

STOCK MARKET INTEGRATION IN EUROPE

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Amir N. Licht*

I. Introduction

Western Europe boasts over 35 stock exchanges -- a number which is almost unanimously agreed to be high. Too high, in fact, when we remember that the United States, whose population and GDP are roughly within the same order of magnitude, has three national and five regional stock exchanges. Ironically, the number of equity markets was even rising recently. The purpose of this report is to analyze the trend toward stock market integration which Member States of the European Union (EU) are currently undergoing.

The situation of European stock exchanges today is fundamentally different than it was just a little more than a decade ago. It is not too bold to assume that another decade from now it will show little resemblance to its condition today. Unless some unpredictable event interrupts the process European stock markets are likely to become fewer in number and more internationalized in their listings, trading, and membership. The main theme of this report is that this integration process is an integral part of a broader process of economic and political integration which EU countries have been pursuing for almost 40 years. We argue that stock market integration in the EU can only be understood in this context. Moreover, we also argue that European stock market integration probably could not have been undertaken but for the broader quest for economic integration. While integration of stock markets may have its independent rewards, it turns out from the European experience that it requires considerable compromises in order to be realized. It is the broader framework of the European Union, with its institutions, political implications, and momentum, that ensures that stock market integration proceeds on track, even if with occasional halts.

The efforts taken in the EU are the boldest exercise in stock market integration compared with any other region in the world. Within a period of several years, a set of legislative measures were enacted, aiming to harmonize the regulatory structure in EU Member States. More importantly, stock exchanges in Europe have undertaken a series of projects intended to integrate their markets in varying scopes and forms. These activities were taking place while national stock exchanges were also struggling to modernize their trading systems and gain business. As a consequence, Europe may be viewed as a gigantic laboratory, in which real-life experiments in stock market integration were held. The fact

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that most of those efforts have failed or were abandoned first attests to the difficulties in achieving this goal. It may also serve to indicate the conditions which should be more conducive to success. This report attempts to tell the story of European stock market integration in a way that highlights the difficulties in attaining cooperation and the tools that were used to overcome them.

The term “stock market integration” in this report is used in its more popular meaning, i.e., subsuming such phenomena as multiple listing, cross border trading, and provision of investment services by foreign firms. Oftentimes, these activities are also referred to as “internationalization of stock markets”. In the academic literature on international finance “market integration” is used to describe a situation in which financial assets having the same profile of risk and return are priced similarly (Alford 1993). The two meanings of integration are not exclusive. Indeed, they are strongly connected, since multiple listing and international trading lead to integration in its economic meaning.

This report was written in July-August 1996 and was updated in certain points in March 1997. It is structured as follows. After this part of introduction, Part II overviews European stock markets, emphasizing the international dimension, i.e., cross-listing and transborder trading and cross-market arbitrage. Part III introduces the essential elements of European integration in general. Part IV covers the public sector side of integration efforts. It describes and analyzes the process of regulatory harmonization through EU Directives and also the state of regulatory cooperation in the EU. Part V covers the private sector initiatives for integration. It is dedicated to the unique experience that European stock exchanges have gained by conducting a number of projects aimed to connect and integrates their markets. Part VI briefly analyzes several aspects directly related to stock market integration, such as corporate governance, monetary union, etc. Part VII concludes.

II. European Stock Markets

This Part provides background information on several major European stock exchanges. Apart from being large, and therefore important, these markets differ substantially in their structure, their surrounding financial industry, and the legal environment. With regard to each market, we provide some basic information and numbers, particularly on its international activity. We then describe its trading method and review the historical processes that have led to it.

A. Overview of National Stock Markets

1. United Kingdom

The principal stock market in the United Kingdom is the London Stock Exchange (LSE), formally called The International Stock Exchange of the United Kingdom and the Republic of Ireland. Like all other European exchanges (except the Stockholm Stock Exchange and Easdaq - see below), it is made up of member firms - broker-dealer firms who buy and sell shares amongst themselves and for their clients. The London International Financial Futures Exchange (LIFFE) deals in the trading of financial futures and traded options.

The London Stock Exchange runs three markets.

- The Official List -- This is the largest market. It is intended for large companies, which have substantial public floating and a history of business activity. The market is divided to a domestic section and an international one, on which non-UK stocks are traded.
- The Unlisted Securities Market (USM) -- This market was set up in 1980 to cater for smaller companies, but has met only limited success. It stopped accepting new listings and was closed at the end of 1996.
- The Alternative Investment Market (AIM) -- This market was set up in June 1995, in a renewed attempt to establish a market for smaller stocks. (A previous effort, the Third Market, flopped in the wake of the 1987 stock market crash, and was finally closed in 1990). Unlike the Official Market, it does not impose any requirements for minimum trading period or number of shares in the public (Sherman 1996). In January 1997 the London Stock Exchange tightened the regulatory requirements for the AIM, particularly with regard to disclosure (Venture Economics 1997).

In September 1995, a new trading system, Tradepoint, started operations in London. The system offers continuous electronic auction on several hundred of LSE's UK stocks. By performing completely automated matching of orders, Tradepoint directly competes with SEAQ as an alternative market. Tradepoint operates as a business company.

Another relevant commercial service is Instinet, operated by Reuters. Instinet operates as an automated broker-dealer, and is a member in the LSE as a member in

special status. Functionally, however, it performs exactly the same functions that Tradepoint does.

At the end of 1995, 2603 companies were listed on the London Stock Exchange main (official) and parallel (USM) markets, with 3270 stocks. Of these companies, 2078 were domestic and 519 companies were foreign. 2503 securities were domestic, and 707 securities were foreign. It should be borne in mind, that in general, many companies list more than one security. Therefore, the number of stocks traded is greater than the number of companies, in both categories. Total market capitalization of equities at that time was Pound 3,257,332.6 million, of which Pound 900,329.6 million was in domestic securities, and Pound 2,257,003.0 million in foreign securities. Turnover for the year ending 12.29.95 totaled Pound 718, 558.0 million, of which Pound 323,166.0 million was in domestic equities, and Pound 395,392.0 million in foreign equities¹ (London Stock Exchange 1996).

By year-end 1996 it had 252 listed companies with market capitalization of \$ 9,250 million, following a period of very rapid growth (Butler 1997).

The modern history of European stock exchanges begins in 1986. Then, the London Stock Exchange introduced a sweeping reform, nicknamed “Big Bang”, that included removal of the traditional distinction between jobbers (dealers) and brokers, introduction of competition from banks and foreign institutions, liberalization of commission, and the introduction of the Stock Exchange Automated Quotation system (SEAQ).

Modeled after the US NASDAQ, SEAQ embodied a revolution in European stock trading. It is a pure dealer, quote-driven market in which members of the stock exchange assume the role of market makers for certain stocks. As such, they post two-way (buy and sell) quotations for these stocks. By committing capital to market making, and standing ready to effect trades, market maker provide liquidity. SEAQ involves no trading floor. The quotations are disseminated electronically, and appear on terminals in broker-dealers’ and investors’ offices. Actual trading is conducted over the telephone, and is reported

¹ There are differences in the definitions used to compile turnover statistics on different exchanges. This means that comparisons between certain exchanges are not strictly valid. The Federation of European Stock Exchanges distinguishes between the two following groups of exchanges, according to the regulatory view that underlies their turnover data. This means that turnover figures are only comparable between exchanges that adopt the same view, but not across groups.

- Trading System View -- exchanges adopting this view will consider only transactions effected through their own trading system. This group includes the Paris Bourse.
- Regulated Environment View -- exchanges adopting this view will consider transaction over which they have a regulatory oversight. This would include all the securities business of their members, including trades made into foreign markets. This group includes the stock exchanges in Amsterdam, Germany, and London (Federation of European Stock Exchanges 1996).

Numbers for stock exchanges of London, Germany have been halved for comparison purposes. This is because turnover data suffer from a problem of double reporting in certain cases. In addition, trades effected on continental bourses by London-based dealers are often not reported in London. (Pagano and Steil 1996:52).

after the trade to the system. Consequently, transactions may be effected in prices within the gap between the buy and sell quotations (the bid-ask “spread”, or in the British jargon, the “touch”).

These reforms led to an immediate success, which consolidated LSE’s position as the undisputed leader among European Stock Exchanges and the most internationalized stock exchange in the world. Many European (and non-European) stocks were traded on SEAQ’s international section, SEAQ-I, and in general, London attracted substantial portions of the turnover in continental European stocks.

Several factors aided in the success of the reforms.

- The quote-driven trading method has led to the creation of liquidity, that was provided by market makers who committed substantial capital, and benefited from the spread. Coupled with lower transparency (immediacy of trade data) in SEAQ, the method proved especially useful for trading of large blocks in prices within the market spread.
- London dealers were available during most of the working day. That offered a clear advantage over continental stock exchanges, in which trading was then conducted in one or few call auction sessions during shorter opening hours.
- The UK has abolished the stamp duties (transaction tax) on foreign and large trades, which provided London dealers with a direct advantage in terms of transaction costs.
- Finally, London was already a major international financial center. It had high presence of foreign financial services firms, who took advantage of the City’s sophistication, English speaking professionals, and its pleasant life style (Benos and Crouhy 1996).

The success of SEAQ-I was reflected in the growing percentage of turnover in continental European stocks taking place in it. Table 1 summarizes the findings of three studies of trading in continental stocks on SEAQ-I in the period 1988-1991. SEAQ’s market share in these tradings has changed across home-countries and over time, but in most cases has reached very substantial levels. Figures 2-4 display the trading of certain continental European stocks reported by SEAQ-I dealers as percentage of trading volume in the home country for Germany, France, and Italy, starting in 1989 or 1990 and ending in January 1995. It is difficult to identify clear trends in the numbers, especially for the last three to four years. In any event, SEAQ-I’s market share is still substantial.

Table 1. Trading of Continental European Stocks Effected by Members of the London Stock Exchange, as Percentage of Stock Trading on “Home-Country” Exchange

Panel A (from Pagano and Röell, 1991 and 1993a)

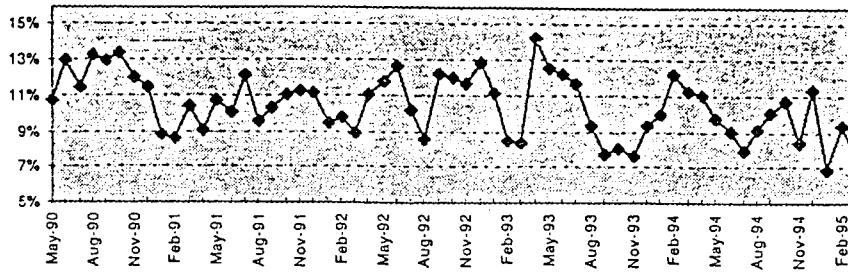
Nationality of stock	1988	1989 (Jan.-June)	1989 (June-Dec.)
German	12.65	16.21	
French	13.72	25.08	
Italian		6.50	11.20
Spanish	0.53	6.15	

Panel B (from Worthington, 1991)

Nationality of stock	1990 Q1	1990 Q2	1990 Q3	1990 Q4	1991 Q1
German	12.5	12.2	11.3	12.8	10.3
French	26.9	26.8	25.3	26.3	29.5
Italian	23.1	18.1	19.1	27.1	24.7
Spanish	14.3	15.9	25.5	18.4	18.4
Dutch	38.3	49.8	63.0	54.2	52.9
Swiss	--	29.2	25.5	33.5	35.5
Swedish	39.5	64.9	62.4	50.0	45.0

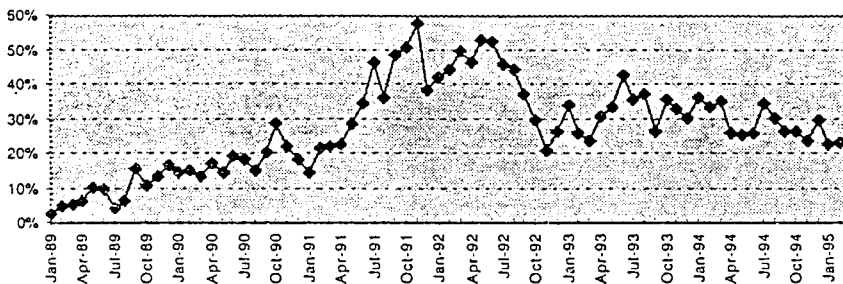
Source: Pagano and Steil (1996), summarizing Pagano and Roell (1991 and 1993), Worthington (1991).

Figure 2. Trading of German DAX Stocks Reported by SEAQ-I Dealers as Percentage of Trading Volume in Germany.



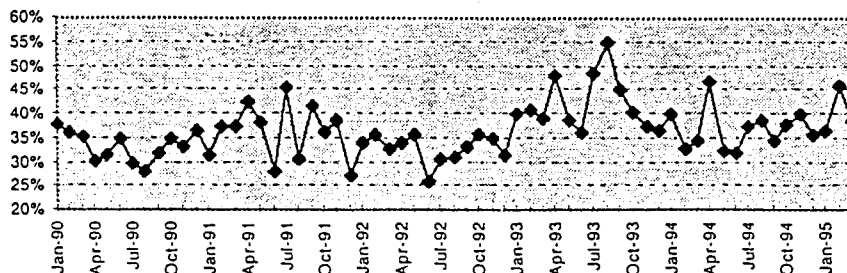
Source: Pagano and Steil (1996)

Figure 3. Trading of Italian Stocks Reported by SEAQ-I Dealers as Percentage of Trading Volume in Milan.



Source: Pagano and Steil (1996)

Figure 4. Trading of French Stocks Reported by SEAQ-I Dealers as Percentage of Trading Volume in Paris.



Source: Pagano and Steil (1996)

It follows from Pagano and Steil (1996:6-7), that trading in continental stocks was not a zero-sum game. With regard to Italian stocks, they cite evidence that indicates that the inception of trading on SEAQ-I actually increased trading volume on the Milan Stock Exchange. The inception of SEAQ-I trading also did not have a statistically significant effect on overall Milan turnover. With regard to Belgium, Anderson and Tychon (1993) argue that London trading on balance has stimulated greater trading in the continent. Among the reasons for this situation may be that a portion of the trading was created by the availability of SEAQ-I dealers, especially to UK-based institutional investors. Thus, they could start diversifying their portfolios with lower transaction costs, in comparison to trading through foreign brokers.

Starting in 1990, London's SEAQ-I began to lose its primacy as the leading European stock exchange. This was reflected in continental stock exchanges gaining back volume in their home country's stocks. The reasons for that trend are both external and internal.

- Most important was the introduction of modern, automated trading systems in continental stock exchanges, that established order-driven, continuous auction trading method in most of them. Continental states were also gradually abolishing transaction taxes.
- Market making proved unprofitable for a number of London houses, who consequently decided to stop their commitments on SEAQ-I.
- Growing competition between market makers, and the growing number of foreign firms, changed the trading environment to become less "collegial" (Pagano and Steil 1996).
- The LSE has also suffered from internal tension after the failure of an automated clearing and settlement project TAURUS, and internal disputes among its members on the preferred direction of further reforms.
- The withdrawal of the UK from the European Monetary Union may have also affected continental investment firms in their decisions whether to increase their presence in London. Although it remains *the* financial center of Europe, Frankfurt's position is becoming stronger as the future home of the European Central Bank.

In early 1997, however, the London Stock Exchange may be poised to start a new phase of growth, or at least reforms. After a period of internal controversies, manifested by the ousting of two Chief Executives within a relatively short period, it is about to implement a new trading system. The system, Sequence 6, will allow users to combine order-driven trading with the traditional quote-driven trading in the most heavily traded shares. Although the system has yet to gain regulatory approval, the trend seems irreversible.

In July 1996, the LSE announced plans to reduce its workforce from 940 to 600 people. This is partly due to the switch from its own clearing and settlement system, Talisman, to Crest, an independently owned system. In addition, competition from continental exchanges and Tradepoint also force it to refocus its strategy. Although there

were suggestions that the LSE change its structure to a stock company, this is not formally contemplated now (Guha 1996, Gapper 1997).

2. France

The principal stock market in France is the Paris Bourse, or Paris Stock Exchange, formally known as S.B.F. Bourse de Paris. The Paris Bourse is a membership organization. Other French securities markets are the Financial Futures Market (MATIF) and the Financial Options Market (MONEP).

The Paris Bourse operates four different markets.

- The Official Stock Exchange (Marche Officiel) -- This market is dedicated for relatively large companies, with at least 25% of their equity publicly held.
- The Second Market (Second Marche) -- This market is intended for companies that are not large enough to be traded on the Official Market. It is considered a temporary stage for companies, a preliminary step before “upgrading” to the Official Market. This, among other reasons, led the Second Market to be largely unsuccessful.
- The New Market (Le Nouveau Marche) -- Established in February 1995, it is targeted specifically toward growth companies, i.e., small, relatively young companies with a high risk profile, mainly in high-tech fields. Listed companies need not have a profitability or trading record (Jury 1996). In January 1997 the stock exchange scrapped the minimum balance sheet requirement and tightened the disclosure requirements (Le Figaro 1997), apparently in response to EASDAQ’s success (see below).
- The Over-the-Counter Market -- This is not a permanent market, and is used for occasional transactions in non-listed securities.

At the end of 1995, 904 companies were listed on the Paris Bourse, with 1696 stocks. Of these companies, 710 companies were domestic, and 194 were foreign. 817 securities were domestic, and 879 securities were foreign. Total market capitalization of equities at that time was Pound 321,694.4 million, which was all in domestic securities (numbers for foreign securities were not available). Turnover for year ending 12.29.95 totaled Pound 134,857.0 million, of which Pound 132,563.5 million was in domestic equities, and Pound 2,293.5 million in foreign equities (London Stock Exchange 1996).

In year-end 1996 the Nouveau Marche had 18 listings with \$ 1,100 million market capitalization (Butler 1997).

Starting also in 1986, the Paris Bourse has undergone a series of reforms over a period of several years. In July 1986, a continuous electronic auction with automatic clearing replaced the traditional periodic call auctions with open outcry. The system, Cotation Assiste en Continu (CAC), was purely order-driven. It followed a strict execution algorithm, with a simple price/time rule: an order with a better price, or prior in time if on equal price, got priority in execution. In June 1995, the CAC system was

replaced with the Nouveau Systeme de Cotation (NSC), also known as Super-CAC. The NSC also follows a strict price and time priority execution rule (Benos and Crouhy 1996).

In 1988, the Paris Bourse abolished the distinction between brokers and dealers, and appointed dual-capacity intermediaries. In 1989, it liberalized its trading commissions. In July 1993, a ceiling on stamp duty was set at FFr 4000.

From its outset, the CAC system was highly transparent. The whole order book was available to members (except from certain “hidden orders”), and transactions were reported immediately by the system. Such high level of transparency limited the ability of investors to trade in large blocks, a fact which had led many to SEAQ-I. In response, the Paris Bourse, in September 1994, introduced new rules for large block trading. These rules substantially reduced both the pre-trade and post-trade transparency of such transactions.

The Nouveau Marche uses a dual trading method, combining an electronic order book with quote driven market making.

3. Germany

There are eight stock exchanges in Germany, located in Frankfurt, Dusseldorf, Munich, Berlin, Stuttgart, Hanover, Hamburg, and Bremen. The Frankfurt Stock Exchange, formally known as the Deutsche Borse, is by far the most important, accounting for 75% of trading volume. It is organized as a joint stock company whose major share holders are the bank members. The remaining are the regional stock exchanges and its brokers and dealers (Pagano and Steil 1996:16). The Deutsche Borse also operates the derivatives exchange, the Deutsche Terminbourse (DTB).

German stock exchanges have three different market segments.

- The Official Market -- This market is designed for large issuance of shares (over DM 2.5 million).
- The Regulated Market -- This market is intended for smaller companies, i.e., with issue value under DM 500,000 in Frankfurt.
- The Free Market -- This market is open for any company accepted by the Association of Securities Dealers, with no minimum requirements.
- The New Market (Der Neuer Markt) -- Following the lead of the Paris Bourse, the Deutsche Bourse in March 1997 established its own growth company market, similar in nature to the French Nouveau Marche.

At the end of 1995, 647 companies were listed on the Deutsche Borse, with 1818 stocks. Of these companies, 427 companies were domestic, and 220 were foreign. 812 securities were domestic and 1006 securities were foreign. Total market capitalization of equities at that time was Pound 373,337.0 million which was all in domestic securities (numbers for foreign securities were not available). Turnover for year ending 12.29.95 totaled Pound 384,164.8 million, of which Pound 374,961.0 million was in domestic equities, and Pound 9,203.8 million in foreign equities (London Stock Exchange 1996).

In March 1997 the Neuer Markt had two listings (Fisher 1997b).

Stock trading in Germany is highly fragmented and complicated. Trading in the regional stock exchange is done mainly in auctions with open outcry up to three sessions during the day. Between auctions, traders on the floor may engage in bilateral trades. The trading method is basically order-driven, with a flavor of dealer trading. Each stock is designated to one broker-dealer (*kursmakler*), who manages the book while trading for his or her own account. *Kursmaklers* differ from the New York Stock Exchange's specialists in that they do not have a positive obligation to trade. The liquidity they provide, therefore, is purely discretionary.

An automated trading system, called IBIS, operates in tandem with the floor trading. It is operated by the German banks, who are the most important traders in Germany. The system is an open-book continuous auction system, which allows traders to compete with the exposed orders. Unlike CAC and Super-CAC, it does not match and execute orders automatically and requires human intervention to complete the trade.

IBIS accounts for a large portion of the trading in German stocks, i.e., around 40-60 percent (Pagano and Steil 1996:18). In May 1996, all trading in the DAX30 blue chip stocks was supposed to take place entirely on IBIS.

The Deutsche Borse has intended to modernize the trading method by installing the Paris Bourse's NSC system as part of a wider cooperation initiative. These plans were recently shelved in 1996 (see section V.H below). Instead, a new electronic trading system called Xetra (eXchange Electronic TRAding) should replace IBIS in 1998. When in full operation, it is intended to handle wholesale and retail business in all securities quoted on the exchange (Fisher 1997a).

B. Cross-Listing and Transborder Trading

In order to measure the degree of internationalization of European stock markets we look at two major aspects of the phenomenon. Table 5 shows the number of foreign companies traded on several European stock exchanges in the period 1990-1995. Except for an unexplained drop in Germany from 1991 to 1992 (probably due to definitional reasons), there is little noticeable change in all the five markets. Amsterdam, Germany, and Paris show a slight constant decline, and so does the UK, with the exception of a rise in 1995. Stockholm's numbers have risen slightly, but are generally very low compared with the other markets. Table 6 shows market value and turnover numbers for foreign trades in the same period.² Unfortunately, market value numbers for foreign stocks are not available in most cases. As regards turnover numbers, Amsterdam, Germany, and Paris all show a peak in foreign trading in 1993 and a subsequent decline afterward. Stockholm features a very large surge in 1995 (over twelve times the previous year's record volume). This may be related to the introduction of remote membership in Stockholm in 1994. The UK is the

² Although the numbers are drawn from one source (The London Stock Exchange's Report on Quality of Markets), the reader should note that it is a secondary source for non-UK stock exchanges. This might explain certain irregularities in some cases, which we were unable to reconcile, e.g., the number of foreign companies in the German market. See also note 1 in section II.A.1 above for comments on the meaning of turnover numbers.

only market to show a constant and substantial rise in foreign turnover. This is especially noticeable, since volumes in the UK are greater than in other European markets by 2-4 orders of magnitude.

These tables, however, do not distinguish between European and non-European securities. Thus, they are not quite indicative as to the degree of integration within the European market. In order to gauge this facet, Table 7 shows the distribution of foreign-listing on several European stock markets according to issuers' country of origin from 1990 through 1996.³ These numbers are not necessarily compatible with Tables 5-6 for reasons we were unable to discern. Note, that Table 7 refers to foreign listings, and not to cross-listings. Interestingly enough, most of the stock exchanges we have surveyed do not keep track of cross-listing per se, i.e., they do not know whether their listed companies (either foreign or domestic) are also listed somewhere else on the globe.

What stands clear from the tables is that London's SEAQ-I remains the undisputed market leader in the international equity business. This would not have been so impressive but for the constant reports on the decline of SEAQ-I and the migration of business to continental stock exchanges. One explanation is the reliability problem inherent to turnover numbers. Another reason could be a change in market share in a growing market, but the numbers for non-UK stock exchanges do not generally support this hypothesis.

The most striking fact is the almost total lack of new intra-European foreign-listings in the covered period. Even in the highly internationalized SEAQ-I, the majority of new foreign listings came from non-EU countries. Indeed, the early 1990s were a period in which many stock exchanges in Europe were in a state of flux, struggling to position themselves for a more competitive future. In addition, the foremost challenge for continental stock exchanges in the early 1990s was to regain primacy in the trading of stocks from their countries, and much less so with regard to foreign companies.

Finally, a note on the meaning of cross-listing. Companies cross list their stocks for various reasons, which cannot be covered here fully. One of those reasons is to allow foreign investors to trade in the company's stocks as if they were domestic stocks. Technological advances lower the transaction costs pertaining to trading abroad and so does regulatory liberalization. As a result, this motivation may gradually be losing its force, with the inevitable negative effect on the level of cross-listing. Thus, both an increase and a decrease in the level of cross-listing may attest to a growing level of stock market integration.

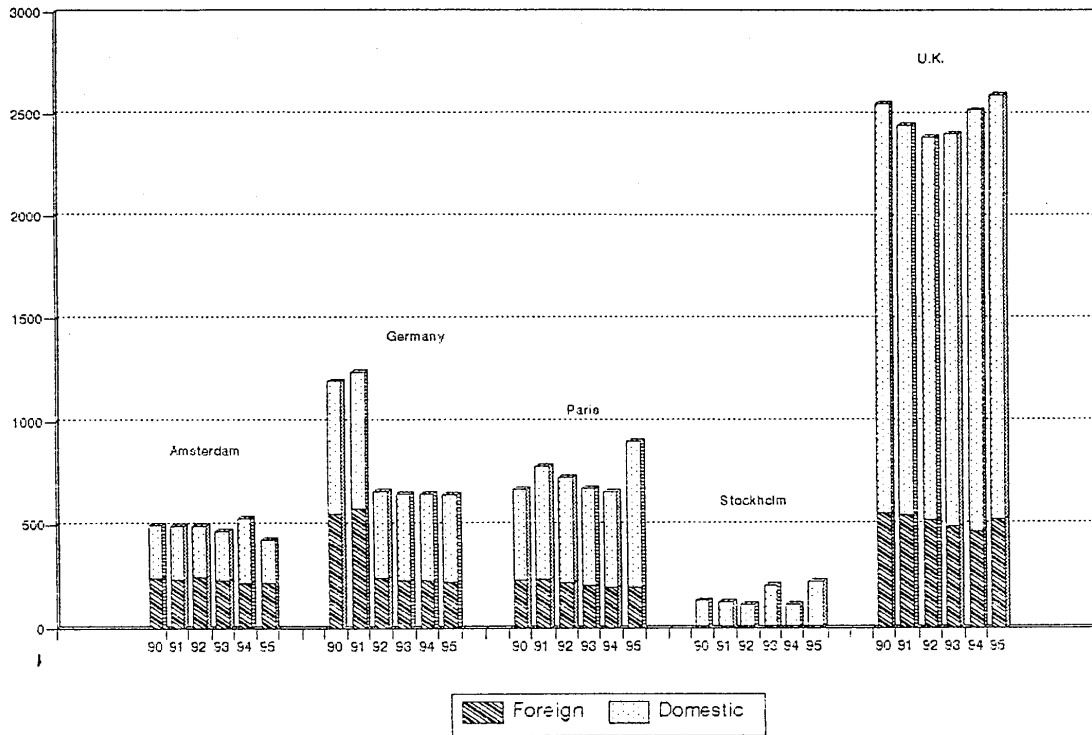
³ These numbers are drawn from the different stock exchanges, and are not compatible with the numbers in Tables 5 and 6. The definition of "country of origin" is not uniform across stock exchanges or even across issuers. Usually it is defined by the *issuer*, based on its country of incorporation. Such country is not necessarily the country where the company is headquartered or conducts its main business but rather some comfort jurisdiction, such as tax havens.

Table 5. Companies, Equity Issues, and Securities in Major European Markets

Market	Year	Companies			New Equity Issues			Securities		
		Foreign	Domestic	Total	Foreign	Domestic	Total	Foreign	Domestic	Total
Amsterdam *	1990	238	250	498	16	10	26	307	303	610
	1991	234	253	497	4	15	19	n/a	n/a	n/a
	1992	246	251	497	n/a	n/a	n/a	295	310	605
	1993	224	245	469	2	9	11	269	319	588
	1994	215	317	532	-	6	6	279	388	667
	1995	216	217	433	4	7	11	238	387	625
Germany *	1990	555	649	1,204	35	25	61	616	776	1,392
	1991	578	665	1,243	33	19	52	639	799	1,438
	1992	240	425	665	n/a	n/a	n/a	433	702	1,135
	1993	229	426	655	12	4	16	396	790	1,186
	1994	227	423	650	3	3	6	359	825	1,184
	1995	220	427	647	0	12	12	1,006	812	1,818
Paris	1990	226	443	669	1	20	21	n/a	n/a	n/a
	1991	231	551	782	9	10	19	n/a	n/a	n/a
	1992	217	515	732	n/a	n/a	n/a	217	515	732
	1993	205	472	677	2	12	14	205	472	677
	1994	195	459	654	1	9	10	195	459	654
	1995	194	710	904	3	23	26	879	817	1,696
Stockholm	1990	11	121	132	3	4	7	n/a	n/a	n/a
	1991	10	117	127	-	6	6	n/a	n/a	n/a
	1992	10	108	118	n/a	n/a	n/a	n/a	n/a	n/a
	1993	8	197	205	-	27	27	n/a	n/a	n/a
	1994	8	106	114	1	9	10	n/a	n/a	n/a
	1995	11	212	223	1	16	17	12	305	317
U.K. *	1990	553	2,006	2,559	38	120	158	742	2,081	2,823
	1991	541	1,915	2,456	20	101	121	758	1,982	2,740
	1992	514	1,878	2,392	n/a	n/a	n/a	725	1,958	2,683
	1993	485	1,927	2,412	6	180	186	635	2,050	2,685
	1994	464	2,070	2,534	12	256	268	658	2,531	3,189
	1995	525	2,078	2,603	38	190	228	707	2,563	3,270

Source: London Stock Exchange, Quality of Markets Review, various issues.

Table 5.1 Companies, Equity Issues, and Securities in Major European Markets



Source: London Stock Exchange, Quality of Markets Review, various issues.

Table 6. Market Value and Turnover in Major European Markets

Market	Year	Market Value			Turnover		
		Foreign (£m)	Domestic (£m)	Total (£m)	Foreign (£m)	Domestic (£m)	Total (£m)
Amsterdam *	1990	n/a	77,166.0	n/a	n/a	22,244.7	22,244.7
	1991	n/a	90,363.2	n/a	125.6	23,293.3	23,418.9
	1992	n/a	113,108.1	113,108.1	87.2	28,892.3	28,979.5
	1993	n/a	156,894.0	156,894.0	147.9	43,413.9	43,561.8
	1994	n/a	143,073.7	143,073.7	123.7	56,644.5	56,768.2
	1995	n/a	228,510.0	228,510.0	122.5	76,435.2	76,557.7
Germany *	1990	n/a	194,457.0	n/a	n/a	225,163.3	225,163.3
	1991	n/a	209,804.8	n/a	4,278.7	200,382.9	204,661.6
	1992	n/a	217,935.1	217,935.1	4,044.2	254,673.9	258,718.1
	1993	n/a	313,027.7	313,027.7	10,452.3	377,697.7	388,150.0
	1994	n/a	304,210.7	304,210.7	11,628.9	399,375.5	411,004.4
	1995	n/a	373,337.0	373,337.0	9,203.8	374,961.0	384,164.8
Paris	1990	n/a	159,348.5	n/a	n/a	65,291.2	65,291.2
	1991	n/a	185,649.4	n/a	2,255.6	63,473.6	65,729.2
	1992	n/a	216,947.2	216,947.2	1,776.0	73,271.6	75,047.6
	1993	n/a	308,750.0	308,750.0	3,057.0	106,802.0	109,859.0
	1994	n/a	288,464.2	288,464.2	2,530.8	126,743.0	129,273.8
	1995	n/a	321,694.4	321,694.4	2,293.5	132,563.5	134,857.0
Stockholm	1990	n/a	48,633.6	n/a	n/a	n/a	n/a
	1991	n/a	51,867.6	n/a	17.9	10,973.3	10,991.2
	1992	-	50,366.2	50,366.2	9.6	15,340.5	15,350.1
	1993	n/a	67,718.7	67,718.7	16.7	26,253.3	26,270.0
	1994	n/a	76,131.2	76,131.2	45.2	52,318.9	52,364.1
	1995	3,495.0	111,068.0	114,563.0	641.0	63,272.0	63,913.0
U.K. *	1990	n/a	445,044.5	n/a	n/a	321,922.7	321,922.7
	1991	n/a	541,164.6	n/a	137,726.4	178,763.0	316,489.4
	1992	1,552,750.4	624,393.3	2,177,143.7	164,745.3	216,929.5	381,674.8
	1993	1,918,431.3	810,102.7	2,728,534.0	289,785.2	281,983.7	571,768.9
	1994	1,982,838.3	774,556.5	2,757,394.8	359,333.4	303,001.4	662,334.8
	1995	2,357,003.0	900,329.6	3,257,332.6	395,392.0	323,166.0	718,558.0

Note

* Turnover has been halved for comparison purposes.

Source: London Stock Exchange, Quality of Markets Review, various issues.

Table 7. Foreign Listings in Major European Markets

Market	Year	Companies by Country of Origin									TOTAL
		European Union (EU)					Non-EU				
		United Kingdom	France	Germany	Other EU	Total EU	United States	Japan	Other Non-EU	Total Non-EU	
London	1990	na	5	11	78	95	121	26	158	305	400
	1991	na	-	-	8	8	1	1	9	11	19
	1992	na	-	-	3	3	1	1	7	9	12
	1993	na	-	-	4	4	1	-	3	4	8
	1994	na	-	-	6	6	1	1	9	11	17
	1995	na	-	-	8	8	3	1	32	36	44
	1996	na	-	-	5	5	2	-	11	13	18
	Total	na	6	11	112	129	130	30	229	369	518
Paris	1990	15	na	11	36	64	37	30	34	101	165
	1991	-	na	1	2	3	2	1	-	3	6
	1992	1	na	-	0	1	-	-	1	1	2
	1993	1	na	-	0	1	-	1	-	1	2
	1994	-	na	-	1	1	-	-	-	0	1
	1995	-	na	1	2	3	-	-	-	0	3
	1996	-	na	-	1	1	2	-	-	2	3
	Total	17	na	13	44	74	41	32	35	108	182
Stockholm	1990	-	2	1	2	5	1	-	4	5	10
	1991	-	-	-	0	0	-	-	-	0	0
	1992	-	-	-	0	0	-	-	-	0	0
	1993	-	-	-	0	0	-	-	-	0	0
	1994	-	-	-	1	1	-	-	-	0	1
	1995	-	-	-	0	0	1	-	-	1	1
	1996	-	-	-	0	0	-	-	-	0	0
	Total	0	2	1	3	6	2	0	4	6	12

Source: London Stock Exchange; Paris Stock Exchange, Stockholm Stock Exchange, letters to the author.

C. Cross-Market Arbitrage

Intuitively, one would expect multiple listed stocks to be perfectly arbitrated, i.e., that their prices on different markets would be virtually the same at each point of time. This would be particularly true if broker dealers could have access to both market at equal costs, and transaction costs were low enough. Cross listing would thus lead to integration of the relevant capital markets (Eun and Janakiraman 1990).

Empirical Studies generally confirm that the “law of one price” holds across markets with regard to multiple listed stocks (e.g., Kato *et al.* 1991). Empirical work dealing directly with EU markets is relatively scarce. The most direct evidence is provided by Pagano and Roell (1993), who found that SEAQ-I in London and the Paris Bourse are perfectly arbitrated: in a sample of 380 perfectly time-matched observations for 16 different stocks, not a single unexploited arbitrage opportunity was found.

On the other hand, Pagano and Steil (1996:27) cite two studies, in which some transaction prices struck in Milan fell outside the contemporaneous best bid and ask quotes of SEAQ-I dealers. These trades, though, generally involved rather small amounts and were not very visible to the generality of market professionals.

A related phenomenon is the so called ‘Siamese twins’. These are pairs of companies, whose corporate charters pool cashflows and link expenditures on dividends and repurchase of shares. A typical example is Royal Dutch Petroleum and Shell Transport and Trading, Plc, whose shares trade in several European markets and the US. Froot and Dabora (1995) report, that each company’s stock obeys “the law of one price”, indicating the existence of cross-border arbitrage. Yet, their main results show that the twin stocks do not move in lockstep and are correlated with the market on which they are most intensively traded.

Finally, a more remote evidence may be inferred from arbitrage between European stock markets and markets in the US. According to a senior official in the Stockholm Stock Exchange, market professionals in Stockholm share the assumption that brisk arbitrage in Swedish dual-listed stocks exists between Stockholm and SEAQ-I and the NYSE. Although it was not rigorously tested, the notion is that the spread in those stocks is very thin, close to transaction costs, and no gap develops between the markets (Vindevag 1996).

III. European Integration in General

Western European countries have reached the highest degree of regional integration on the globe so far. They have demonstrated an admirable ability to cooperate in issues that are often prone to controversy and distrust. Within the general scheme of an “ever closer union”, as provided for in the Treaty of Rome, an integrated capital market was an integral part. In this respect, the European Union (EU) is different than any other scheme of international cooperation aimed to achieve stock market integration or cooperation in securities issues. This Part puts forward the necessary background for understanding the context within which the EU has moved toward stock market integration. After emphasizing the uniqueness of the motivations for creating and broadening the EU, we note some milestones in the history of the EU. We then provide an brief overview of the institutions that are put to work for achieving the goal of integration. This will set the ground for a description of actual steps toward integration and harmonization provided in subsequent Parts.

A. The Special Case of European Integration

West European integration represents the archetype of regional integration: the only experiment in formal, institutionalized integration above the level of the nation-state to have survived and strengthened. Conventional theories of integration often allude to the economic benefits that ensue from abolishing barriers to trade, full utilization of relative advantage, etc. By integrating their economic resources nations are able to increase their total welfare. Those conventional motivations for regional integration notwithstanding, the West European integration does not derive its primary *raison d’être* from such reasoning. The movement toward the European Communities and subsequently for the European Union is primarily a consequence of geopolitical reasons and circumstances.

Economic integration was a strategy to achieve political objectives. American commitment, American political and financial support, and American provision of security were all important to its establishment and sustainability. Democratic societies, rebuilt on the ruins of World War II, were to be secured by linking their governments and economies. Popular acceptance of integration was eased by recognition of a degree of shared values and cultural community among mainly Catholic countries of the original six Member States and by their common postwar socialization into “Western” values under the influence of an American hegemon.

The transformation of Europe further into deeper integration in light of advances in transportation and telecommunication was due to the preexistence of the institutional structure from the 1960s based on a small and cohesive core (Wallace 1994).

Once a nucleus for integration was formed and its institutional foundations laid, economic considerations also played a role in deepening the trend toward integration. In the early 1980s, for example, it became apparent that the EC integration wagon had slowed down or halted. A report by Paolo Cecchini (1988) estimated the potential gains from further integration in a vast array of topics (not only stock markets or capital markets) to be up to 7% of West European GDP. This was a reaffirmation that

considerable economic stakes are involved in substantial integration in addition to the political ones.

In any event, according to Wallace, the experience of deep integration within Western Europe does not provide a model for others to follow. This is due to its unique geopolitical origins and history, which made it possible for Member States to forgo a considerable degree of national sovereignty. Such a scenario is less likely in other regions or globally. As we shall see, even the lessened degree of freedom of action often impeded the integration of stock markets in Europe.

It is our view, that Wallace's general observations are fully applicable in the specific context of European Stock Market integration efforts. In trying to understand and assess the achievements of the EU in integrating its stock markets, attention should be paid to the institutional framework that has set its direction and pace. Controversy and conflict of interests between stock markets are commonplace and were also abundant in the negotiations on the European Investment Services Directive, for instance. It is the general framework of the EU that has kept Member States at the negotiations table for several years until some agreed version was reached. Absent such long-term commitment to an integrative institutional framework, it is doubtful whether any material agreement could have been reached within a comparable period of time.

B. Milestones in European Integration

In 1951, France, Germany, Italy, Belgium, Luxembourg, and the Netherlands concluded the Treaty of Paris, establishing the European Coal and Steel Community. In 1957, the same countries signed the Treaty of Rome, and established the European Community. Rather than concentrating on strategic commodities alone, a broad perspective was taken. The Treaty of Rome provided for the free movement of goods, persons, services, and capital within the Community, with an initial focus on establishing a customs union. It did not call specifically for unification of capital markets. The customs union was achieved in 1968.

The 1970s saw the recession following the oil crisis. A growing number of non-tariff barriers were implemented as surrogates for outright custom duties, and the movement toward economic integration lost its momentum. The growing number of Member States also contributed to the difficulties in reaching consensus on further action. (The UK, Ireland, and Denmark joined the Community in 1973; Greece - in 1980; and Spain and Portugal - in 1986. In 1994, Sweden, Finland, and Austria acceded).

By the early 1980s it was clear that economic growth in Europe was falling behind growth in Japan and the United States. The European Commission took the view, that recovery from the recession was being held back by the failure to create the single market envisaged in the Treaty of Rome. In 1985, the Commission prepared a highly influential White Paper (European Commission 1985). The White Paper enumerated 300 issues in which EC legislative action was required in order to remove the restrictions on the development of a single market. It also set the end of 1992 as the date by which the legislative program was to be in place, i.e., enacted by the Council of Ministers of the EC and implemented by the Member States. The White Paper was adopted by the Council,

and became the basis for an amendment to the Treaty of Rome, known as the Single European Act.

In respect with financial services, the White Paper identified the following objectives:

- The complete liberalization of capital movements;
- The unification of national markets for financial services;
- The establishment of a common regulatory structure for financial institutions. (Scott-Quinn 1994).

The Act, however, did not include monetary union among the priorities laid down as legally binding for 1992. The issue rose again at the 1991 Maastricht summit, where it was agreed to introduce a single European currency unit by 1999. Presently, a significant question mark is hanging over the feasibility of this deadline, and over some Member States' willingness to meet it.

C. The Legal Mechanisms of Integration

The foundations of European integration are primarily legal in nature. Therefore, some background on the legal mechanisms of integration is necessary.

1. The Institutions

The Treaty of Rome, as amended by the Single European Act, established an array of institutions that are essential for the integration process.

- The Council of Ministers -- The Council comprises the ministers of Member States in charge of a certain issue. It thus has a changing personal structure, according to the context. It holds the power to adopt a common position with regard to a Commission's proposal and later to make final decisions on legislative measures proposed by the Commission. The single European Act revived the Council's power to adopt certain measures by a "qualified majority", based on a weighted voting formula.
- The Commission -- The Commission comprises 17 members appointed by mutual agreement among the Member States. It is charged with the implementation of the Treaty of Rome and is granted the sole power of initiative in proposing and implementing legislation.
- The European Court of Justice -- The Court comprises thirteen judges and six advocate generals. It has the authority to decide on issues of EU law. There are several avenues to reach the Court, including private action, an action brought by the Commission or a Member State, or a referral of question on Community law by a domestic court.
- The European Parliament -- The Parliament has traditionally been an advisory body. Under the Maastricht Treaty it now has some powers through a negative assent procedure.

2. The Legal Doctrines

Starting in 1963 and continuing into the early 1970's and beyond, the European Court of Justice established four doctrines that fixed the relationship between Community law and Member State law and rendered that relationship indistinguishable from analogous legal relationship in constitutional federal states (Weiler 1991:2413). The summary below of these doctrines follows Weiler (1991).

- The doctrine of Direct Effect -- The doctrine provides the following presumption: Community legal norms that are clear, precise, and self-sufficient (not requiring further legislative measures by the Community of the Member States) must be regarded as the law of the land, in the sphere of application of Community law.
- The doctrine of Supremacy -- The doctrine provides that in the sphere of application of Community law, any Community norm "trumps" conflicting national law, whether enacted before or after the Community norm. Additionally, the Court has the competence to determine which norms come within the sphere of application of Community law. Coupled together, the doctrine of direct effect and the supremacy doctrine create a "higher law", akin to one that governs federal states.
- The doctrine of Implied Powers -- The doctrine says that powers would be implied in favor of the Community where they were necessary to serve legitimate ends pursued by it. The doctrine is reinforced by complementary doctrines: exclusivity and preemption. Where a field has been preempted by the Community or is exclusive to it, and action is needed, the Member States are pushed to act jointly through Community institutions.
- The doctrine of Human Rights -- The Treaty of Rome does not include any Bill of Rights. In balancing the enormous powers of the Community under the preceding doctrines, the Court asserted that it would nevertheless review Community measures for any violation of fundamental human rights.

3. The Principle of Mutual Recognition

The general strategy for achieving the single European market is through harmonization of regulatory requirements. Regulatory harmonization reduces disparities among, and thus arbitrage between, national markets. Convergence of contrasting regulatory standards and the practices that follow them is supposed to be conducive to completion of a single market.

Regulatory harmonization of financial services in the EU has changed over the years. In the period before the 1985 White Paper the Commission followed the commonality approach. In respect with securities regulation, commonality would entail the development of substantially equivalent or uniform rules, applicable in all Member States. On the one hand, such rules would minimize the costs of dealing with diverse regulatory systems in terms of compliance, analysis, etc. They could thus yield considerable benefits. On the other hand, employing the commonality approach puts great pressure on the decision making mechanisms and institutions that promulgate the rules. In the period before the

Single European Act, Member States de facto adhered to a principle of unanimous decision, thereby providing veto power to each Member State. Not surprisingly, reaching consensus on regulatory policy as well as on specific wording of Directives became very difficult.

The commonality approach proved politically infeasible, given the insistence of Member States on retaining distinctive features of their domestic regulatory schemes (Warren 1991:198). The increasing number of Member States proved to make process even more difficult. A different approach was thus proposed in the White Paper and adopted in the Single European Act. Instead of attempting to mandate virtually identical rules and practices in national securities regulation a strategy of mutual recognition was employed.

Under mutual recognition, only basic, essential principles are prescribed, setting minimum standards of regulatory action, and leaving the detailed arrangement to be implemented independently by each Member State in its domestic law. It should be emphasized, that adopting the mutual recognition approach is based on a very strong premise, namely, that all the Member States generally share similar regulatory views and are willing, politically, to allow certain activities within their territories to be regulated by foreign countries.

A corollary of the mutual recognition approach was the acceptance that there would be competition among rules in the EU regulatory framework. Limits of scope do not allow a full analysis of regulatory competition here. In a nutshell, regulatory competition in a certain area may be seen as a beneficial process, providing the market with the best (or at least optimal) set of rules. Alternatively, it may be regarded as a destructive process -- “a race for the bottom” -- where states attract businesses by promulgating lenient rules and businesses take advantage of lower standards, migrating to such countries through “regulatory arbitrage”. According to Pagano and Steil (1996:18), the European Commission saw regulatory competition as “a necessary but regrettable consequence” of its inability to achieve full commonality.

The mutual recognition approach gave new life to regulatory harmonization efforts in the financial services field. Although controversies were still common, they were relatively easier to reconcile or sidestep.

4. The Principle of Subsidiarity

Another doctrine of growing importance in the EU is the principle of subsidiarity. The principle provides that decisions should be taken at the lowest appropriate level: as close as possible to the people who are affected by them. Thus, action at the Community level is required only if the desired objectives cannot be achieved -- at least not as efficiently -- by action at the national level (Trachtman 1992).

The mutual recognition principle implies that most of the securities regulation Directives defer to national regulatory agencies. There are two areas relevant to the integration of securities markets which would require overall action by the EC rather than separate actions by each of the Member States.

- The creation of a single currency for the Community. We discuss this issue briefly in Section VI.D.
- The creation of a securities commission for the Community. The principle of subsidiarity implies that each Member State should retain its authority in regulating its securities market, and thus works against creating a regulatory agency at the Community level (a "European SEC"). We discuss this issue in more detail below in Section IV.E.

IV. Regulatory Harmonization and Cooperation in the EU

The major vehicle for implementing the formal aspects of stock market integration in the EU is the Directives adopted by the Council of Ministers and subsequently implemented in domestic laws. As of 1 January 1996, the date when the Investment Services Directive became effective, the securities regulation Directives provide for an environment which is the closest in the world to an integrated international stock market. This Part first offers an overview of the Directives and their impact, some of which is drawn from O'Connor (1995). It then describes the manner in which securities regulators undertake their regulatory tasks when international aspects are involved.

In essence, the Directives represent cooperation between regulatory entities, as opposed to private sector cooperative initiatives. Negotiations on the wording of specific Directives are conducted formally at the level of Ministers of Finance. They are, however, informed by professionals at the regulatory level.

Several Directives pertaining to securities and stock markets preceded the White Paper, and were thus based on the commonality approach. Even though the early ones were drafted when the EC comprised only six Member States, they brought about only minor changes in the prevailing arrangement. These Directives were later on amended and adopted to the mutual recognition approach.

There was no declared policy for the issues with which the securities regulation Directives dealt. Nevertheless, a clear pattern may still be observed. Early Directives were relatively modest in their harmonization goals. They would provide for harmonization of basic requirements, while specifically allowing Member States to proscribe stricter rules as they see fit. Member States in general were given ample grounds to set the details of the legal arrangement (Cruickshank 1996).

Over time, technology was transforming stock exchanges to become more competitive. Recent Directives thus had to resolve the more contentious issues, and in a more detailed manner. The hallmark of this period is the Investment Services Directive (ISD). Indeed, it is acknowledged that the ISD may have gone too far in terms of being detailed, rendering its arrangement too rigid to cope with market developments. Alternative mechanisms for setting technical rules, such as the European Securities Committee, are sought (Steil 1996).

A. Stock Exchange Regulation

1. The Investment Services Directive

By far the most important Directive for stock market integration, the Investment Services Directive (93/22/EEC) is also a very complex document. This is due to the numerous political compromises that were required to reach an agreed version. Those difficulties also caused the ISD to enter into force three years later than the intended date under the 1992 Program, i.e., 1 January 1993. It is widely agreed, that much of the delay

stemmed from arguments between Member State representatives seeking to ensure that the ISD was worded in a way which might give firms from their country some competitive advantage. The ISD covers two major issues: regulation of investment firms (dealt with in the subsequent Section) and regulation of securities markets. In general, it prescribes a system of “a single passport”, under which a business regulated in one Member State may conduct business in the whole Community without further regulatory requirements on behalf of host countries. This broad principle, however, is subject to specific exceptions in certain cases and also to a general proviso, which allows Member States to derogate from it for purposes of “the general good”.

Originally, i.e., in its 1988 draft form, the ISD was intended to deal solely with investment firms, and leave the issue of market structure completely liberalized. In such a scenario, each Member State would have been free to set its rules for the business of running a securities market. Investors and investment firms thus could have chosen from a variety of market structures.

In 1989, the French government representatives to the Council of Ministers formally demanded to distinguish between “recognized markets” (subsequently relabelled “regulated markets”) and over-the-counter (OTC) markets. The French delegation insisted that Member States must have the right to require that transactions in domestic securities take place only in regulated markets. As the definition of “regulated” market emerged, it entailed “transparency”, in the sense of post-trade publication of transaction details, and formal “listing” of securities. Not incidentally, these requirements were not met by London’s SEAQ -I, the market section where foreign stocks are traded. In fact, the establishment of “regulated market” criterion which SEAQ-I could not meet was seen as an effective mechanism to force the repatriation of French share trading back from London to Paris (Steil 1996:116).

A fierce debate ensued between two coalitions, the “Club Med” group (comprising France, Italy, Spain, Portugal, Greece, and Belgium) and the “North Sea Alliance” (comprising the United Kingdom, Germany, Ireland, Luxembourg, and the Netherlands). At issue were mainly two concepts regarding stock market structure: concentration and transparency. Regulated markets, as presented by the French, were supposed to provide for both.

a) *Regulated Market*

The ISD’s definition of a “regulated market” is complex, and sometime even circular, due to political maneuvers. In essence, a regulated market is a regularly functioning securities market, that is, *inter alia*, formally designated as such by its home state, which requires compliance with the Directive’s reporting and transparency rules, and which complies with the Listing Particulars Directive (79/279/EEC), where the Directive “is applicable.” Being a regulated market represents a potential competitive advantage. If that market wishes to operate on a Community-wide basis, being “regulated” enables it to provide remote access terminals to traders in other Member States.

Pursuant to the “single passport” principle, article 15(4) of the ISD provides that regulated markets are entitled to provide trading screens to investment firms based in

other Member States without having to seek approval from the relevant foreign authority. At the insistence of the French, however, Article 15(5) preserves Member States' rights to authorize or prohibit the creation of "new" markets within their territories. It is not yet clear whether this right applies to existing markets that operate in other Member States or solely to newly established markets (Steil 1996:130).

The "where applicable" clause leaves open the issue which was a major cause of concern for the United Kingdom, i.e., the status of SEAQ-I. Stock are not formally listed on SEAQ-I but rather simply traded. Requiring markets to have listed stocks would have ruled out SEAQ-I as a duly regulated market. The "where applicable" clause opens the door to excluding markets such as SEAQ-I from the scope of that requirement altogether.

b) Concentration

The Directive permits a Member State to require that securities transactions be carried out on a regulated market, that is, be concentrated.

Concentration (as opposed to fragmentation) in its French conception meant that shares in French companies held by French residents must be traded in the French stock market. Consequent to British and German objections in particular, the concentration requirement that was eventually included in the ISD is significantly weakened in comparison. First, the concentration requirement is not a mandatory arrangement but rather an enabling one. It is expected that not all Member States will adopt such a requirement.

Second, the concentration requirement, once invoked, can only force domestic traders to trade in "a regulated market", i.e., *any* duly designated regulated market, and not only the invoking Member State's domestic market. Such a country can, however, invoke the all-encompassing "general good" exception or the "new market" provision, and block foreign markets from penetrating its borders.

Third, three conditions -- set in Article 14(3) -- must be satisfied, before the concentration rule may be applied by a Member State:

- The investor must be established in or be a continuous resident of that Member State.
- The transaction must be executed by an investment firm conducting business within the Member State.
- The transacted securities must be listed on a regulated market in that Member State.

Fourth, and very importantly, Article 14(4) provides that a Member State invoking concentration must give domestic investors the right to authorize transactions on their behalf being carried out off a regulated market -- in other words, to opt-out. Yet, investors' ability to respond to their country's opting-in for concentration by opting-out is not absolute. A Member State may avail the opting-out ability only to investors that, in its view, are sufficiently protected. Essentially, opting-out is thus limited to sophisticated investors, chiefly professional and institutional ones. To counter this counter-counter-

measure, there is a further requirement that opting-out must not be subject to conditions which jeopardize the prompt execution of investors' orders. It is unclear whether an investor may give a blanket authorization or may be required to authorize particular transactions (Warren 1994:212).

According to Steil (1996:125), the controversy over the concentration issue exemplifies how much Member State delegations were locked in a proxy war on behalf of domestic interest groups. Each delegation took the negotiation position perceived to be most favorable to its intermediaries and exchanges. Having concentrated auction markets, France and Italy backed concentration; respectively, the UK, Germany, and the Netherlands, who have more dealerized markets, strove to allow alternative market structures.

On the theoretical level, Steil and his colleagues (1996) argue that fragmentation, especially when coupled with diversity of market architecture, may actually be beneficial. First, multiple accessible markets undermine monopolistic behavior on behalf of domestic exchanges and cartelistic behavior of their member firms. Second, competition between market architectures brings wider variety and accommodation to investors' needs. A survey they conducted on institutional investors' preferences shows no support in the elimination of parallel (OTC) markets. Third, they argue, strict concentration -- namely, the routing of all the orders pertaining to a certain firm to its home-country market by an all-European automatic order-routing system -- is likely to damage market liquidity by introducing unnecessary rigidities into it. In particular, it would limit traders' techniques by restricting them to simple market or limit orders, whereas today markets that are not totally automated like CAC offer a greater variety of trading orders. Finally, they claim that it is misleading and unhelpful to see the whole issue as a competition between geopolitical monoliths (the US, EU, and Japan) for economic supremacy.

c) Transparency

Transparency of trading implies the scope and updatedness of available information with regard to executed tradings. Similar to the concentration provisions, the ISD's transparency provisions were also subject to intense controversy, and are also quite vague.

The Club Med group argued that stringent transparency rules were critical to ensuring an adequate level of investor protection and to reducing risks of distortion between competing markets. In a way, transparency was presented as a proxy for quality. The North Sea Alliance argued that limited secrecy regarding trading transactions was essential to the protection of market makers, and thus, of market liquidity.

This controversy, again, reflects the differences in market structure between the two groups. In a typical order-driven Club Med market, e.g., the Paris Bourse, a high level of transparency may improve the market's functioning as a price discovery mechanism. On the other hand, in a typical quote-driven North Sea market, like SEAQ-I, dealers commit capital to provide liquidity. Full transparency would undermine their ability to unwind positions they are obliged to take as market makers. By publicizing their exact position they would make themselves vulnerable to tradings in adverse conditions (Steil 1996).

Article 21 of the Directive reflects a compromise between the two factions. It requires all regulated markets to publish at least weighted average prices, high and low prices, and aggregate trading volumes at the start of trading and on a rolling basis throughout the trading session. It is expected that European stock exchanges will adhere to their custom of publishing individual transaction data and not just average data.

Moreover, Article 21 allows Member States to exclude from their transparency rules transactions involving large blocks of securities or illiquid securities, small markets, to preserve the anonymity of firms and investors, and exceptional market conditions. These provisos are so broad and vague, that they render the transparency requirement meaningless. The issue, therefore, remains at the national level, or more accurately, at the stock exchange level. Consequently, it is subject to competition among market structures. It may be noted anecdotally, that currently, the transparency rules of London's SEAQ-I actually go beyond the minimum standards set by the ISD.

d) Is There an Optimal Structure?

The legislative history of the ISD reflects a deep controversy over the questions whether there is an optimal market structure, and whether one should be prescribed by law. Putting industry interest groups, and possible French aspirations to drive SEAQ-I out of business, on the one side, one may still ask to what extent should legislation be used for achieving an optimal market structure.

In the European context, Steil and his colleagues (1996) put forward a twofold argument. First, they claim, different types of traders and investors may want to have access to different types of market structure. In particular, professional traders (dealers) and institutional investors are more likely to have large positions and trade big blocks. They are also better equipped to understand how the market functions and are less sensitive to transaction costs (up to a certain level). A dealer, quote-driven market may thus be more appropriate for them.

On the other hand, small, mainly retail, investors are mostly interested in getting a "fair" price. This is often understood to be the most recent market price, that presumably reflects all publicly available information, including trading data. Continental European markets are mostly order-driven, and allow for automated order matching. Thus they are more appropriate for such investors.

Second, there exists an important relationship of *interdependence* between the two market types, specifically when stocks are multiple listed. An order-driven highly transparent market provides a reference, or a benchmark, for the market price. It further serves for dealers and other large block traders to work an order, taken on the dealer market, gradually into the order-driven market. They can thus unwind positions with lower effect on the market price, if they are willing to take the time risk. Conversely, positions that were accumulated in the order driven market can be aggregated and negotiated more flexibly on the dealer market.

B. Intermediaries Regulation

1. The Investment Services Directive

The original goal of the ISD was to establish a single passport system with regard to investment firms. It was preceded by the Second Banking Coordination Directive (SBCD), which was adopted in 1989 and implemented in the 1992 Program deadline on January 1, 1993. The SBCD provides for a single passport to credit institutions (mainly banks), under which credit institutions incorporated in a Member State would be allowed to offer, in any Member State, a range of services listed in an Annex as activities subject to mutual recognition.

Banks in several continental countries, especially Germany, operate as “universal banks”, i.e., they provide credit services and investment services by the same legal entity. Consequently, they use the same capital to back both kinds of activities. The SBCD preserved banks’ right to operate in that manner. The delays in adopting the ISD thus created an anomaly, whereby universal banks could conduct investment activities with a single passport while specialized investment firms could not. In general, the ISD now permits duly licensed investment firms incorporated in a Member State to provide a variety of services, set forth in an Annex, in the whole Community.

With respect to stock exchange membership, Article 15 of the ISD permits investment firms and banks to become members in any regulated market in the Community, provided they are authorized as such in their home country. Either through a branch or a subsidiary, these institutions can also get access to the host state’s clearing and settlement system.

Initially, the Club Med Group insisted that banks incorporate separate subsidiaries for conducting investment services and accessing stock exchanges (which explains why Germany joined the North Sea Alliance). As a compromise, France, Italy, and Belgium were allowed to deny access for banks until the end of 1996. Spain, Portugal, and Greece are allowed to extend that period until the end of the century, and may extend it even further, subject to a certain approval procedure.

Article 15(4) further provides that in cases where a regulated market does not require a trading floor, investment firms will have the right to have electronic remote access. Member States are required to ensure that facilities for remote access exist.

One subject on which the Member States were not able (or willing enough) to reach an agreement was the requirement that Member States promulgate codes of conduct for intermediaries in their dealing with clients. The Club Med group championed such rules, maintaining they are crucial for investors protection. The North Sea Alliance again took a more liberal attitude. As a compromise, the ISD includes a call for Member States to promulgate such rules, but no obligatory requirement to do so.

While mutual recognition is the underlying principle of regulating Community investment firms, firms from outside the EU are subject to different rules. Originally, the draft ISD (and the draft SBCD) imposed strict reciprocity as a condition for access to non-EU firms into the EU. The US in particular vehemently objected to such a condition, which would have created the dreaded “Fortress Europe”. The final versions of both the

SBCD and the ISD now include a weakened requirement, namely, for national treatment. Under that condition, as set forth in Article 7 to the ISD, the non-EU country must afford EU investment firms the same competitive opportunities available to domestic investment firms. The Directive further provides for a continuing (and highly discretionary) review process to assess the degree to which that condition is kept. To enjoy the benefits of national treatment, non-EU companies have to incorporate a special subsidiary, subject to a certain grandfathering proviso.

2. The Capital Adequacy Directive

The Capital Adequacy Directive (93/6/EEC - CAD) was drafted by the EC Commission in parallel with the ISD. The two Directives are considered a joint package. The CAD was adopted within a short time period with the ISD (not without extensive negotiations) and entered into force at the same date, January 1, 1996.

The CAD was drafted with three principal objectives: two internal to the EU and one external. First, the CAD aims to ensure that both investment firms and credit institutions hold sufficient capital to cover the market risks to which they are exposed. Second, the CAD aims to ensure that there is no competitive distortion between the two types of institutions -- credit institutions and investment firms -- as a result of differential capital requirements, when they compete in the same area. Therefore, the CAD takes a functional regulatory approach. Third, in drafting the CAD the Council sought to ensure that its aims are achieved while preserving the competitiveness of the European financial services sector globally (Scott-Quinn 1994).

The issue of capital adequacy, especially when banks' capital standards are involved, raises grave problems that transcend the scope of this Report. In the following paragraphs, therefore, only cursory overview is provided, with an aim to point at problems more than to discuss them.

The practical problem which led to implementing of the CAD was the coexistence within the EU of universal banking (mainly in Germany) and separated banking and securities firms (e.g., in the UK). In order to set a comprehensive arrangement, the CAD applies to all those firms. The functional approach means that the CAD looks at the nature of business activity rather than the general character of the entity that conducts that activity. Different standards are then applied to different functional activities. While clear and elegant in theory, the actual application of the principle proved very problematic.

The mechanism for treating securities activities differently is the "trading book" concept, as defined in the Directive. Universal banks are allowed to abstract their securities business -- the trading book -- from their banking business and apply the CAD standard to the former. The banking business would be subject to the more stringent Basle standards and other applicable EU Directives. In any event, national regulators are given considerable latitude in setting higher standards on the one hand, and in approving specific arrangements with particular firms on the other.

Dale and Wolfe (1996) argue that the CAD regulatory regime suffers from a number of material defects:

- The imposition of different capital standards for the trading book and the banking book makes no sense on prudential grounds, since the risks incurred on each book are not segregated.
- The ability of banks to fund their securities trading with cheap bank deposits protected by a state safety net may distort competition while posing significant moral hazard problems.
- The CAD's methodology for risk assessment (the "building block" approach) provides a poor representation of the actual equity position risk borne, as it fails to take proper account of portfolio diversification.
- By setting detailed standards in the Directive itself, the CAD suffers from unnecessary rigidity. For example, the CAD needed to be updated to align it with the Basle rules before it even became effective.
At the same time, Scott-Quinn (1994) emphasizes, that by giving ample discretion to national regulators, the CAD's flexibility in fact allows them to tilt the playing field in favor of their regulated firms. In more exact terms, it allows them to externalize some of the risk to other Member States.

3. The UCITS Directive

The UCITS Directive (85/611/EEC) applies the mutual recognition principle to "undertakings for the collective investment in transferable securities" (UCITS). Adopted in 1985, it was the first to do so in the financial services field, and, in fact, preceded the White Paper in applying mutual recognition.

The Directive creates the institution of an authorized UCITS, which is an open-ended collective investment fund. A UCITS can be set up as a common fund managed by management companies or as a unit trust or investment company. A UCITS is entitled to market its units throughout the Community, while remaining subject to the control of its home country. However, its marketing activities in other Member States must comply with the rules of those states. The Directive further sets forth a list of restrictions in respect of a UCITS's investment portfolio.

C. Issuer Regulation

Starting in 1979, the EC (and then the EU) promulgated a series of Directive intended to simplify and set minimum standards to the relationship of public companies vis-a-vis their shareholders and the market. The first three Directives discussed below were adopted together in June 1983. As they preceded the 1985 White Paper, they were based on the commonality approach rather than on mutual recognition. Later amendments brought some of these Directive within the ambit of mutual recognition too. Before proceeding to the content of the Directives, two background comments are in place.

First, note that the practicalities of issuing securities in the EU differ somewhat from the those in the US. In the US, all securities that are registered with the SEC for sale to the public, are subject to the same disclosure requirement whether or not they are also listed on a stock exchange (stock exchange may, and do, require further disclosure in

certain cases). In most of the EU registration used to be a negligible aspect and the emphasis was on admission to listing requirements (Kay 1989:113). Thus, the Directives initially dealt with disclosure in the listing context and then, separately, with disclosure in connection to public offerings. Later amendments consolidated and unified the two sets of rules.

Second, the order in which the Directives were adopted was not purposefully planned. The first to be adopted was the Directive on admission to listing, which may be seen as a specific case of public offering. As it turned out, all of the six Member States have already had some listing requirements. What the Directive had to do was to provide for some standardization of that requirement, but not to impose new requirements on Member States. As a consequence, the idea was received quite favorably by the Member States, and the drafting went smoothly (Cruickshank 1996).

On the other hand, not all of the Member States had requirements for disclosure during listing. The Directive on Listing Particulars which provided exactly for that came after the Admission to Listing Directive. It built on the success and momentum that were achieved with the latter which facilitated its adoption. General rules of disclosure during public offerings came only nine years later in the Directive on Public Offering Prospectus (Cruickshank 1996).

1. The Admission to Stock Exchange Listing Directive

In its original version, the Admission to Stock Exchange Listing Directive (79/279/EEC) harmonized the conditions for the admission of securities to official stock exchange listing. It sets out conditions, enumerated in an Annex, that all Member States had to apply. Those conditions cover the legal position of the company, its minimum size, a company's minimum period of existence, legal aspects of its shares, etc.

The Directive further imposed a continuing duty on listed companies to publish, without delay, information on any important new development which might impact share price.

When a company is listed on stock exchanges in more than one Member State or in third countries, the information provided to each exchange must be equivalent. In no case may a third country exchange be given disclosure which is more informative than the information provided in the Community.

The Directive requires Member States to cooperate and exchange information, in particular when a listing is applied for in several Member States at the same time.

In 1994, the Directive was indirectly amended through an amendment to the Listing Particulars Directive described immediately below. The need for individual application for listing in several stock exchanges was abolished in certain circumstances.

2. The Listing Particulars Directive

The Listing Particulars Directive (80/390/EEC) standardizes the legal rules concerning the obligations to publish listing particulars prior to admission of securities to

official listing. It further provides for mutual recognition of listing particulars by the Member States.

The Member States are obliged to require the publication of listing particulars before securities can be admitted to stock exchange listing. The guiding principle is that the listing particulars must contain the information which is necessary to enable an informed assessment of the securities in light of the assets and liabilities, financial position, profits and losses, and prospects of the issuer and of the rights attaching to such securities.

A 1987 amending Directive (87/345/EEC) provides for mutual recognition in other Member States of listing particulars prepared by a company and approved by one Member State.

In 1990, further simplification was achieved in another amending Directive (90/211/EEC). It provides for the mutual recognition of a public offer prospectus as listing particulars if it was approved as a public offer prospectus within the three months preceding the application for admission to listing. Member States are not obliged to apply the mutual recognition amendments of 1987 and 1990 to securities issued by non-EU companies.

In 1994, an important amendment was introduced in Directive 94/18/EEC. It is an opt-in arrangement, that allows (but does not oblige) Member States to dispense with the obligation to require listing particulars in two cases.

- Securities which have been admitted to official listing in another Member State for at least three years. The issuer has to be in compliance with its reporting and other obligations, and to make available to the public some basic information.
- Securities which have been traded for at least two years on a second-tier market regulated and supervised by a Member State. The *same* Member State may then dispense with the listing particulars when the issuer seeks admission to official listing.

3. The Half Yearly Reporting Directive

The Half Yearly Reporting Directive (82/121/EEC) applies to companies whose shares have been admitted to official stock exchange listing. It sets minimum (indeed, minimal) requirements for publishing semi-annual reports, covering turnover, pre-tax profit or loss, and dividend paid or prospected.

4. The Public Offer Prospectus Directive

The Public Offer Prospectus Directive (89/298/EEC) requires the distribution of a prospectus where a public offering is made of transferable securities, that are not already listed on a stock exchange. The general duty has a long list of exemptions for non-public offerings, small offerings, etc. An important exemption is granted to Eurosecurities, which are typically distributed with only short notice and traded by sophisticated investors. The scope of that exemption as well as its rationale with regard to equity securities are relatively vague (Warren 1990).

The prospectus must contain the information which is necessary to enable an informed assessment of the securities in light of the assets and liabilities, financial position, profits and losses, and prospects of the issuer and of the rights attaching to such securities. Once duly approved, a prospectus must be accepted in all Member States in which the offer is carried out, subject to translation to the local language and the provision of certain local-related information.

Member States are not obliged to apply the mutual recognition principle to securities issued by a non-EU company, defined according to the place of its registered office.

The information required under the Directive is less detailed than that required for official listing under the Listing Particulars Directive, apparently in order not to burden small- and medium-sized issuers. However, the issuer may draw up the prospectus in accordance with the Listing Particulars Directive with adaptations to the circumstances of a public offering. After the document is submitted to scrutiny and approved it may serve for both purposes.

D. Transaction Regulation

1. The Transactions in Major Holdings Directive

The Transactions in Major Holdings Directive (88/627/EEC) applies to companies whose share are officially listed on a stock exchange. It obliges both the buyer and the seller of a “major holding” to notify the transaction to the company within seven days. The company is then obliged to notify the public within additional seven days.

A “major holding” is defined as the crossing of each of several thresholds, in either direction. For the purposes of computing a major holding, account is taken of indirect holding by related persons and entities, holdings in agreement, etc.

2. The Insider Dealing Directive

Before the Insider Dealing Directive (89/592/EEC) was adopted in 1989, insider trading was commonplace in many European stock exchanges. In some, notably the French and the German, it was considered as “part of the game” of securities trading. The late 1980s witnessed several insider trading scandals both in Europe and in the US, which focused public attention on the issue. As a consequence, and in response to heavy American pressure on some European securities regulators, insider trading was prohibited.

The European approach to banning insider trading is conceptually different than the American one. US law does not prohibit insider trading specifically and explicitly. Rather, insider trading is classified by decision law to be a form of securities fraud. It is not defined formally in any statute. The Insider Trading Directive takes a direct approach, and specifically defines insider trading by defining its two components: inside information and insiders. In the special European setting, where multiple judicial systems did not have substantial tradition and experience in coping with insider trading, such an approach was probably the only feasible one. The continental expertise in applying statutory texts also contributes to the effectiveness of that approach.

Member States are obliged to make it an offense to divulge inside information to third parties other than on the course of business, or to recommend to third parties to transact, based on inside information (“tipping”). Penalties must be sufficient to promote compliance with the measures taken under the directive.

Member States would have jurisdiction over all transactions taking place on markets within their territories, but may extend their jurisdiction extraterritorially.

E. Actual Regulatory Cooperation

The considerable harmonization of legal rules notwithstanding, it follows from the principles of mutual recognition and the single passport that different national authorities are in charge of implementing and enforcing the rules laid by the Directives. This section portrays in broad strokes the regulatory structures that are in place in EU countries, with an emphasis on cooperation frameworks.

Regulatory structures vary considerably among Member States. In the main, the archetypal structure is derived from the special qualities of the stock market, and resembles that which exists in the US. Day-to-day oversight of the stock market generally requires a high level of professional knowledge and dealing with numerous technical details. Typically, the stock market itself would be entrusted with it, as is the case in the US. Regulation at the higher level is undertaken by a governmental agency, whether independent or a part of the Ministry of Finance. In Germany, like in the US, which are both federal states, a third, or mid-layer is added at the level of the several States.

As a broad generalization, regulatory jurisdiction in European countries is determined according to the rule of territoriality. In order for a regulatory agency (and subsequently, for the courts) of one country to assert its jurisdiction, some territorial link must exist with the regulated activity. Extraterritorial jurisdiction of the kind known in the US, i.e., one based on foreign based activity that has an adverse effect within the US, is not known in Europe in such broad terms.

In the particular context of international securities regulation, one has to remember that the regulatory structure set up for that purpose in the EU is relatively new. Most of the cross-border activity over the last decade centered in continental trading migrating to and from SEAQ-I. There, companies could trade without being listed officially and trading was conducted mainly by large sophisticated investors. In their domestic markets, continental European countries did not have a tradition of vigorous securities regulation. All this, we conjecture, has led to relatively little effort being put in this direction.

The growing interest among investors in international diversification and, above all, the entering into force of the ISD underscore the regulatory problems of international securities activities. European regulators today are aware of these issues, but in general, their regulatory jurisdiction is still defined in terms of nationality or territoriality. The major territorial links are the location of the market and domicile of the issuer. For example, transactions in the shares of French companies listed in Paris are in principle in the interest of the French regulators, even if effected abroad. Yet, the rules are not straightforward. A hypothetical French company that would only be listed abroad, say, on the forthcoming EASDAQ market based in Belgium (see section V.F below), would in

theory be under sole supervision of Belgian regulators, while being clearly in the interest of French ones too. After several conversation with officials in EU regulatory agencies, it is our understanding that no clear picture so far exists among them with regard to assertion of their jurisdiction in such cases. A particularly thorny issue in this regard is defining the place of the transaction, which defines the market, and thus, the responsible regulatory authority. This lack of clarity should wither over time, particularly as more emphasis is put on cooperative measures. In any event, it attests to the considerable difficulties attendant to any effort of achieving stock market integration.

The combination of territorial rules of jurisdiction and the principle of the European passport has made European regulators highly aware of the need for regulatory cooperation. This need will increase as multiple listing and cross-border trading becomes more commonplace. The issue of insider trading is a telling example. An insider of a multiply listed company, wishing to conceal her trading on non-public information could in theory effect these transactions abroad and even split them among several markets. To respond to such a threat, regulators have to assign regulatory responsibility and also to reconstruct the full picture of tradings in the company's stock, in order to detect suspicious transactions. Some European securities authorities are preparing to undertake such a task, which would require extensive exchange of trading data among stock exchanges and regulators, while others are not, at least yet.

In order to overcome the severe shortcomings of unilateral regulation, European regulators supplement its measures with various forms of regulatory cooperation. Generally speaking, they prefer effective, albeit somewhat informal, solutions over formal institutions. Thus, there exists no formal organization of European securities regulators although all of them are members in the International Organization of Securities Regulators (IOSCO). Cooperation among regulators takes several forms.

- Bilateral cooperation -- The preferred format of cooperation between European regulators is bilateral contacts. Such contacts may be very informal. Oftentimes, they are held in the framework of Memoranda of Understanding (MOUs) with other agencies. These are non-binding documents between regulators in which they agree on shared principles, such as the need to join forces in preventing market abuses. Their main provisions include agreements to exchange information, help in investigations, and ensure the confidentiality of such shared information. In certain cases bilateral cooperation is being done with no MOU in existence at all. This is the case with the German Federal Securities Supervisory Office which claims to have established fruitful working relationship with other regulators without signing MOUs yet (Bergstresser 1996). It should be borne in mind that virtually all the securities regulation Directives oblige competent authorities of Member States to cooperate and exchange information in order to ensure effective regulation. This seems to have rendered additional MOUs within the EU not cost-effective, if not redundant (Deveney 1996).
- The High Level Group -- The idea of creating a regulatory agency at the Community level (a "European SEC") has been on the table for several years, but the initiative was neglected for some time. The protracted negotiations over the

Investment Services Directive have proven the necessity of Community-level body for updating and “fine tuning” the Directive’s technical requirements. Presently, national securities regulators cooperate for that purpose within a framework of an advisory committee, known as the “High Level Group”. It is a board of high-ranking members of stock exchanges and supervisory authorities that currently deals with interpreting the ISD and implementing it into national law. Its meetings are chaired by officials from the EC Commission (DG XV). It is planned to formalize this process in a special Directive which would replace the Group with a European Securities Committee, similar to the Advisory Banking Committee in charge of the SBCD (Cruickshank 1996; Bergstresser 1996).

- The Group of Chairmen -- In addition to the High Level Group, the presidents of the EU securities authorities also meet occasionally as member of the “Informal Group of Chairmen” without representation for the EC Commission. The Group is a forum for debate and exchange of opinions rather than for decision making. Examples for topics discussed in this forum include the actual implementation of the single passport system and implementation of the ISD’s grandfathering provision on preexisting investment services providers. The combination of professional regulators of the highest rank and the informal (some say mysterious) style of their meetings is claimed by European officials to be very conducive for discussing common problems (de Marigny 1996; Bergstresser 1996).

To sum, securities regulation authorities in EU countries were put in a position where they must cooperate and are now beginning the process of learning how to do so effectively. A number of factors contribute to the process. First, there exists a broad framework of Directives which is supposed to ensure some minimum level of regulation in all Member States, and with generally the same rules. This in turn creates a threshold level of mutual confidence which is crucial for actual cooperation. Second, a regulatory strategy of mutual reliance is in effect due to the principle of the single passport and mutual recognition which forces national regulators to work in teams. Not only that they can rely on each other but they also must do so. Third, the field of securities regulation is but a sub-sector of a much broader plan of integration which makes it improbable for national regulators to renege on their commitments. However, this is not to say that a certain country cannot externalize the adverse effects of lenient regulation -- a problem which exceeds the scope of this report.

F. The Effect of Regulatory Harmonization

It is virtually impossible to gauge the effect that regulatory harmonization has had on the process of stock market integration in Europe. As already mentioned in section II.B above, the statistics of foreign activity in most European stock exchanges in the 1990s do not provide an unambiguous picture.

We believe that a number of reasons have led to this situation. For a fair amount of time, harmonization of securities regulation rules was not the decisive factor for stock market integration or fragmentation. Rather, the critical factors were institutional barriers to entry by intermediaries and obsolescence of trading systems in continental Europe. The early disclosure Directives could hardly have a significant impact on cross-listing and cross-border trading when London's SEAQ-I was the undisputed market leader, combining higher liquidity with more lenient requirements from issuers.

This observation must not be misinterpreted as meaning that the Directives were unimportant. One clear effect of the Directives pertaining to issuers was to lower issuers' transaction costs for primary market transactions, i.e., listings and public offerings. At the same time, it must be acknowledged that transaction costs for investors increased as a consequence since they now have to refer to documents prepared according to foreign methods, albeit translated. Whether the combined effect is positive or negative is hard to tell.

The Directives that are most conducive to stock market integration are the ISD and CAD. Notwithstanding the impediments introduced to protect certain interest groups, they still have dismantled barriers to entry considerably. However, these Directives came into force only recently and in fact have not yet been implemented by all Member States. Due to the late effective date of ISD and CAD it is too early to pass a judgment on their effect in terms of numbers.

It is also important to note that when these two Directives entered into force, an undisputed market leader no longer existed. A number of continental stock exchanges are now in a position to compete with SEAQ-I on equal footing, taking advantage of the ISD and so are potential rivals or new entrants. In an alternative hypothetical scenario, with only one major stock exchange among several negligible ones, an arrangement comparable with the ISD might produce perverse effects, helping it to consolidate its position and monopolize the market.

V. Pan-European Integration Projects

A. The Unique European Experience

West European countries have gone further than any other region in world on the road to international stock market integration. Their efforts for integration did not remain in the abstract. Rather, in about a decade, West European countries have witnessed a flurry of projects and programs aimed to bring about actual integration between national stock markets. In that period, at least seven projects -- six of them after 1990 -- have been initiated to connect national stock exchanges or to supplement them with truly pan-European platforms. These initiatives were conducted in various scales, from a two-country to a seventeen-country system, and with varying geographical coverage. Four of the projects failed or were abandoned; two are currently under way, albeit in preliminary stages of implementation; the seventh is still mainly notional, with questionable prospects for success.

The European experience provides a unique opportunity for the study of regional stock market integration. The wealth of activities toward actual integration renders it a large scale laboratory, where real-life experiments in stock market integration are conducted. In this respect, the failures are as valuable for the student as are the successes. Any effort toward stock market integration should thus take a close look at the European experience, and identify the goals, strategies, and circumstances that were conducive to integration and those that were not.

Among the general themes that constitute the backdrop for the European integration projects, one deserves particular mentioning. Throughout the last decade, Europe has had a pan-European system de facto, in the form of SEAQ-I. The migration of trading to London often drove integration efforts possibly more than any theory of a Single European Market.

Ever since its 1986 "Big Bang", SEAQ-I has functioned as a central market for European stocks, while continental stock exchanges were struggling to modernize themselves. Recall that trading on SEAQ-I offered continuous availability of market makers who were committing substantial capital to provide a deep market. In addition, trading in London was not subject to any transaction tax on non-UK stocks, while trading in continental Europe was. The trend reversed after 1991, after continental stock exchanges started to implement modern trading systems, which made trading in Europe more efficient.

B. The 1985 White Paper

The majority of European projects for stock market integration was influenced by the EC Commission's White Paper of 1985 on a Single European Market (Commission of the European Communities 1985). The White Paper inspired not only the promulgation of the Directives. It also put forward a concise vision of the future integrated European stock market. Section 107 of the White Paper includes the following language:

“Work currently in hand to create a European stock market system, based on Community stock exchanges, is also relevant to the creation of an internal market. This work is designed to break down barriers between stock exchanges and to create a Community-wide trading system for securities of international interest. The aim is to link stock exchanges electronically, so that their members can execute orders on the stock exchange market offering the best conditions to their clients. Such an interlinking would substantially increase the depth and liquidity of Community stock exchange markets, and would permit them to compete more effectively not only with stock exchanges outside the community but also with unofficial and unsupervised markets within it.”

In light of this passage, it is not surprising that many integration projects indeed sought to link national stock markets. Repeatedly, a pan-European system of some sort was supposed to provide the liquidity and depth that continental exchanges were missing and lure business back from London. Efforts to realize such a system have taken various forms. Most cases proved fruitless.

C. IDIS

The first project of stock market interconnection actually preceded the White Paper, and is the “work currently in hand” mentioned in section 107. In February 1984, European stock exchanges considered a plan for an electronic information exchange system, called Inter-Bourse Data Interchange System (IDIS). IDIS was intended to lay down a system or network to connect stock exchange floors in the community and to transmit equity prices for multiple-listed securities in the EC. It was further intended to extend the system at some later stage to carry bid and offer prices, confirmation of trades, and to enable instructions for clearing and settlement of trades to be conveyed, using standardized formats, which were yet to be devised. It was planned to initially link up the stock exchanges in London, Milan, Brussels, and Amsterdam, in mid 1985 (Riley 1984; Agence Europe 1984).

In retrospect, it is evident that IDIS had no chance to be realized. By the time the blueprint for it was being laid, traditional trading floors were disappearing from Europe, to be replaced or supplemented with automated trading systems. For reasons unclear to us, the project nevertheless enjoyed periods of renewed interest, and new schedules were repeatedly set. In 1987, the European Commission became involved, and provided some financial support. In September 1989, the Federation of Stock Exchanges in the European Community (FSEEC, later the Federation of European Stock Exchanges, FESE. See Section V.I) disbanded the project (European Report 1990).

D. EUROLIST and EUROQUOTE

1. Early Starts

In January 1990, FSEEC commissioned a feasibility study on a proposal to form what was called a “super-league” listing. The idea was to create a single equity listing for Europe’s leading 250 to 300 companies. The common listing was supposed to be big

enough to meet the demand for capital from large European companies and act as a strong magnet for capital from around the world.

At that time, the FSEEC was already studying another project, called Price Information Project for Europe (PIPE), that was meant to serve as a pan-European information reporting system (ISRR, 1990a). The decision to create PIPE was reached in September 1989, when IDIS was scrapped. In mid-1990 the FSEEC decided to go ahead with PIPE, later renamed Euroquote (see next Section). Reaching preliminary agreement on PIPE proved relatively easy but the “super-league” listing project -- then dubbed Eurolist -- produced a simmering dispute between the London, Paris, and Frankfurt bourses.

Originally, the French stock exchange saw the concept of a European single list as including the stock market system itself, whereas for the British it meant only a list of stocks. This difference in views was hardly surprising since the British position with regard to the market system issue was that the London Stock Exchange’s SEAQ-I system should be the basis for a European exchange (ISRR 1990b).

In fact, the dispute reflected a deeper controversy about the proper target investors for an all-European stock exchange. London’s SEAQ system was particularly suitable for the needs of institutional investors. Joined by the Madrid Stock Exchange, it thus supported a pan-European wholesale market. The French and the Germans, on the other hand, emphasized the need for a retail market. They wanted to encourage retail investors to invest in foreign stocks through local brokers. Evidently, the French and Germans were not interested in any European-wide project that would further strengthen SEAQ’s position on their account.

In November 1990, the twelve stock exchanges of the FESE re-evaluated their integration plans. After some discussion, they defined two separate schemes:

- Eurolist -- a scheme to find ways to reduce the diversity in accounting and listing rules which makes listing on foreign stock markets costly.
- Euroquote -- a system to carry prices and company information on companies quoted on the Eurolist.

Conceptually, Eurolist should have preceded Euroquote. But in fact, Euroquote was already under way since May 1990 under its previous name PIPE. Whether by explicit decision or because of inertia, Euroquote was continued and Eurolist was set aside. A British third proposal for a European Wholesale Market (EWM) based on SEAQ was also shelved.

2. EUROQUOTE

Inspired by the 1985 White Paper’s vision of an integrated market, Euroquote was designed as a grand system. It was supposed to create the technological infrastructure for three basic areas.

- Collection and re-dissemination of essential market data and company information.

- Development and operation of an automated communication network inter-linking on a real-time basis between all securities exchanges and their respective member firms as well as certain third parties (possibly including market supervisors).
- Facilities for automated order routing, order execution and confirmation, and automated clearing and settlement instructions and procedures.

The project was to be implemented in three corresponding phases (OECD 1991).

Formally, Euroquote was implemented as a joint venture agreement by setting up Euroquote S.A., a Brussels-based joint stock company, designed to facilitate securities trading within the EC area. The stock exchanges of London, Paris, Frankfurt, and Madrid were the major shareholders with about 15 per cent holding for each.

The project, however, never took off. From the outset, controversies persisted among stock exchanges about the scope of tasks that Euroquote should undertake. By the spring of 1991, the Germans stated that there is no need for Euroquote as an information-only system. Such services were already being provided by several private vendors. What the Germans did want was to see Euroquote as real European trading system. This, obviously, was vehemently opposed to by the British who were not willing to fund a direct competitor to SEAQ (The Economist 1991; Creaven 1992: 316).

The UK did not give up on its intention to extend SEAQ to all Member States, as it was already functioning as a de facto pan-European quotation system. This raised fierce objections from continental exchanges, particularly from France. While the conflict clearly revolved around market share, it was framed, again, as a controversy between two philosophies, one seeking a wholesale market for large investors (in which SEAQ enjoyed a clear advantage), and another seeking a retail market for investors trading small quantities of shares (in which the Paris Bourse was superior). Continental exchanges balked at the idea of granting the London market official recognition as the European wholesale market (Waters 1992b).

Recall that approximately at the same time, in around 1991, European countries were split into two camps -- the "Club Med" group and the "North Sea Alliance" -- over the drafting of the Investment Services Directive (see Section IV.A.1). The controversy between the national stock exchanges over Euroquote has split them into two camps quite in parallel with the division between their countries whose delegates, in turn, were motivated by the interests of their national stock exchanges.

The first step toward abandoning Euroquote was made in May 1991 in an FESE conference. The British and German stock exchanges, joined by the Irish, declined to participate in a capital increase for Euroquote (to a considerable US \$18 million). Faced with rivalry and mutual distrust, all the members of the FESE, as shareholders in Euroquote, decided unanimously to dissolve the company in July 1991 (European Report 1991; Waters, 1992a).

Euroquote is the first example of actual failure in attaining stock market integration and cooperation among stock markets in general (the previous project, IDIS, has simply lost its *raison d'être* due to lapse of time rather than failed outrightly). One may wonder

how is it that virtually the same two groups were able to reach an agreed compromise, albeit protracted, over the ISD but could not agree on Euroquote.

In our view, at least two explanations may be offered. First, at the substantive level, Euroquote lacked a clear focus and a sound economic justification (see below section V.J). The ISD, on the other hand, has had a well-defined principle to implement -- the single passport principle -- coupled with a good model to follow, in the form of the SBCD. This principle, in turn, was part and parcel of a broader integration plan set forth in the 1992 Program. Second, at the institutional level, Euroquote was initiated by a group whose members had no real mutual commitment or other ties that would bond them. The FESE, for that matter, was negligible as a cohesive framework (see below section V.I). This was not the case with the ISD, which was launched and supported by the European Union. As such, it benefited from its vast institutional power which forced the Member States into reaching a compromise.

The Euroquote episode thus exemplifies the effect that competitive tensions may have on cooperative initiatives. Note, that we avoid labeling such effects as negative. To the extent that negative externalities and other market failures do not arise because of competition, a competitive market structure may well be an efficient and desirable one.

3. EUROLIST

While Euroquote was heading into a dead-end, the French revived the alternative plan for a smaller system, Eurolist. This project gained much more favorable responses and eventually came into being.

Eurolist was agreed upon and officially launched in the May and July 1991 meetings of the FESE, when the decisions to kill off Euroquote were made. Intended from the outset to serve only as an information dissemination system and not as an actual trading system, Eurolist was less likely to raise objections on account of competitiveness concerns. In addition, the background hostilities over the ISD also subsided as compromises on its provisions on stock market structure have been reached. Finally, continental European stock markets have also transformed: they were becoming more deregulated and more automated. As a consequence, their relative disadvantages compared with London's SEAQ-I diminished which made them more willing to consider cooperation (Waters 1992b).

As the Eurolist project was defined, its primary goal was to bring about regulatory harmonization. Such harmonization was a precondition for any scheme of pan-European multiple listing. FESE members thus approached each country's regulators and the European Commission for help with harmonization. A series of Community Directives had already existed on issues such as admission to listing, listing particulars, public offer prospectus, and periodical reporting. Based on the concept of mutual recognition, documents approved in the home market are accepted by the authorities in other countries. What was still required was an option for a complete exemption from filing requirements for shares that are already traded in a particular market.

Recall that in May 1994, an amendment to the Listing Particulars Directive was promulgated. It allows Member States to dispense with issuers' obligation to furnish

national regulatory authorities with listing particulars, if the securities were traded in another Member State for certain periods of time and listing particulars have been submitted to the latter. In promulgating the amendment, the Commission explicitly gave its mind to boosting the Eurolist project (EuroWatch 1994). At least in principle, the amendment opened the door to the implementation of Eurolist. The amendment, though, is enabling rather than mandatory. It allows Member States to opt into its provisions. Thus, it remains for each Member State to decide whether it wants such inward cross listing or not.

Eurolist started operation in October 1995 with 59 registered companies from nine countries. It is intended for European blue chip companies for which there exists considerable demand in many small markets where they are not currently listed. It enables companies to obtain listings in European countries outside their home exchange by using a single set of documents. Members pay a flat rate fee of ECU 40,000 on top of the home listing fees for the right to list on any or all of the 17 participating countries' exchanges -- the EU Member States plus Switzerland and Norway. Once listed on the system, the companies can file their periodical reports in their home country which are then disseminated to other markets.

In order to qualify for joining Eurolist companies must satisfy the following criteria:

- A market capitalization of at least ECU 1 billion;
- Annual equity trading volume of ECU 250 million;
- An official listing in at least three European countries, including the home country.

Legally, Eurolist is organized as a Belgian stock company. The system itself -- the Eurolist Message Transfer System (EMTS) -- is operated by the Brussels Bourse. It comprises of a computer network with a hub in Brussels and terminals and display screens located at the various stock exchanges. The hub disseminates the information to all other nodes. To ensure wide dissemination of information Eurolisted companies are urged to have electronic data links with the system (Paelinck 1996).

The information disseminated by the system is referred to as "price-sensitive information". Although intuitively clear, precise definitions of this term do not exist. In essence, it includes stock prices supplied by the stock exchanges and company news supplied by the Eurolisted companies.

As of June 1996, there were 65 companies from 11 countries listed on Eurolist, with 70 securities (some companies have more than one class of stocks listed). Table 8 provides a breakdown of the number of securities according to their home stock exchange. It should be noted, that except for four Swedish stocks, all other stocks are formally cross-listed in several other exchanges. When shares are cross-listed, usually the bulk of trades takes place in their home market. Trading in other markets is rather negligible, unless those markets are major European ones (Paelinck 1996).

Table 8. Number of Eurolisted Stocks by Home Stock Exchange

Home Stock Exchange	Number of Stocks
Amsterdam	17
Frankfurt	13
Stockholm	13
Brussels	8
Paris	6
Madrid	4
London	4
Luxembourg	2
Milan	1
Athens	1
Lisbon	1
Dublin	0
Helsinki	0
Oslo	0
Copenhagen	0
Vienna	0
Zurich	0
Total	70

Source: Paelinck (1996).

E. NORDQUOTE

Shortly after Euroquote was announced, in October 1990, the stock exchanges in four Scandinavian capitals unveiled a joint electronic information service of their own. The stock exchanges estimated that each one of them is too small to independently attract foreign investor interest but that exposure to the Nordic market as a whole would create such interest (Holbom 1996).

The service was dubbed Nordquote, to connote a similarity in the integration strategy that underlay Euroquote. The service consolidated quotation and transaction data provided by the stock exchanges in Copenhagen, Oslo, Stockholm, and Helsinki. The integrated data stream was sold to continental European securities houses and information providers, such as Reuters or Telerate (ISRR 1990c). That system still continues to transmit price and index information in virtually real-time.

A year later, in 1991, the four stock exchanges formed a Nordic Stock Exchange Committee to find ways of breaking down internal equity trading barriers within the Nordic region. Both stock exchange executives and Scandinavian companies believed that a Nordic Bourse could enjoy an advantage of having a higher profile than the national markets and would be of greater interest to investors outside the region. This, in turn, was supposed to increase the liquidity of stocks listed in Scandinavia and lure back trading volume that had migrated to the London Stock Exchange. The already existing Nordquote information service was considered a potential facilitating factor toward realizing that goal (Dagens Industri 1991). From the outset, however, some stock exchange executives were skeptical as to the need for a Nordic Bourse that would merge the four stock exchanges and its prospects of success (Kauppalehti 1991).

Diversity in stock market regulation regimes was also a potential impediment to such integration, but it was about to be eliminated when Finland, Sweden, and Norway were to join the European Community. The stock exchange merger plans, however, were shelved. As it turned out, relinquishing of national exchanges was politically unpalatable to Nordic authorities. It was also objected by interested parties, such as stock exchanges that could lose business as a consequence (Moore 1993; Holbom 1996).

In June 1993, the leaders of the four Nordic stock exchanges, joined by the Reykjavik Stock Exchange as an observer, began talks on establishing a Nordic trade support system that would go beyond mere price dissemination. It was further planned to upgrade it later into a joint trading system, to supplement national bourses. That project too was called Nordquote. The idea, again, was to win back business which has migrated to London's SEAQ-I by creating a sharper profile for the Nordic markets vis-a-vis foreign intermediaries and investors and increasing the inter-Nordic trading volume.

Limiting the initial configuration to trade support features rather than a full blown trading system was a consequence of compromises between the participating parties. In particular, the Oslo Stock Exchange was unwilling to forego floor trading, a fact which impeded Nordquote's prospects to become a trading system from the beginning. On the other hand, the Copenhagen Stock Exchange was an enthusiastic supporter of the system being a potential loser to SEAQ-I and Stockholm.

In May 1994, the new Nordquote was opened with 70 top Scandinavian blue chip stocks (16 Swedish, 18 Finnish, 21 Danish, and 15 Norwegian). The system was accessible only to intermediaries that were members of the Nordic stock exchanges, 73 of which initially subscribed to it. It allowed them to indicate bid and offer prices for securities which were displayed on an interest board, forming a continuation of the local order book. In a typical scenario, a broker in one country, say Norway, would be interested in a stock which was trading in another country, say Sweden. He would indicate his interest in the stock on his Nordquote terminal, that was connected to the Oslo Bourse. Oslo would transmit the data to the Stockholm Stock Exchange. Book building continued to be done in the national stock exchange level, meaning that Stockholm would sort the new data with other interest indications received by it. The consolidated order book would then be transmitted to the other three exchanges and disseminated by them to their members. Actual trading was conducted as before, by the telephone, with subsequent reporting to the respective domestic exchanges (Nordquote 1994).

Technically, the system's configuration was relatively simple. It was based on existing data processing hardware in the participating exchanges, to which data links in leased lines and some special-purpose display screens were added. The total cost of the system was very modest, estimated at less than US \$0.5 million (Holbom 1996; Skaanning-Jorgensen 1996).

Just 15 months after starting operation, in August 1995, Nordquote was wound up, having generated no perceptible increase in cross-border activity. The number of listed stocks has not changed significantly during that period. The system never gained much interest among investors, and failed to unleash any "imaginary latent trading interest" (Steil et al. 1996:40). What undermined Nordquote's success more than anything else was the establishment of remote foreign membership by the Stockholm Stock Exchange in 1995. In this setting, Nordquote could not offer intermediaries any advantage over existing systems (Holbom 1996; Skaanning-Jorgensen 1996).

The Nordquote project is an excellent example of the problems that lie in the way to regional stock market integration. The opening conditions were seemingly favorable: the number of players is relatively small. The players are concentrated in a well defined region, sharing wide cultural commonality. They also have a common large external rival (London's SEAQ-I) and share the same trading method in general (order driven). Yet, productive cooperation, one that would create genuine integration and bring about more business, proved difficult to reach. Nordquote indeed automated some elements of the trading process but as it was implemented, it did not create any Nordic market, nor any illusion thereof. Each national stock exchange remained a close club, genuinely accessible only to its members for Nordquote did not offer remote membership. For unknown reasons, non-Nordic intermediaries could not use the system even in its watered down version, something that might have given it a pan-Nordic stature.

This was due to internal rivalry and competition between the stock exchanges. As is often the case in competitive situations, stock exchanges and their members were not willing to forego their monopolies over "their" stocks. Consequently, all the trade barriers that existed before Nordquote remained in place. Nevertheless, the same competitive pressures that undermined cooperation may bring about an equivalent outcome. The

Stockholm Stock Exchange took the first step in this direction by opening itself up to foreign members (and thus relinquishing some of its members' rents). It is understood that in the short period since that step it gained considerable trading volume. In due course it may become a regional focal point -- at the expense of other stock exchanges -- where issuers and traders will prefer to concentrate their business.

F. EASDAQ

EASDAQ -- a project initiated by private entrepreneurs to establish a pan-European, NASDAQ-like, market -- seems poised to be the first case of genuine regional stock market integration. For this reason it is described here in relative detail.

One of the major issues on the European Union's agenda is the financial problems experienced by small and medium-sized enterprises (SMEs). In November 1993, the EC Commission confirmed the existence of a problem for small rapidly growing firms in obtaining access to sources of long-term equity capital. This, in turn, limited their rates of growth, often to the detriment of the development of products based on new technologies. It also had negative implications in terms of job creation. Faced with consistently high rates of unemployment, the Commission thus looked for ways to facilitate SMEs' access to capital.

The problem could not find an easy solution through national stock exchanges since those markets were neither equipped, nor wished, to specialize in small company stocks. They would ordinarily require some minimum record of profitability which startup companies cannot provide. After a series of studies, the Commission concluded that there exists considerable demand for equity capital from European SMEs, and that there also exists some interest among institutional investors in purchasing SMEs' stocks. The Commission was particularly impressed by the NASDAQ system in the United States in which some 79 European companies were listed. It considered NASDAQ as a model of a stock market well tailored to the needs of growth companies. Therefore, the Commission became interested in implementing a similar market in the EU (Commission of the European Communities 1995).

In addition to the general need for risk capital and the potential willingness to supply it, a more pressing problem exists in Europe. It is the huge stock of equity capital that European venture capitalists have already accumulated (Venture Economics 1994a, 1994b). Typically, a venture capitalist would want to recycle its investment capital after the portfolio company matures and no longer requires its assistance. One avenue for exit is by taking the portfolio company public. An initial public offering (IPO) allows the venture capitalist to realize some of the investment by selling part of its holding while opening a door for further sales by creating a liquid market for the stock (Sahlman 1990). The alternative avenue is a private sale of the holding which has some major drawbacks (Gilson and Black 1996). In sum, a lack of a good stock market for startup companies impedes the realization of return on venture capital and its reallocation for more efficient uses. European venture capitalists are thus in a unique position where they are ready, able, and willing to launch a new stock market on a pan-European scale.

In November 1994, several investment banks and securities firms, led by the European Venture Capital Association (EVCA), established the European Association of Securities Dealers (EASD). This was done with a view to establish a new pan-European market for growth companies to be known as EASDAQ (EASD Automated Quotation). The EU Commission provided financial and political support for the project as part of its efforts to advance SMEs (Venture Economics 1994b). Full membership in EASD is open for companies and organizations actively involved in the trading, analysis, and sponsoring of small company stocks. Associate membership is open for those having commercial or policy interest in the activity of EASD (Commission of the EC 1995).

Preliminary understanding about EASDAQ was reached in September 1994 by the EVCA, the US NASDAQ market, a group of British financiers called EASDAQ-UK, and the Paris Bourse (which left in 1995 after establishing the competing Nouveau Marche). In March 1995, EASDAQ S.A. was incorporated in Belgium as a stock company (Jury 1996). Membership in EASDAQ grew quickly. As of February 1997, it had some 92 shareholders from ten countries (Butler 1997).

The relationship between the EASD and EASDAQ has been defined in a Memorandum of Understanding signed in May 1995. Under the Memorandum, EASD assumed all regulatory duties relating to the membership in EASDAQ. It further undertook to approve professional standards for brokers and dealers, approve admission and dismissal of member firms, and approve disclosure and admission rules for issuers (Commission of the EC 1995). Clearly, the choice of name as well as structure for EASDAQ were made in order to connote with NASDAQ's remarkable success in creating a market for growth companies in the US.

By May 1996, EASDAQ passed two important hurdles in the way to full operation. It has crossed the capital threshold for recognition as an authorized stock market, having collected the required commitments from its shareholders. Following that, the Belgian cabinet approved EASDAQ as a recognized stock market (Corporate Money 1996). This means that pursuant to the Investment Services Directive, it will be a "regulated market", accessible to participants from all over Europe as their national stock market. It further means that EASDAQ will be able to "list" securities rather than merely "quote" them. This subtle difference bears major consequences for those institutional investors who are subject to prudential regulations that restrict their investments to "listed" securities.

EASDAQ was officially launched in September 1996, but only in November did it see its first IPO. By March 1997, there were eight companies listed on EASDAQ with a market capitalization of \$ 1344 million. Of these companies, two were from France, two from Belgium, two from England/Wales, and one from each of Switzerland and the United States. Most of the issuers were from hi-tech industries, e.g., computers and biotechnology. Four companies were dually traded (EASDAQ 1997).

In order to ensure the required momentum for the market at the outset, EASDAQ has reached an agreement with NASDAQ to cross-list 20 of the European companies currently listed in the US. It was hoped, that more such companies will gradually cross-list on EASDAQ, but as of March 1997, no such trend has materialized.

An EASDAQ listing requires the following:

- Minimum assets of ECU 3.5 million;
- Capital and reserves of at least ECU 1.8 million;
- Quarterly reporting, with full accounts reconciled either to International Accounting Standards (IAS) or US GAAP.

Pursuant to its philosophy, EASDAQ takes a discretionary approach toward candidate businesses with no trading record or history of profitability. Direct responsibility for post-listing compliance rests with a company's sponsor -- a firm charged with the role of being a primary adviser to the listing company both before and after the public offering (Jury 1996). In addition, each firm has to have at least two market makers. By February 1997, some 250 European brokers and dealers have registered as EASDAQ market makers (Price 1997).

Instead of independently developing and operating the system, EASDAQ has opted for outsourcing its major components. Its quotation management system was provided and is operated by the International Securities Market Association (ISMA). It "piggy-backs" ISMA's existing Trax system, which is mainly used for Eurobond trading management. The real-time trade confirmation and reporting systems within Trax were to be enhanced to match EASDAQ's regulatory requirements. Market makers and brokers are wired into the Trax system and install its software. In order to reach a pan-European coverage, ISMA was to extend its system to Scandinavia, Spain and Portugal, and parts of the US.

EASDAQ's settlement system is to be provided and operated by Intersectle, a Swiss company based in Zurich. After matching trade reports by Trax, they are forwarded for settlement in Intersectle. The Intersectle system is capable of settling any trades that take place before 2 pm on the same day. However, it is understood that a T+3 standard will be implemented. In March 1997, EASDAQ announced that Euroclear and Cedel Bank joined Intersectle as its settlement providers. The enhancement was made in order to allow institutional investors and their custodians to keep their holdings of EASDAQ securities with Brussels-based Euroclear and/or Luxembourg-based Cedel Bank (European Report 1997).

Quotes and other data originating from the EASDAQ are forwarded by the quote management system to private information providers, such as Reuters and Telerate. They will then be disseminated to investors (Moran 1996). EASDAQ allows companies to be listed in any currency of their choice. In March 1997, seven companies were quoted in US dollars and one company in French Francs. This does not bar traders from effecting transactions in other currencies because actual trading will be done over the telephone (EASDAQ 1996).

Regulatory responsibility for EASDAQ lies with the Belgian Banking and Finance Commission. According to Belgian law, EASDAQ S.A. was recognized as the "Market Authority" -- the entity responsible for the functioning and surveillance of the market. The Market Authority operates under a second-tier supervision of the Belgian Banking and Finance Commission. EASDAQ's listing requirements are understood to be closely in line with NASDAQ requirements. In order to meet these requirements, EASDAQ was

independently developing the market surveillance component of its system (EASDAQ 1996).

EASDAQ has expressed its readiness to cooperate with foreign regulatory agencies, e.g., the US Securities and Exchange Commission (SEC), if they request information on brokers or market makers. EASDAQ's Market Authority has been empowered to directly enter into contact with the competent authorities of EU Member States and other countries on issues related to membership, surveillance, etc. By July 1996, no formal framework for cooperation with foreign regulators or stock exchanges has been established, although direct contact was being maintained with some foreign regulators (EASDAQ 1996; Moran 1996).

EASDAQ further envisaged that the Belgian Banking and Finance Commission will enter into agreements (or Memoranda of Understanding) with foreign regulators in order to be able to conduct its second tier supervision and that most of the EASDAQ contacts with such regulators will pass through these channels (EASDAQ 1996).

A relatively short period after its launching, EASDAQ seems to have good prospects for being the first genuine pan-European stock market after SEAQ International. In order to succeed, however, it will have to overcome some serious obstacles. First, EASDAQ will not be the sole actor in the market for markets for growth companies. National stock exchanges are in various degrees of implementing "New Markets", especially targeted for this kind of companies. This alone threatens to take away some of EASDAQ's potential issuers. Should several such markets be interconnected in a version of the Euro NM project (see below), they might become direct competitors of EASDAQ.

On a wider scale, EASDAQ is not alone in the world. The strongest competition will definitely be posed by NASDAQ. Formally, there is no cooperation between the two entities; but so far, the two markets do seem to collaborate. This may stem, inter alia, from NASDAQ's economic interest in EASDAQ. Such cooperation may not last long. NASDAQ and EASDAQ will soon be competing for the same business in the same market segment, both for IPOs and for order flow for listed companies, West-European and others. For example, NASDAQ recently said that it hoped more German companies would eventually join the exchange, provided they resolve their disclosure problems (Coonan 1996). In addition, NASDAQ already offers to install its terminals in Europe, which would force European brokers to make tough choices between the two systems. Finally, any kind of agreement between the markets on splitting the market may face close antitrust scrutiny by the US Justice Department as well as the European Commission DG IV.

As if this were not enough, markets like NASDAQ are being established in other parts of the world as well, e.g., in Japan, Singapore, and Malaysia. Not surprisingly, they are called JASDAQ (an existing second tier market that may expand to growth companies), SASDAQ, and MESDAQ, respectively.

Another fundamental problem EASDAQ faces is the virtual absence of a wide infrastructure of stock analysis services of the kind that exists in the US. Absent a widespread industry of stock analysts who regularly follow companies and communicate with the market, trading in their stocks will be prone to be affected by various degrees of non-public information (read: insider trading). EASDAQ hopes that the requirement for a

sponsor for every listed company will ensure at least minimal research coverage of all its stocks (EASDAQ 1996).

Finally, one can find arguments that “Europe simply lacks anything like the number of genuinely public small companies that America has. EASDAQ is an exchange created for stock that do not by and large exist.” (Banks 1996). While this may be an extreme proposition, one has to acknowledge that EASDAQ was indeed launched to solve a serious structural problem in European corporate finance. Success, therefore, could be beyond its force.

As a pan-European system, EASDAQ will predominantly involve transactions with several international dimensions. Hypothetically, a single transaction could involve as many as six different legal and regulatory regimes (one for market, one for the listed company, two for the parties, and two for the broker-dealers). More realistic scenarios will definitely involve several regimes. Rules of private international law (conflict of laws) would in theory govern specific transactions in EASDAQ. However, it is our impression, that should a genuine controversy arise it will prove very difficult to resolve by such rules. The scope of this Report does not allow for full analysis of the problem, but the issue should be borne in mind since EASDAQ is but a representative case of a broader problem.

G. Euro NM

In parallel with launching the Nouveau Marche, in February 1996, the Paris Bourse also founded Euro NM. Euro NM was formed as a European Economic Interest Group (EEIG), a non-profit legal entity based on EU law, that is intended to facilitate and encourage cross-border cooperation. Based in Brussels, it is an intended umbrella group for similar “New Market” exchanges in Europe. The founders included the Paris Bourse’s subsidiary, Le Nouveau Marche, and the Belgian Bourse de Bruxelles. The latter also announced plans for its own Nouveau Marche -- a market similar to the French one -- which was to be opened in March 1997.

Other stock exchanges gradually join the wave. In March 1996 the Deutsche Borse announced a decision to create a similar Neuer Markt, and its intention to join Euro NM. The Neuer Markt was opened in March 1997. In February 1997, the Amsterdam Stock Exchange unveiled its own New Market for young growing companies, called the Nieuwe Markt or NMAX (New Market Amsterdam Exchange). The Nieuwe Markt too is to form a part of Euro NM.

Euro NM is presented by its founders as a future Europe-wide network of growth company markets like the Nouveau Marche. Its stated aim is to define a joint policy to promote the network of member markets to issuers, potential members, investors, and other potential member markets. Euro NM pursues several objectives through specific working groups:

- Joint international marketing , e.g., common roadshows;
- Harmonization of rules, notably with regard to listing and disclosure requirements and trading procedures;

- Establishment of connections between markets in order to facilitate joint trading and common data dissemination;

In addition, Euro NM will be a vehicle for common representation of its members' interests toward European authorities and other entities outside the EU (Le Nouveau Marche 1996, Euro NM 1997).

Euro NM is said to be able to offer candidate companies the advantages of a domestic market plus international exposure. Euro NM's European dimension is expected by its founders to provide more liquidity and make it much more attractive for investors. A network of national markets was envisioned, forming a "single logical market", where a stock listed on one member bourse could be traded by any member on any other exchange in the network. In particular, Euro NM stated it will strive to establish connections between the markets in order to create a joint trading and data dissemination network (Le Nouveau Marche 1996; Jury 1996).

As of March 1997, Euro NM remains essentially notional. The French Nouveau Marche is the only market that is seriously functioning, as the German and Belgian New Markets are only making their first steps. The Dutch market has to become operational, after the Amsterdam Stock Exchange had originally declined to join Euro NM. The London Stock Exchange with its AIM persists with its stand-off position vis-a-vis Euro NM.

The major informational gap relates to the actual content and structure of Euro NM. In the main, what has so far been publicized about Euro NM is too vague to allow a clear understanding of its mode of operation. In December 1996, it was reported that the then three Euro NM members have developed joint marketing and common regulations and will move toward joint front-end technology for members (Euromoney 1996). In March 1997, however, it was reported that Euro NM plans to work on developing a common data feed and marketing plan and that the plans to develop a common trading platform were shelved because of technical problems (O'Mahony 1997).

Assessment of Euro NM, the motivation for its creation, and its success prospects should be made conducted separately with respect to its different stated goals: first, to implement an actual system; second, to provide for an organizational framework for its members.

To the extent that a system is intended, a possible scenario is one which would allow brokers and dealers to see the trading status in all the "New Markets" on the network and to initiate trades based on this information. For this purpose, however, no special system is required because data streams from the exchanges are likely to be available from existing vendors. It may be all the more superfluous where remote membership is introduced. This is exactly the lesson that should have been learnt from the Euroquote and Nordquote episodes. Indeed, some of Euro NM's stated objectives, e.g., providing liquidity and investor interest through a pan-European dimension, greatly resemble those states by Euroquote and Nordquote. One should not be surprised, therefore, that Euro NM was quick to follow these precedents in giving up whatever plans it may have had for implementing a joint trading platform. It is not claimed here that the rationale for Euro

NM is necessarily mistaken, but rather that more added value will have to be found in it or that other motivations also influence its development.

One such explanation relates to competition between stock markets. A potential competitor for Euro NM is EASDAQ. In its public statements, Euro NM tries to differentiate itself from EASDAQ by claiming that it will be a favorable solution for companies with domestic orientation, whereas EASDAQ would be suitable for companies with more international aspirations. EASDAQ does not deny this, but admits that competition with the New Markets is likely. In any event, the “domestic orientation” argument may apply to the New Markets separately but much less so to Euro NM which is pan-European by definition.

Presently, EASDAQ enjoys a clear head start in terms of time, technology, knowhow, and potential listings. Euro NM, therefore, may constitute an effort on behalf of existing stock exchanges to impede total preemption of the growth company market by EASDAQ. Recall that the Paris Bourse has left EASDAQ after being one of its founders. Possibly, after realizing that EASDAQ might deny it an important source of revenues it preferred to have some control over the process and to increase its chances to benefit from it. The rush of other stock exchanges to establish their own New Market and join Euro NM (including the Amsterdam Stock Exchange’s change of heart) can be explained on the same basis.

A possible indication for such tension is the fact that in May 1996, representatives of Euro NM presented the project to the European Commission president who stated it conforms with the EC’s goal to encourage SMEs. This could be in order to receive financial support of the kind EASDAQ has enjoyed.

Another facet of stock market competition relates to competition among Euro NM members in themselves. In a Europe where the ISD is fully implemented, stock exchanges will fiercely vie for growth company business just like for any other business. Paradoxically, a functioning Euro NM would only increase such competition.

In this context, it was reported in May 1996 that “[m]arkets participating in the Euro NM will undertake not to compete for one another’s domestic IPO candidates. The Paris Nouveau Marche is now actively seeking to attract companies from throughout the EU, Austria and Switzerland, but is not approaching Belgian and German candidates, the “property” of the other network members.” (Jury 1996). To the extent that this report is accurate, it may provide the best explanation for Euro NM as a purely anti-competitive arrangement. The reported joint marketing plans could thus be a euphemism for market splitting. Non-profit associations that indulge in market division are a well-known phenomenon. The problem is that they are forbidden under European competition laws as much as they are under US antitrust laws. It thus remains to be seen what would be the reaction of the EC competition authorities (DG IV) if Euro NM or its members actively pursued such a scheme.

H. French-German Cooperation

In December 1993, an agreement was signed between the German derivatives exchange, the Deutsche Terminbörse (DTB), and the French futures exchange, Matif, to link the two markets. As a first step it was agreed to allow members of each exchange to trade two of the contracts traded in the other exchange. French brokers started trading two important German contracts in September 1994. The French decision on which contracts would be made available to German brokers was repeatedly delayed, and eventually never made. Among the reasons for the delays were the need to change the trading method from open outcry to fully electronic trading and French reluctance to forego their most profitable contracts.

In the meanwhile, DTB was merged into the Frankfurt Stock Exchange, the Deutsche Börse. Subsequently, a provisional broader agreement was reached in November 1995 between the Deutsche Börse, the SBF-Société des Bourses Françaises (the Paris Stock Exchange), MATIF, and MONEP (the French options exchange). Importantly, the original agreement was expanded to the cash market for equity securities. The agreement called for the creation of a “double platform”, a common computerized network on which equities, some bond market products, and derivatives listed on the exchanges, could be traded. The new system would have allowed traders to buy and sell French and German equities and some derivatives products by using a single computer system (Lapper and Jack 1995).

The original motivation for the derivatives markets link-up was to create enough counter-weight to London’s derivatives market, LIFFE. The same logic underlay the expanded agreement. It was reported that French and German market officials had hopes to increase liquidity, lower costs, and eventually lure trading in German stocks, for instance, from London to the new market (Lapper and Jack 1995).

To implement the agreement, the German Stock Exchange would have had to install Paris Bourse’s modern trading system for equities, the Nouvelle Systeme de Cotation (NSC), in its cash market. Reciprocally, the DTB’s electronic trading system was to be adopted by the French derivatives market. After lengthy considerations, the German Stock Exchange decided not to adopt the French system and prefer its existing one. In a joint statement the four bourses said that adopting these systems would require “too many and too costly modifications... in both countries”. They declared, however, that cooperation between them will be sought in other ways (Jack et al. 1996).

I. The Federation of European Stock Exchanges

Before concluding this Part, a short note on the Federation of European Stock Exchanges (FESE). The Federation is a typical trade association, comprising 17 members -- the largest stock exchanges in each of the 15 EU Member States plus Switzerland and Norway. It serves mainly as an information exchange forum for its members and as a vehicle for joint representation vis-a-vis other bodies, such as the European Commission. The Federation also publishes monthly statistics on European securities markets and a newsletter (Paelinck 1996).

The Federation does not have an independent administration and is thinly staffed. Decisions are made in its half yearly assembly, de facto on a consensus basis. As mentioned above, the Federation was involved in a number of projects for stock market integration over the years. Whenever a controversy arose, though, those projects were abandoned.

All this implies that FESE is generally a weak organization with limited authority. However, no claim is made here that this situation needs correction. In a largely competitive setting it would be surprising to find a strong association with substantial powers (unless it is meant for correcting some market failure or for anticompetitive purposes). The Federation's structure seems well optimized for the limited range of issues in which its stock exchange members share the same interests. In the aspects over which they differ the stock exchanges were careful to reserve their freedom of action and their ability to impede projects which may have had adverse effects on them.

J. Assessment

Of the seven different projects described in this Part, four -- IDIS, Euroquote, Nordquote, and the French-German cooperation -- have failed completely or were abandoned. A fifth project -- Euro NM -- has questionable viability in our view, although it may be too early to pass a judgment. Eurolist is mainly an administrative framework for implementing existing Directives and is in the early stages of implementation. EASDAQ too is making its first steps, but may have relatively favorable chances to succeed.

The balance, seemingly, is not encouraging. It is especially disturbing in light of the general context in which these projects were or are undertaken, namely, the EU (except for Nordquote which enjoyed comparable conditions, though). The EU is a favorable environment for integration. It provides for harmonized legal rules in certain important areas plus a centralized judicial system. Most significantly, it is based on fundamental principles of free movement of capital and services. Why, then, do these projects fail? The question may be rephrased as "Why do *cooperative* projects fail?", because EASDAQ is not a cooperative venture of stock exchanges or regulators but rather a private business venture.

In their comprehensive and insightful study of European stock markets, Dr. Steil and his colleagues make the following claim with regard to inter-exchange collaboration:

"A central electronic quotation system for Community stock exchanges has neither a compelling commercial logic, nor a wider economic logic. To the extent that any particular exchange would benefit, it would almost certainly mean that this exchange would be free-riding off the costly and valuable price discovery services of another... [T]aking a broader market-wide perspective, it is difficult to see why a European market comprised of relatively illiquid national exchanges should itself become liquid -- or even in any meaningful sense 'integrated' -- on the basis of simple electronic interfacing...

To conclude, collaborative arrangements among European exchanges of the sort described above [Euroquote, Nordquote, and Eurolist], will not in and of themselves achieve any significant increase in the liquidity of European stocks.

This will only come with the removal of barriers to competition among market intermediaries. This was never implicit in Euroquote, Nordquote, or Eurolist.” (Steil 1996:39-40).

We agree. Must stock exchange cooperation then necessarily fail? We believe not, but meaningful success would be difficult to achieve. Information exchange and dissemination, for example, are areas where stock exchanges seem not to have conflicting interests. The early Nordquote, today’s Eurolist, and maybe Euro NM are examples for such initiatives. But, commercial information providers are likely to do that job more efficiently. In addition, once the information at issue is such that some exchanges do not regularly disseminate the issue takes on a competitive structure again, with low chances for success. This was the case with IDIS, for instance, where the Amsterdam Stock Exchange was willing to provide closing prices but not bid and offer prices (Financieele Dagblad 1989). Against this backdrop, if EASDAQ should succeed it will be mainly thanks to its competitive business approach.

To conclude this Part, a general hypothesis may be put forward. In advancing the goal of stock market integration, the hypothesis goes, a strategy of enhancing competition between stock exchanges is more likely to succeed than an alternative strategy of enhancing cooperation. In an essentially competitive setting cooperation is difficult to achieve; and even if it is achieved, it is likely to be meaningless or non-sustainable. Over the last years, European stock exchanges and the European Commission have spent considerable time and resources in confirming this hypothesis, albeit inadvertently.

A closer look at the 1985 White Paper would reveal an internal contradiction between its general strategy for completing the European internal market and its vision of extensively networked European stock exchanges. The general policy is to lower barriers to trade and enhance competition. If the networking model is to enhance competition, there is little chance that stock exchanges would support it. If it is to stifle competition, it should not be supported by EU institutions. The ISD, particularly in its original version, but also in its final one, follows the pro-competitive model of which EASDAQ is a harbinger.

We advocate caution, though, in concluding that the EC Commission has explicitly acknowledged the uselessness of simple networking of national stock exchange. The financial and moral support given to EASDAQ by the EC was provided by the Directorate General in charge of promoting SMEs (DG XIII), and not by DG XV, which is in charge of stock exchanges. Similar caution is in place in respect with the EC President’s general approval of Euro NM, even though conceptually, it is a direct descendant of earlier integration projects that largely failed.

Finally, as a more general note, one should be very doubtful in assessing the prospects of stock exchange organizations in bringing about stock market integration. Information exchange and sometimes standard setting are perhaps the major aspects in which such bodies could prove beneficial and advantageous. Countries that contemplate integrating their stock markets should thus establish more powerful mechanisms to achieve it.

VI. Stock Market Related Aspects

Stock markets do not operate in isolation. Their main function is to be the medium through which supply of and demand for equity investment interact. Integrating stock markets in several countries thus implies that supply and demand in these countries would also get more integrated. Increased levels of demand and supply would generally entail accelerated integration. Differences between patterns of supply or demand in various countries would have significant implications on the prospects of growth and integration of the stock markets.

This Part covers several aspects ancillary to stock market integration -- the issues of foreign ownership regulation, foreign exchange, taxation, corporate governance, public saving and pensions, clearing and settlement, and payment. These issues are ancillary in that they pertain to the supply side of the stock market (such as corporate governance), or the demand side (such as public saving and pension), or the interaction and “friction” between them (such as foreign exchange or taxation). But being ancillary does not mean that they are marginal in importance. Rather, each issue has major implications and deserves discussion in much wider a scope than this report allows. Here we limit ourselves to pointing at the problems and the reasons for their importance in the context of stock market integration.

A. Corporate Governance

Equity shares represent claims on the company. Under Western legal systems, they are the residual claims, last in line after the claims of other stake holders, e.g., suppliers, financial creditors, tort creditors, and employees. This simple observation concisely reflects the enormous complexity involved in discerning the relationship between stockholders and other stake holders. Further complexities stem from the fundamental problem of modern capitalism, i.e., the agency problem. Once ownership of the firm is not unitary conflicts of interest emerge between capital contributors (stock holders) and those who hold control in the firm, either a controlling shareholder or the management in a widely dispersed company. In both cases, the controller has incentives to derive private benefits from her control position at the expense of public shareholders. Common examples include taking of company’s business opportunities, self dealing with the company, and management perquisites.

Comparative empirical evidence as to patterns of holding concentration and corporate governance shows considerable diversity in such patterns. Table 9 shows ownership concentration in non-financial listed firms in six European countries, the US, and Japan. A prominent feature of the numbers is the high concentration of ownership in continental Europe, as against high dispersion in the US and the UK, and fragmented ownership in Japan. Moreover, recent studies also show a significant correlation between the incidence of certain governance patterns and some crucial provisions in the general commercial and business laws of countries (La Porta et al 1996; Shleifer and Vishny 1996).

Table 9. Ownership Concentration in Listed Firms (The Largest Owner's Share)

Largest owner's share	(1) France (1982)	(2) Germany (1985)	(3) Italy (1993)	(4) Spain (1990)	(5) Sweden (1987)	(6) UK (1990)	(7) Japan (1983)	(8) US (1981)
> 50	55	66	89	49	42	5	5	9
30-50	] 42 ]	] 23 ]	] 9 ]	] 49]	31	] 29 ]	] 70 ]	] 29]
25-30					12			
20-25					11			
15-20					27			
10-15	] 12 ]	] 2 ]	] 2 ]	] 2]	4	] 30 ]	] 25]	10
5-10					30			29
<5	2			2	4	9	25	23

Source: Berglof (1996).

It is now widely acknowledged in the corporate governance literature (Roe 1994; Fukao 1995) that patterns of corporate governance in different countries are greatly influenced by political reasons, culture, and tradition. Two often cited and polarized examples include the US and Germany. The US' dispersion of ownership is related, inter alia, to political hostility toward concentration of power within financial institutions, general populist movements, and suspiciousness toward trade unions. Such trends were largely absent in Germany where industry was developed by rich families of the higher class, banks had a strong political grip, and employees grew to be part of the control structure in firms.

All this background bears several implication for the stock market. In countries where ownership is concentrated, whether in private hands as in Germany or with the government as in France, the supply of equity investment opportunities is more limited. At the same time, high incidence of ownership concentration is correlated with low level of legal protection for public investors (La Porta et al 1996), manifested, e.g., in weak duties of corporate disclosure. This, in turn, may lead to lower demand for stocks among public investors who rightly develop a belief that the stock market is too risky for them.

Lower supply and demand inevitably entail lower liquidity and lower attractiveness of the stock market in general. Indeed, some commentators argue that a more direct link exists between liquidity and control (Coffee 1991). Under such arguments, higher liquidity entails lower incentives for a substantial stockholder to invest in increasing firms value through exercising control. On the other hand, lack of liquid markets for the investment, i.e., lack of easy exit in low cost, would force the stockholder to exercise 'voice', controlling influence, in order to ensure her investment's value.

Corporate governance patterns demonstrate enormous inertia and path dependency and are heavily interlinked with the most of the legal and economic system in a country. We agree with Berglof (1996), that it would be a dangerous exercise to try to intervene in it just in order to improve the working of the stock market, e.g., through higher liquidity. The principle of subsidiarity also supports restraint in dealing with the issue at the Union level. Nevertheless, the growing number of companies listed in multiple stock exchanges across Europe would make it inevitable for Member States to become interested in other countries' corporate governance systems.

B. Public Saving and Pensions

National patterns of public saving and management of pension funds directly affect the demand side for stocks (assuming that issuing companies represent the supply side). In this Section we will identify an array of factors that play a role in this process.

At the very fundamental level, there lies the issue of public tastes for different types of investment. Here, again, the US and Germany provide two polarized examples. Throughout the twentieth Century, American households -- to which British retail investors are often likened -- were willing to invest in equity shares. They do it either directly or, more recently, through intermediaries such as mutual funds and pension funds. In doing this, they demonstrate a certain level of tolerance toward the risk inherent in equity investment. On the other hand, German investors have remained wary of investing in equities. A typical portfolio has 80% of its assets invested in bonds and only 20% in equity. Debt weightings of 90% and 100% are not uncommon. In the main, German investors show high level of risk aversion, and willingly accept lower rates of return on their funds (Global Investor 1996).

Secondly, there exists diversity among countries with respect to the prevailing type of pension plans. 'Funded plans' are plans in which obligations toward beneficiaries are covered in advance by actual payments into their accounts. These funds are then managed according to some prudential regulations intended to ensure some balance of risk and return. 'Pay-as-you-go plans' are plans in which beneficiaries are paid only when they cease working. Social security is a public form of pay-as-you-go plans, where the government finances payments through its budget. In the private version of these plans the employer and its future employees are relied upon by present employees and pensioners to provide the money in the future. Pension commitments appear on the firm's balance sheet, analogously to the government's budget. This kind of pension plan is especially prevalent in Germany (Global Investor 1996). The fact that in this way employees' future is in trust with the employer may explain the high involvement of employees in corporate governance in Germany.

A third dimension in which countries show diversity is the regime of portfolio management, or prudential regulation. A variety of factors may be subject to restrictions on pension funds' freedom to manage their assets.

One of these factors may be the restriction to listed stocks (rather than just publicly traded), originally intended to ensure liquidity and fair pricing. Other restrictions apply to the proportion of equity securities and fixed income (debt) securities, the share of foreign assets and foreign securities in particular in the portfolio, possible duties to purchase local government securities, etc. Table 10 shows the distribution of pension funds' portfolio in several European countries. To illustrate, note the stark differences in the share of equities in British vs. Swedish portfolios (80% vs. 2%), or the difference in the share of foreign assets between these countries (30% vs. 1%).

Pensions funds hold an enormous potential for stock market integration within the EU and internationally. This is because equity investment is usually more promising in terms of return on investment, while international diversification may help to reduce non-systematic

risk. Nevertheless, it is unlikely that stock market integration will be a major consideration in countries policies on pension plans, and the EU should not be any exception. The aging of population in the EU, privatization of many state economic activities, and other macroeconomic problems, all make pensions a politically important

Table 10. Pensions Funds' Portfolio Distribution (percentage allocations, 1992)

	Equities	Fixed income	Property	Liquidity and deposits	Of which: foreign assets ^a
UK	80	11	6	3	30
Germany	6	80	13	1	8
Netherlands	24	60	14	2	17
Sweden	2	91	2	6	1
Denmark	19	67	12	2	4
Ireland	66	24	7	3	35
France	20	67	11	2	2
Italy	14	72	10	5	4
Belgium	31	50	8	11	31
Spain	3	94	2	1	1
Portugal	(18)	(57)	5	19	3

^a Foreign assets are included in the categories to the left.
Data in brackets are estimated.

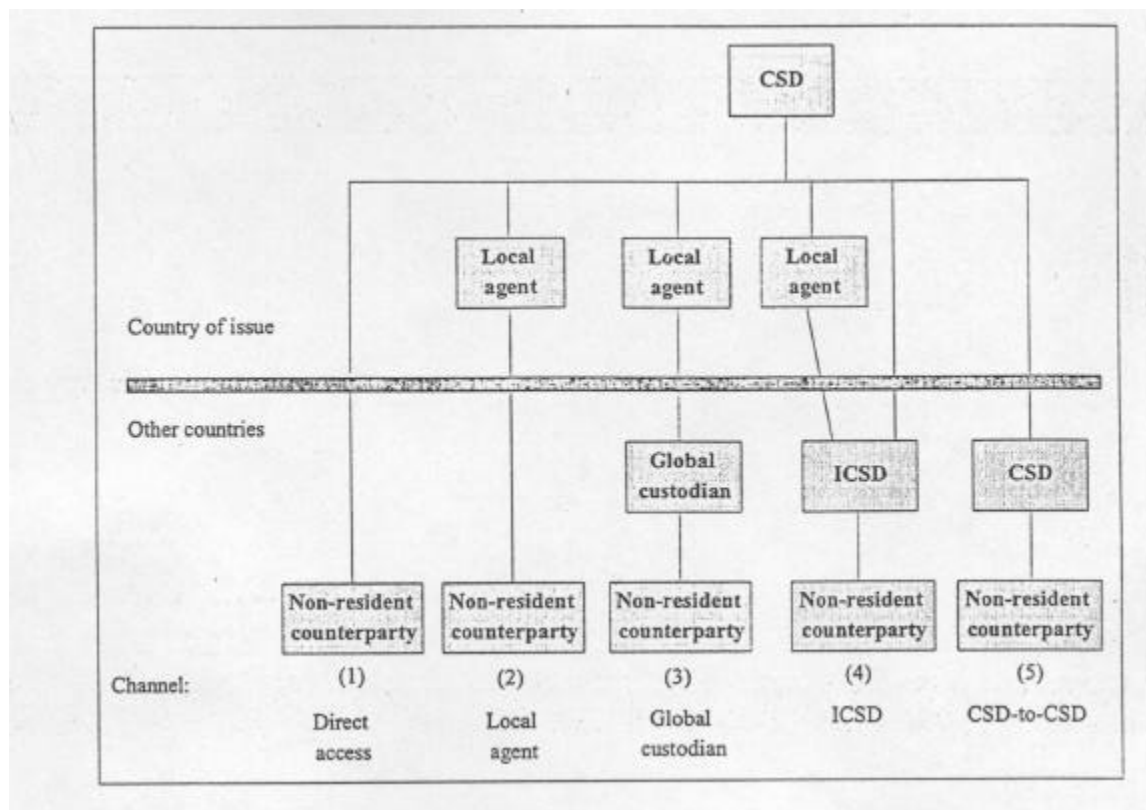
Source: Davis (1996).

issue for national governments. Although there may be room for EU initiatives, the principle of subsidiarity implies that at least some of the aspects involved should be dealt with at the national level. From this point of view, stock market integration seems not to have the highest priority, and we would expect the same in other countries.

C. Clearance and Settlement

Clearance and settlement are the lower deck of the securities trading ship. Clearance involves the determination of what each party to a transaction owes and is entitled to receive. Settlement is the process of actual exchange of securities and payment between the parties. Clearance and settlement are typically done by specializing institutions. Central Securities Depositories (CSDs) handle the securities-related aspects, and the banking/payment system handles the payment-related activities.

Table 11. Alternative Channels for Settling Cross-Border Securities Trades



Source: BIS (1995)

There exists a considerable variety of possible configurations for international clearance and settlement systems. Table 11 summarized the alternative channels for settling cross-border securities trade. It is apparent from the Table that the center of gravity of the clearance and settlement process may lay on either side of the border, or in a third country.

In theory, the service could be provided by stock exchanges as an integral part of their trading activity. In reality, however, there is a general migration of these services from the stock exchange to independent providers. A major move in this direction was taken in mid-July 1996, when the clearance and settlement of trading in the London Stock Exchange moved from the LSE-manually-operated Talisman system to the independent automated Crest system (managed by the Bank of England). As a result, the LSE is about to lose around one third of its annual income heretofore derived from clearance and settlement services (Economist 1996).

Clearance and settlement thus embody a significant part of transaction costs pertaining to securities trading. From investors' point of view, these costs are similar in nature to other fees and commissions paid to broker-dealers, etc. Economists generally

agree that clearance and settlement should benefit greatly from standardization and centralization. Various kinds of positive externalities and economies of scale and scope may be realized through such convergence into fewer and more uniform procedures (Giddy *et al.* 1995). In the specific context of the European stock market, Giddy and his colleagues strongly advocate the creation of a single Euro-hub for clearance and settlement in order to realize these standardization and centralization benefits.

Two international CSDs (ICSDs) -- CEDEL and Euroclear -- are already operating in Europe, but national CSDs remain in operation and even thrive (BIS 1995). Giddy *et al.* reject the hypothesis that national stock exchanges utilize their monopoly power to impede the growth of ICSDs, noting that stock exchanges in fact divest themselves of these activities, as the LSE recently did. They point at lack of harmonization of clearance and settlement standards as the major barrier, which includes different settlement cycles, taxation of trades, forms of securities, and payment system operation and access. Being aware of the principle of subsidiarity and national interest, they are pessimistic as to the prospects of a single European ICSD to emerge.

D. Foreign Exchange Regulation

Absent currency risk, e.g., within the ambit of a European Monetary Union (EMU), there should be little justification for dozens of small stock exchanges that currently pepper Europe. In the eyes of some commentators, e.g., Steil (1996), such risk is the last major barrier to a sweeping process of stock market integration in the EU.

With the ISD in place, remote membership of broker-dealers and cross-border operations of stock exchanges should gradually erode the advantage now held by national exchanges. However, the problem will persist even in respect with cross-listed corporations in which trading may be effected in other currencies. Most companies still have a clear center of gravity in a certain country in whose currency they conduct most of their business and report their financial statements. Currency risk is thus relevant to all of them and may be eliminated only through monetary union.

The role of monetary union in stock market integration resembles that of pension funds but on a larger scale. Although stock market integration in the EU should benefit considerably from EMU it is unlikely that it will be a major consideration in the implementation of EMU. Monetary union entails far-reaching implications for national governments, economically and politically. It will thus be decided upon based on a much broader agenda than stock market integration.

E. Taxation

As a general rule, taxes lower the investor's returns from business and stock trading is no exception. In the context of stock markets taxes may be divided into two major categories: taxes on investment, such as capital gains tax, and taxes on trading, such as stamp duties. Of these, taxes on trading -- transaction taxes -- deserve two notes.

First, empirical evidence shows that transaction taxes lead to significant responses in the form of a fall in domestic trading. The response can involve either a shift of the same transactions off-shore (where an off-shore market is available), a substitution into other similar (but untaxed) assets, or a decline in trading altogether (Campbell and Froot 1994). Thus, transaction taxes have a tradition of being a major policy tool in stock market competition and integration. Abolition of stamp duties in France, for instance, was one of the steps taken to increase the Paris Stock Exchange's attractiveness to foreign investors and bring trading in French stocks back from SEAQ-I. In the UK, exemption from stamp duties is used for two purposes. One is similar to the French rule, and indeed preceded it: an exemption on foreign trades, applicable to SEAQ-I, serves to boost its attractiveness. Another exemption used to apply to market makers on SEAQ, thereby rewarding them for committing capital and providing liquidity to the market. In the LSE's proposed system for a public limit order book, such an affirmative duty to quote prices and be exposed to risk would not exist. Consequently, exemption from stamp duties to a weakened version of market makers (called Registered Principle Traders) was hotly debated between the Treasury and market participants.

Second, transaction taxes may have a more complex effect than just increasing transaction costs. The market crash of October 1987 and some other phenomena have given rise to a strand of theories on bubbles, crashes, and other seemingly irregular market behavior (Cunningham 1994, Stout 1995, Campbell and Froot 1994). Major players in such theories are traders who trade "excessively". To inhibit such excessive trading transaction taxes may be used. We are not aware of any case where stamp duties or other transaction taxes were imposed for such purpose.

VII. Conclusion

A little more than a decade after the EC Commission put forward its vision of an integrated European stock market in the 1985 White Paper, EU countries are closer than any other region in the world to achieving this goal. This is not to say that they are there already but rather that the EU has removed the largest number of structural barriers to it. The ISD, which is the boldest step in this direction, has yet to be fully implemented and its effects absorbed. Monetary union and other structural reforms still need to be realized.

The story of stock market integration in the EU consists of two separate but related plots. One is about the on-going efforts on behalf of the public sector (the European Commission and national governments) to harmonize the regulatory environment and cooperate in its enforcement. The other is the repetitive trials by the private sector (mainly stock exchanges) to build a market with pan-European dimensions. While the former has largely succeeded, the latter has largely failed. It is relatively easy to point at competitive tensions between stock exchanges as a major reasons for the failures of the cooperative efforts. But this should not mislead the student to infer that international relations among EU countries lack such tensions. They do not. What the governments did have which the stock exchanges did not is a higher level institutional framework, namely, the EU.

The process of stock market integration in the EU is a sub-part of a wider movement transforming Europe from a group of separate nation states into a union with confederate qualities. This context gives governments several advantages over the private sector. First, the context gives a meaning to the whole process. In the Europe case, the meaning was (and still is) of the utmost importance: to ensure peaceful coexistence of nation states in Western Europe. Second, the broader context puts the consequences of compromises in proportion. What may be a calamity for a national stock exchange could be a small price for the nation. Third, the multilateral institutional structure allows governments to use issue-linkage (read “horse trading”) in order to achieve their goal in other sectors. Such considerations are of little comfort to the firms in the losing sector.

While being relatively advanced, the European stock market integration process is still making its first steps. It is thus difficult to define a winning strategy for stock exchanges either individually or as a group. A tentative conclusion from the experience gained so far in Europe is that the most promising avenue may be simply to enhance competition. Advances in telecommunication and computer technologies make all the markets in Europe accessible at reasonable costs. This would facilitate direct competition among them in providing more efficient trading services. In turn, trading from other countries would migrate to those markets thereby integrating the stock market as a whole.

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