment to the standards prevailing on the Continent.

One of the expressions of a country's legal system is bankruptcy law and debtor-creditor law which, in Europe, imposes considerable impediments to the financial integration process. In addition, it hinders the development of a pan-European risk capital market. For example, in many European countries, bankruptcy rules make it very difficult for an entrepreneur who has failed once to start a company again. This is in strong contrast to the US where the "right to fail" is considered part of the learning process of business. In this way rules in European countries contribute to establishing a European culture of risk aversion (Sallard 1999).

Another institutional barrier to integration is tax systems. Taxation of income and capital is an area in which despite the Single Market program differences across countries are still high. In the EU, 15 different company tax systems apply. Countries' tax systems still tend to favour domestic investments which might help explain the observed home bias in international portfolios. Dividends are subject to double taxation, and in some member countries the tax credit granted to resident shareholders for the tax paid at company level is not available to non-residents. Considerable differences exist in the effective tax burden: For a subsidiary of a parent company this can reach more than 30 percentage points depending on both's location. As a consequence, investments may not take place in the lowest cost locations but where the lowest taxes are paid (Adam et al. 2002). Differences in tax systems help explain why, for example, in the middle of the process of financial integration and convergence of systems in Europe Ireland managed to establish itself as an outstanding international banking centre.

Deposit insurance is another example of institutional barriers. These days, banks in Europe are increasingly competing for an international clientele, and deposit insurance is one important element of this competition. EU standards regulate little beyond the minimum insured amount of €20,000 prescribed in the EU deposit insurance directive. Schemes in member countries differ widely in premiums, coverage limits, sources of funding, whether they insure also deposits in foreign currency, whether the administration of the scheme is official, private, or joint, and whether bank membership is voluntary or compulsory. The existence of deposit insurance and its various design elements have, above all, two consequences. They determine location decisions of banks and nonbanks, thereby influencing domestic employment, incomes, and the tax base, and they affect financial stability. There are indications for a trade-off between the attractiveness of a location to international bank deposits and bank safety: The existence of explicit deposit insurance may lower market discipline and increase the probability of a banking crisis (Huizinga and Nicodème 2002).

The case of Enron has drawn the attention to corporate governance standards in Europe. In December 2001, the US power company filed for bankruptcy after reporting a \$638 million third-quarter loss and the disclosure of a \$1.2 billion reduction in shareholder equity partly related to partnerships run by its chief financial officer. The firm's bankruptcy raised questions about different financial services companies that facilitated its complex financial structure flattering its earnings and fostering the illusion of rapid growth. The case prompted a crisis of corporate accounting which with the downfall of Andersen, Enron's lead auditor, spread to Europe as well. European equity markets witnessed "a flight from risk" with investors shunning stocks that faced accounting or financial concerns. They worried about the quality of corporate accounts fearing that heavily indebted companies would either collapse or be forced to raise large amounts of equity to restore the health of their balance sheets. Bond spreads widened for banks exposed to troubled companies. Rating agencies changed the way they assess corporate credits, issuing ratings actions faster and downgrading companies several notches at once, and credit rating downgrades soared. As a consequence, credit markets became increasingly illiquid and market volatility rose.

Enron showed Europeans the limits to financial liberalisation. In April 2002, EU finance ministers met to discuss the implication of the Enron collapse for European markets. In particular, they considered to tighten rules on derivatives trading and the existing legislation on financial analysts, auditors and credit rating agencies. The International Accounting

Standards Board (IASB) whose rules will apply to Europe-based companies by 2005 is charged with setting respective common standards. Those will enable investors better to compare companies across countries.

But, in contrast to the impression left by the debates about Enron, in principle, there is no common approach to corporate governance in the EU. Big differences exist between bank-based and market-based member states. For instance, in the UK the market for corporate control is assumed to play an important role in disciplining managers and improving corporate performance. A company that is badly managed or underperforming runs the risk to be taken over and the management replaced or the direction of the company changed (Allen and Gale 2001a). By contrast, for example, in Germany many companies are not publicly traded, or controlled by block shareholdings, and close relationship with banks (the so-called "Hausbank") are expected to provide a substitute for market control.

These are only few examples of the institutional differences impeding financial integration in Europe. With the establishment of the Single Market program, and the erosion of the dichotomy between bank-based and market-based economies, systems are approaching, but this appears a rather a long-term evolutionary process. The euro is an important catalyst in this process. The common currency has been the most tangible product of the single market, and with its undisputed practical advantages it heightens public awareness of the desirability of common structures and institutions. The future success of many of the reforms on the EU agenda will depend on a broad acceptance of the overall idea of European financial integration, and this is increasing with the growing acceptance of the new currency.

- **Centres**

Another issue is the effect of the euro on Europe's financial landscape. In the debates, attention usually focuses on stock markets where mergers and consolidation processes resulted in the emergence of three major "poles" in recent years (Goldberg et al. 2002). One formed in 2000 with the establishment of Euronext, a second pole is centered around Deutsche Börse, and a third one exists in the UK. Those are strengthening the role of Paris, Frankfurt and London respectively in their competition for becoming the future hub of European finance.

Traditionally, London has the most advantages. The high concentration of financial institutions in the City allows them to realise considerable scale economies. They benefit further from the existence of high quality professional and supporting services such as accounting, actuarial and legal services and IT, and from an efficient infrastructure including office accommodation and telecommunications. In addition, there is the use of English language. These days, these advantages are often contrasted with the disadvantage resulting from the fact that Britain is no member of the euro area. But, this is rather an argument used outside the City. In London itself, the euro is widely regarded as one stress factors among others. Expensive property rates and poor infrastructure are considered at least as threatening to the City's long-term attractiveness (CSFI 2002).

Similar modifications must be made concerning the role of Frankfurt which was expected to benefit the most of the three places from EMU because of the size of the German economy, the former importance of the D-mark, the dominance of German banks in the euro area and the location of the European Central Bank. But, three years after the launch of the euro anecdotal evidence gives the impression that Frankfurt's relative position has not improved markedly. For example, when DePfa, one of Germany's biggest banks and a specialist in public sector finance, relocated from Wiesbaden to Dublin, the head of the bank moved from Frankfurt to London. There were even rumours that Deutsche Bank, the symbol of German financial power, was harbouring plans to abandon Frankfurt in favour of London. In general, in the financial industry identification with Frankfurt is low. Employees are commuting between Frankfurt and London or other places for the weekends, and many traders are not even located in Frankfurt but use its trading infrastructure and new technologies for doing business from afar.

So far, the advent of the common currency did not prompt business to shift from London to places in the euro area on a massive scale. On the contrary, the spatial closeness of one of the world's leading financial centres to the euro zone countries tended to further increase the place's attractiveness to financial institutions both in and outside Europe. On the other hand, London's rivals in Frankfurt, Paris and other places come up with new challenging ideas almost daily. Thus, the debate about the hierarchy of financial places in Europe is an open issue that will gain new impetus if and when Britain decides to join the euro.

The same holds for the role of places outside Europe in shaping the European financial landscape. Competition between European financial places and institutions is increasingly taking place outside the region. Recent moves of Eurex and Euronext-liffe to enter the US markets are but one example. The growing presence of European banks in other parts of the world is another one. This expansion is not free of risks. Poorly performing foreign investments and acquisitions threaten to worsen earnings quality and increase banks' overall risk profile. In particular, the establishment in emerging economies makes the banks highly vulnerable to systemic risk during financial crises which, in turn, may have repercussions on home markets. One example is the expansion of Spanish banks in Latin America which, at first, was considered one of the most important elements of bank internationalisation in recent years and later became one of its most fatal examples as crisis struck in Argentina.

4. Lessons to be learned

Experience so far has shown that the contribution of monetary integration to European financial integration differed across markets. The euro's catalyst role has been the stronger the more national markets have in common and the greater the importance of currency risk as discriminating factor. It has been most successful in the interbank market for very short-term unsecured deposits and in markets for bonds and derivatives where standardisation is comparably high. It played a lesser role for collateralised instruments and equities where differences in institutions and systems as well as cultural aspects impose additional barriers and hamper comparability. In general, influences accounting for heterogeneity can be grouped into five categories:

- **Maturities.** The longer the investment horizon, the greater is the probability that country- or instrument-specific influences become felt making prices for seemingly similar products of different origin move apart. For example, over short time periods the risk of widening spreads for certain government and non-government securities is low so that the one can be used as hedging vehicle for the other, but over longer spans both tend to move less closely, in particular in times of turmoil.
- **Liquidity.** Prices for seemingly similar financial instruments may get out of sync even with other influences unchanged when squeezes in some markets occur and liquidity dries up while others remain unaffected. For instance, this was an occasional problem of German government futures contracts after the launch of the euro.
- **Standardisation and transparency.** In highly standardised and transparent markets currency risk is often the only or most important element hindering integration. Foreign exchange and exchange-traded derivatives are the best examples.

- Third-market dependence. This bears the risk that prices for seemingly similar instruments drift apart because part of them are influenced by developments in another market they are closely related to. One example is the link between different cash instruments and the relations to their derivatives.
- Institutional differences. Beside the influences described in the preceding section those include different stages of market development, an aspect that may become crucial for the EU accession countries from Central and Eastern Europe.

The higher developed, more standardised and more liquid comparable financial instruments of different origin are, and the greater the degree of financial integration reached before, the stronger the effects of monetary integration and the introduction of a common currency. By contrast, imposing a single currency on immature, strongly specialised or highly fragmented markets may not only lower its effectiveness but increase the likelihood of additional frictions. Examples are the uncertainties and search processes related to pricing processes in bond markets and the construction of yield curves in the euro area:

In national markets there is usually a strict hierarchy of borrowers determining the financial instruments serving as benchmarks. In the euro area, this relation is broken. It turned out that markets for national instruments are not deep and diverse enough to assume benchmark status for the whole region across all maturities. As a consequence price discovery has become more complex and widened to a larger circle of benchmark candidates including private borrowers and derivatives. Benchmark status is fraught with more risks and changing more frequently.

A related issue is the adequate pricing of risks. Again, bond markets may serve as an example. Recently, markets have seen a convergence of bond spreads for Eastern European countries negotiating for EU entry in 2004 with the prospects to join the euro zone in 2007. For example, in March 2002, euro-denominated bonds of Slovenia and Hungary were yielding 45 to 50 basis points over the German bund, and Poland about 70 basis points. By comparison, Sweden's bond yields at the same time were 46 basis points over the German bund, Greece's 33 basis points. In November 2002, Moody's eliminated the gap between foreign and domestic government debt ratings of eight entry candidates treating them as if they were already full members of the euro area. Agencies normally assign a lower rating to a country's foreign debt on the ground that, in contrast to domestic debt, it cannot print its own currency for serving and repaying it. But, Moody's assumed this foreign currency risk to fall and be eliminated completely by the time the countries joined the euro.

The example indicates how much the introduction of the common currency has changed conditions and risk perceptions in European markets. Four years before the launch of the euro, Italy, Spain and Portugal had been yielding about 500 basis points over the German bund while Greece was not even able to issue domestic bonds of 10-year maturity until 1997. The question arising in this context is, whether those countries had been so much riskier than the present entry candidates or whether this time the markets are simply overoptimistic and mispricing the related risks. Uncertainty is even greater in markets less transparent than those for government bonds, and there is a danger that the introduction of the common currency will attract additional activity on these markets neglecting the remaining risks.

There are several implications of the experience with European monetary integration so far for countries outside the euro area: First, there is the group of accession countries. On average, their banking sectors are still relatively weak compared to western Europe, stock markets are less developed, the range of financial instruments available is limited, corporate loan markets are underdeveloped and household savings are slow in moving away from bank deposits into other instruments. On the other hand, stock market dynamism in some countries is remarkably high clearly overtaking that of western competitors (Table 11). With EU entry, the process of financial sector consolidation that has barely begun is expected to accelerate with new market participants from foreign countries reinforcing competitive pressures.

In this situation, the process of monetary integration which is one prerequisite for EU accession is not without problems. The introduction of the euro in these countries will distract attention from country-specific determinants of financial markets and prices to sector-specific and individual features as it has done in the west before. But, in contrast to the latter, for the years to come, for those countries in economic transition financial risks and returns in home markets will continue to strongly depend on their direct economic and political environment. As in today's markets for euro-denominated bonds, there is a danger that the gap between real and perceived circumstances widens thereby increasing the potential for market frictions and failures.

A related issue is currency risk. After EU entry, the countries will be obliged to wait for a transition period of two years after which the convergence criteria will be assessed and the introduction of the common currency will become possible for the first time. During this period, the countries' currencies will be exposed to a heightened risk of speculative attacks.

The EMS crises of 1992/93 have demonstrated the force of such attacks and, given the volume of foreign exchange trading in global markets, there are strong doubts whether the new member states would be able to resist the onslaught. They will have no opportunity to avoid this situation, for example, by shortening the transition period, because that would mean a breach of the rules. The only alternative left were unilateral "euroisation" – the lonely decision to adopt the euro from the start – but the resulting economic effects which could aggravate existing problems of EU membership are a strong argument not to follow this course (Krawczyk forthcoming).

Table 11: European stock market dynamics in international comparison¹

Rank in Europe	Market capitalisation ²	Highest growth in market capitalisation ³	Highest growth in value traded ³	Highest growth in number of listed companies
1	United Kingdom (3)	Poland (2) ⁴	Poland (2) ⁴	Romania (1) ⁷
2	France (4)	Latvia (4) ⁵	Hungary (4) ⁶	Bulgaria (3) ⁵
3	Germany (5)	Hungary (6) ⁶	Romania (5) ⁷	Slovakia (4) ⁷
4	Italy (6)	Romania (11) ⁷	Greece (9)	Poland (5) ⁴
5	Netherlands (7)	Finland (14)	Cyprus (12) ⁴	Russia (7) ⁴
6	Switzerland (8)	Greece (18)	Finland (13)	Armenia (8) ⁸
7	Spain (10)	Bulgaria (20) ⁵	Macedonia (14) ⁸	Lithuania (13)
8	Sweden (13)	Iceland (22) ⁷	Portugal (15)	Latvia (14) ⁵
9	Finland (14)	Armenia (23) ⁵	Netherlands (16)	Hungary (19) ⁶
10	Greece (19)	Lithuania (28) ⁵	Spain (20)	Turkey (24)
11	Belgium (21)	Portugal (29)	Turkey (24)	Iceland (30) ⁷
12	Turkey (25)	Malta (31) ⁷	Sweden (25)	Germany (32)
13	Denmark (26)	Cyprus (33) ⁴	Bulgaria (26) ⁵	Croatia (35) ⁷
14	Portugal (30)	Turkey (34)	Italy (29)	Finland (36)
15	Norway (33)	Netherlands (37)	Luxembourg (30)	Greece (37)

1 World rank in parantheses.

2 End 1999, in millions of US dollars.

3 In dollar terms, percentage increase 1990-99.

4 1991-99.

5 1995-99.

6 1992-99.

7 1994-99.

8 1996-99.

Source: The Economist.

The currency risks of EU enlargement are not necessarily limited to accession countries. There is a danger that traders in the markets will treat the EU area as an entity and not discriminate between new and "old" members. In this case, a speculative attack would not spare the three EU countries outside the euro, the UK, Denmark and Sweden. In addition, in contrast to the monetary relations of members within the euro area those countries would have to face the possibility of destabilising cross-rate effects. So far, the three euro-out countries experienced few disadvantages from their present status. As a result of global competitive

pressures, like other EU countries they have gone through a process of financial consolidation in recent years. Banks from Denmark and Sweden expanded into neighbouring countries, and their exchanges fared well in European competition. With respect to the wider economic effects of EMU, their performance was even stronger than that of other countries. But, EU enlargement may provide additional arguments to join the euro.

The second group of countries concerned is those in other world regions where, in recent years, European monetary integration has become a model for respective similar efforts. Learning from the European experience is a motto that in particular struck a chord in East Asia where countries are striving for greater financial stability after the experience of the crisis of 1997/98. Monetary integration is widely considered as an important ingredient in this process, but, the question is: Does European experience really suggest it to be an indispensable prerequisite for financial integration? The answer depends to a large extent on the stage of financial development of member countries.

Monetary integration helps unite markets for financial instruments where market forces are not hindered by insurmountable barriers and differences thereby enhancing the overall efficiency of national financial systems and creating further incentives for reform. But, as the UK example demonstrates, for a fully-developed international financial centre a common currency does not make much difference. The bulk of financial business these days is done in few key markets and currencies and it is access to these markets that determines international competitiveness. For places such as Tokyo, Hong Kong and Singapore, participating in a regional project like the Single Market program would be an important decision, joining a single currency not.

In the process of financial integration a common currency can only be the last step after all other reforms are completed. It is no substitute for the removal of institutional barriers and other impediments hindering the free move of financial institutions and services. And, it cannot compensate for the specific information about individuals, firms and markets required, for example, in stock trading or retail banking. The markets for loans and equities, and a few other financial products, will always retain a strong national element.

5. Conclusions

European monetary integration is one element in the process of financial integration in Europe and one that in and outside the region often is highly overrated. It is only the – preliminary – last step in the development of a common monetary and financial culture that is deeply rooted in history. There is a direct line from the Italian merchant banks at the Champagne fairs in France in the 13th century over the establishment of the Amsterdam Bourse as Europe's leading securities market in the 17th century to the more recent role of London as hub of international foreign exchange and bond trading creating a tradition of openness that found its latest expression in recent efforts to formally establish a common legislative framework for investors and consumers of financial services under the Single Market program. Countries from other regions lacking this experience may find it difficult to mimic the integration process (Wang and Woo 2002).

Considering financial development in the region the influence of monetary integration efforts leaves a mixed impression. On the one hand, in facilitating the flow of financial services across countries and increasing competitive pressures it is speeding up financial growth and the establishment of new markets and products in underdeveloped systems. On the other hand, it bears the risk of inefficiencies – be it through the incentives created for the establishment of low-performing mega financial institutions or through a convergence towards low-level standards as a result of policy compromises – thereby endangering the international competitiveness of more advanced members and the community as a whole.

The effects of monetary union so far differed across markets and institutions. The biggest overall impact of the euro was on market volumes triggered by a shift from government to non-government securities, both short-term and long-term, as a consequence of the impact the Maastricht Treaty and the Stability and Growth Pact rules had on public finance. Another remarkable effect was the contribution of the common currency to the explosion of trading in instruments such as interest rate swaps and credit derivatives, and the need it created for developing new strategies and techniques for hedging and trading in the euro area.

But, beside these experiences the influence of the euro on financial integration in Europe is limited yet. Markets and systems are still highly fragmented and without the further removal of institutional barriers, and a greater commitment to financial reform and integration in EU countries at the level where individual measures are adopted, Europe's citizens are denied its

full benefits. Cultural values, conventions and national interests are hard to harmonise. Just as an Austrian baker still needs eight licences to open a shop in Italy, a few kilometers down the road, despite the 280 laws approved by European parliaments between 1986 and 1992 in order to create the single market, financial institutions cannot move freely across borders. In a sense, the Enron case has contributed more to strengthening and integrating European financial systems than the common currency in enhancing political commitment to reform and recalling the advantages Europe's financial systems have despite the unquestionable differences between them: a traditional openness to the needs and requirements of an international financial community and a readiness to meet these needs by creating a respective environment and providing the rules for sound business.

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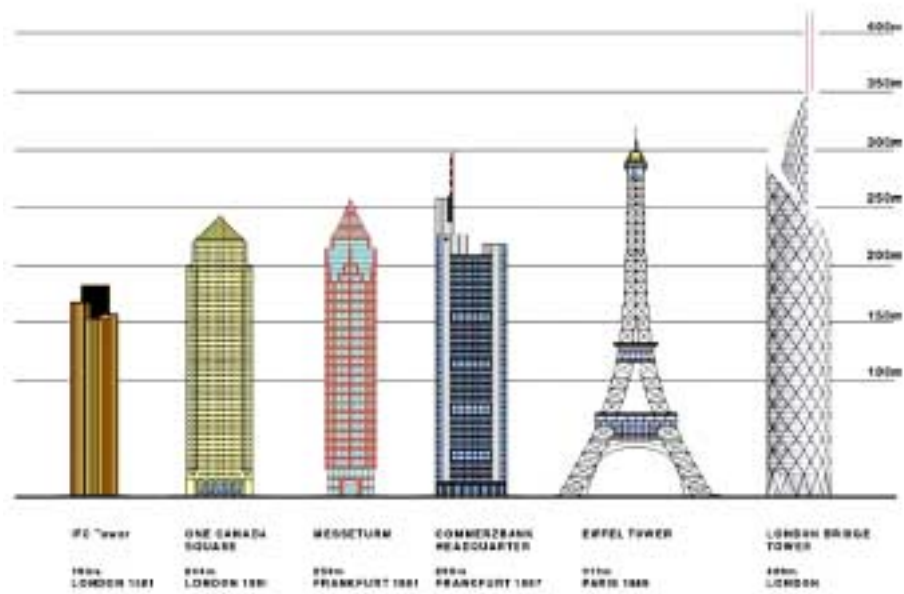
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APPENDIX

Figure 1: Skyscraper visions



Source: Internet.

Figure 2: European exchange links and alliances

