

The Integration of EEC Equity Markets: Analysis and Implications for Switzerland

1. Introduction

Despite significant historic inter-European economic linkages, the single most striking feature of Europe's stock markets, taken as a whole, is their diversity: in size, structure, regulation, taxation, trading practices and operational efficiency. While the EEC's legislative efforts aim at removing some of these differences through harmonization of various standards, certain market peculiarities will undoubtedly continue to remain.

This diversity, nevertheless, is both a strength and a weakness. The strength lies in the opportunity for individual European markets to specialize in the delivery of particular products and services. The weakness resides both in the possible inability of European markets to play a unified and significant role in the global equity market and in the obstacles that this diversity could impose on the very integration process fostered by the EEC.

In this paper, we examine first, in Section 2, the evolving market structures and dynamics of key EEC equity markets and evaluate the on-going initiatives of the European Commission for creating an integrated securities market by year-end 1992. As such, the European Free Trade Association (EFTA) countries' capital markets are not covered by this examination. Relatedly, the term "European equity markets", in this paper, refers to EEC markets alone. In Section 3 we present, in the form of a prognosis, the various possible implica-

tions of the above discussed trends in EEC equity markets, for key market participants, namely, stock exchanges, financial intermediaries, and retail and institutional investors. In Section 4, we view these developments from a Swiss perspective, and outline some of the key issues that these participants will need to consider to and beyond 1992. Lastly, Section 5 contains concluding remarks [1].

2. EEC Equity Markets : Current Structure, Operations, and Reforms

In this section we present a review of the current structure and operations of EEC equity markets and conclude with an examination of the prospect for reforms and integration.

2.1 Size and International Activity

The significant differences in market size and activity among individual European equity markets are summarized in Table 1. The International Stock Exchange (ISE), formerly the London Stock Exchange, is clearly the leading market both in terms of market capitalization and number of domestic and foreign stocks listed. ISE's domestic and total market capitalization of approximately ECU 0.7 and ECU 2.0 trillion, respectively, at year-end 1989 places it third internationally after Tokyo (ECU 3.6 trillion) and New York (ECU 2.4 trillion) [2].

Table 1: European Equity Markets : Size and Activity (December 1989).

	MARKET CAP 12/89 LOCAL blns (1)	MKT. CAP 12/89 ECU blns (2)	MKT. CAP/GNP 12/89 (3)	LISTED STOCKS 12/89 (4)	FOREIGN STOCKS 12/89 ECU blns (5)	TRANSACT. VOLUME 12/89 ECU blns (6)	TURNOVER RATIO 12/89 (7)	NUMBER OF SECTIONS (8)
BELGIUM	2'678	63	50%	338	153	10	0.16	OM,SM,OTC
DENMARK	266	34	39%	265	8	12	0.35	OM,SM,OTC
FRANCE	1'954	282	35%	685	223	96	0.34	OM,SM,OTC
GERMANY	620	306	31%	1163	535	611	2.00	OM,SM,OTC,TM
ITALY	215'000	134	19%	217	0	35	0.26	OM,SM,TM
LUXEMBOURG	1'952	46	834%	204	150	0.12	0.00	OM,OTC
NETHERLANDS	296	129	69%	373	205	36	0.28	OM,SM,TM
U.K.	507	683	99%	2357	599	379	0.55	OM,SM,OTC,TM
PORTUGAL	1'281	8	21%	143	0	-	-	OM,OTC
SPAIN	13'457	103	33%	417	0	29	0.28	OM,OTC

Notes:

- (1) Amounts are in billions of local currency, figures are for domestic market capitalization only; Portugal-1988 data.
- (2) Translation in ECU are based on year-end exchange rates.
- (3) 1989 market capitalization divided by gross domestic product.
- (4) Total number of listed stocks (domestic and foreign), excluding investment funds.
- (5) Number of foreign listed stocks.
- (6) Annual volume of transactions, in billions of ECU (market value of shares traded).
- (7) Annual volume of transactions (6) divided by total market capitalization (2).
- (8) Markets are: official market (OM), second market (SM), third market (TM), over-the-counter market (OTC), and electronic screen trading.

As far as the number of foreign stocks listed is a fair indicator of the level of "internationalization" of Europe's equity markets, ISE holds again the leading position with over 599 foreign stocks listed. Amsterdam follows closely, trading a relatively large number of foreign equities since 1980 through the Amsterdam Securities Accounting System (ASAS) and now lists over 205 foreign issues. However, in terms of market capitalization, the second ranking market in Europe is Frankfurt (ECU 306 billion). It is also the first in terms of sheer annual transaction volumes due to its high turnover ratio vis-à-vis London (2.00 as compared to 0.55). Numerous factors converge in enabling London to have reached, and to continue to maintain and enhance its premier position among European equity

markets, including: historical head start in terms of capital accumulation and trading of shares stemming from early industrialization; long-standing technology interchange with New York and Tokyo in the fields of telecommunications, settlement systems, and product innovation; positive linkages with other areas of capital markets in which London maintains a key role - especially debt and foreign exchange; and progressive self-initiated reforms (as recently evidenced by Big Bang in 1986).

2.2 Market Structure and Organization

All European equity markets, with the exception of the ISE of London, maintain official floor trading

Table 2: European Equity Markets : Structure and Organization (March 1989).

	OFFICIAL TRADING HOURS	FLOOR TRADING	OFF-FLOOR TRADING	OTC MARKET	CONT. MARKET	SCREEN TRADING	PHYSICAL DELIVERY	CENTRAL SETTLE- MENT & CLEAR.	MARGINING TRADING	DAYLY LIMIT ON PRICE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
BELGIUM	11h30-14h30	YES	YES	YES	YES	NO	YES	NO	NO	YES
DENMARK	10h00-16h00	YES	YES	YES *	YES	NO	YES	NO	YES	NO
FRANCE	09h30-15h30	YES	YES	YES	YES	YES	NO	YES	YES	YES
GERMANY	11h30-13h30	YES	YES	YES *	YES	NO	YES	NO	NO	YES
ITALY	10h00-13h45	YES	YES	NO	NO	NO	NO	NO	NO	NO
LUXEMBOURG	10h45-13h15	YES	YES	YES	NO	NO	NO	YES	NO	NO
NETHERLANDS	10h00-22h30	YES	YES	NO	NO	NO	NO	YES	NO	YES
U.K.	09h00-17h00	YES	YES	YES *	YES	YES	NO	NO	NO	NO
PORTUGAL	10h00-13h00	YES	YES	NO	NO	NO	YES	NO	NO	YES
SPAIN	09h30-12h30	YES	NO	NO	NO	NO	YES/NO	YES/NO	NO	YES

Notes:

- (1) NETHERLANDS: There is a 16h30 - 22h30 session for the most active domestic securities to coincide with NYSE trading. SPAIN: There is a late session to coincide with other European markets and the NYSE.
- (2) Introduction of continuous markets usually makes the floor less active.
- (3) Off-floor trading hours for selective markets. FRANCE 10h00 - 17h00; DENMARK 08h15-17h00; GERMANY 9h00-11h00 and 14h30-16h30.
- (4) Unofficial and non-regulated over-the-counter markets unless indicated by an asterisk. Asterisk indicates a regulated OTC market.
- (5) Off-floor computerized centralized market.
- (6) Off-floor decentralized electronic market. For example the London's SEAQ market.
- (7) Securities are hand delivered to settle the deal (as opposed to "dematerialized" book-entry transfer systems that are generally operated by a central clearing authority ; see note (8)).
- (8) The book-entry system is operated by a central authority in France, Luxembourg, the Netherlands and Spain. However, settlement and delivery delays vary between countries and depend on whether the transaction occurs in the cash or the forward delivery market.
- (9) Margin trading is the process of buying securities with money borrowed from brokers. This is forbidden in most countries or regulated as in Denmark, France where a 40% coverage is required for equity margin trading. Where margin is allowed, foreigners can also deal on margin.
- (10) Limits for selective countries are as follows. France: + or - 5% from the previous closing in the cash market and 8% in the forward delivery market. Germany: no limits in principle but a + or - 5% change from the last fixed price should be reported to the Managing Committee of the Stock Exchange before trading resumes. Portugal : + or - 15% in consecutive sessions.

and hours (see Table 2). Strictly speaking, London no longer has an organized equity market due to the fact that independent market making activities by intermediaries, coupled with the rise in the use of electronic quotation systems, have rendered London's trading floor obsolete.

Today, the ISE is essentially an over-the-counter market similar to New York's National Association

of Securities Dealers and its automated quotation system (NASDAQ). In comparison, Continental markets are still of the organized type, similar to the New York and Tokyo stock exchanges, where orders are centralized in a single location ("the stock exchange" or "bourse") and executed there. Nevertheless, an interesting development should be noted, whereby off-floor trading of large block of

shares is tending to drive increasingly large amount of trades out of Continental exchanges, toward broker/dealer offices, or toward London's ISE where the liquidity of large blocks of foreign shares is often higher than on the local market of origin [3]. The lack of liquidity in the Continental exchanges is mostly due to regulation that still prevents intermediaries from trading for their own account and to engage in market-making activities. This prohibition has traditionally been justified on the grounds that it protects investors (since intermediaries act as agent/broker as opposed to principal/dealer) and limits the risks borne by intermediaries.

It is likely that increased competition will force Continental stock exchanges to eventually allow intermediaries to perform market-making activities if they wish to augment the liquidity and flexibility of their markets and to prevent the drift of business in their own shares (especially of the major firms) to London. Notable, in this respect, is Paris's introduction in 1989 of a limited form of market making modeled on London lines known as counterparty trading. However, for many small brokers this liberalization may lead to precarious situations in the event of sharp declines in stock market prices in light of the present state of undercapitalization of most Continental intermediaries (with the exception of banks).

2.3 Price Setting and Price Stabilization Mechanisms

There are different price-setting mechanisms in the European equity markets (see Table 2), with the periodic call system (or batch system) in a dominant position. Under this system, orders coming in over an interval of time are not transacted immediately, but stored and transacted together in a multilateral transaction. Batch systems can function in the verbal, written, or auction forms [4].

The batch system approach followed by most exchanges is expected to increasingly be replaced by a continuous market system, similar to that which prevails in London, with computer-assisted trading

and quotation. In a continuous market system, a transaction occurs whenever two traders' order cross. Price setting and transaction are automatic and occur continuously. This system, now in place in Paris, is anticipated to be progressively operational on the Belgian, Danish and Spanish stock exchanges.

Currently, more than one price setting mechanism may operate in the same market. For instance, in Paris, an auction form of the batch system is used to determine the price of some of the stock that trade in the cash market, whereas a continuous system is employed for all other stocks.

Closely related to price setting mechanisms is the issue of price stabilization techniques with the most frequently employed being the imposition of a maximum daily limit on price changes (see Table 2). For instance, in the Paris market, opening equity prices are not allowed to change more than five percent from the previous day's closing in the cash settlement market and more than eight percent in the monthly settlement market. There is no daily limit to price fluctuations in the continuous market but a special commission can halt trading if price fluctuations exceed seven percent. Prices of foreign securities, however, are free to move in accordance with their home market's rule.

Other price stabilization techniques include trading halts with indicative prices, the refusal to accept destabilizing orders (both employed in Brussels), stabilizing speculation by market makers (employed in Amsterdam and Brussels), and the affirmative obligation stabilization methods as employed in the U.S. and not currently used by any European stock exchange [5]. Furthermore, it is important to note that the majority of European exchanges do not employ any administrative stabilization techniques as "circuit breaking" [6]. Trading halts with indicative prices are less drastic than maximum price limits since in the former case stabilizing orders can enable trading to resume after a short break. Unfortunately, few exchanges use this technique. Stabilizing speculation by market makers is encouraged in some markets by offering participants a trading advantage through lower trad-

ing costs and/or preferred access to some market information. The range of stabilization techniques employed indicates the need for harmonization of standards in this area to enable individual European markets to respond to sharp stock price movements in a coordinated fashion as economic integration proceeds.

On a pan-European level, the hopes and efforts to build an efficient and integrated equity trading system indeed goes back some time and has met with more administrative and political bottle-necks than sheer technological difficulties. In the middle 1980s, the Inter-Bourse Data Information System (IDIS) was conceived with the intention of swapping price information between exchanges. Its efforts floundered partly due to the fact that few exchanges carried prices electronically and partly due to cumbersome bilateral agreements between the various national exchanges.

More recently, the "Pipe"-system (Price Information Project Europe), with its various phases of development, has been promoted as the answer to the need for a more comprehensive trading system on an European level. Basically, the first phase involves collecting, at a central computer hub, raw share price information from each national exchange, followed by a rerouting to equity market intermediaries willing to pay for the service. During a second phase, users will be able to actively request information through the system (instead of being passive recipients) and a hoped-for third step will be a full-fledged trading system for Europe's leading stocks. Politics have already entered into the design phase, with a lack of consensus as to what model a pan-European trading system should follow; some intermediaries are even hesitant about the very need for such a price information exchange system, arguing that price information from London's SEAQ International is sufficient [7].

2.4 Clearing and Settlement Systems

There are as many settlement systems as there are countries within the European Community (see

Table 2), and this fact perhaps presents one of the prime obstacles toward an integrated equity market in the EEC. While some countries (Belgium, Denmark, Portugal and Spain) still practice some form of physical delivery of securities, with long associated delays and higher costs, and few countries have a centralized system of clearing and settlement as France's SICOVAM [8] (also Luxembourg and Netherlands), other countries continue to have a network of multiple settlement and clearing systems (Italy and U.K.).

The situation in the U.K. is of particular interest because it illustrates an important aspect of a clearing and settlement system: how to be operational at both the international and national levels. Currently, here are two systems in different stages of operation in the U.K.; if coordinated, they could give rise to the first instant settlement system for international equities in the world. London's TAURUS system (Transfer and Automated Registration of Uncertificated Stock) which is scheduled to be introduced in 1990, is designed to eliminate the share certificates that change hands after each stock market deal in international equity, and also serves as an automated trade confirmation system. The INS (Institutional Net Settlement) system enables a single payment after the exchange nets out all the business with member firms. Up to now, there has not been a combination of these two systems.

On the international level, the ISE has initiated a centralized clearing system for world stock exchanges called GLOBALCLEAR. Among other reasons, this attempt has not been a success because neither New York nor Tokyo consented to surrender business to London. A similar prior attempt at becoming the international equity settlement center for Europe and Scandinavia had also met with the same lack of enthusiasm from participating national stock exchanges which had their own aspirations in attracting foreign business. It is evident that all European exchanges realize that the exchange with the widest and most efficient international settlement and clearing system will hold the competitive advantage.

The integration process may in part assist in the establishment of bridges between major Continental stock exchanges and the ISE. For instance, links now exist between France's SICOVAM and West Germany's AUSLAENDERKASSENVEREIN. And in a larger context, the final outcome of the various price information exchanging efforts between the major European stock exchanges, that is discussed above, may eventually lead to some form of a pan-European clearing and settlement system. The principal point here is that without a reliable pan-European settlement and clearing system, it is hard to imagine a truly integrated European equity market.

2.5 Exchange Membership and Regulation

With the exception of Italy, stock exchange membership in Europe does not require the purchase of a "seat" as it is the case in the U.S. or Japan. Membership is usually granted by the ruling stock exchange's public or private authority. Usually, membership comes with a stockbroking monopoly, except in the U.K. where entry in the market is free, even for foreign firms (see Table 3, Part I). Elsewhere, foreign firms are generally barred from national markets, or, when allowed in, submitted to stricter requirements than national brokerage firms [9].

Table 3 (Part I): European Equity Markets: Membership and Regulation (March 1989).

	Number of Brokers (1)	Broker's Monopoly (2)	Seat Holding (3)	Minimum Commission (4)	Number of stock Exchanges (5)
BELGIUM	314	YES	NO	FIXED	1
DENMARK	46	YES	NO	NEGOTIABLE	1
FRANCE	61	YES	NO	FIXED & NEGOTIABLE	7 (Paris)
GERMANY	680	YES	NO	NEGOTIABLE	8 (Frankfurt)
ITALY	230	YES	YES (\$ 550.000)	FIXED	10 (Milan)
LUXEMBOURG	74	YES	NO	FIXED	1
NETHERLANDS	150	YES	NO	FIXED	1
U.K.	329	NO	NO	NEGOTIABLE	
PORTUGAL	12	YES	NO	FIXED	2 (Lisbon)
SPAIN	87	YES	YES (Granted)	FIXED	4 (Madrid)

Notes:

- (1) France and Italy have a "numerus clausus" regulation that limits the number of authorized brokers. This regulation will be removed in January 1992 in France.
- (2) Only authorized brokers can engage in the broking activity in these countries.
- (3) Brokers can be required to hold a seat on the trading floor to perform their activities. The seat can be granted or be payable.
- (4) For more information, see Table 4.
- (5) Number of stock exchanges in a given country with the location of the principal exchange given in parentheses.

All countries have established minimum capital requirement for firms, a few countries have done so for individuals, with only London's ISE having established detailed capital requirements according to the nature and scale of business (see Table 3, Part II). Similarly, all countries require an annual financial report for listed companies, but only a few require a more frequent semi-annual (Italy), quarterly or monthly report (Netherlands, and U.K.). In

terms of investor protection, as shown on the same chart, half of the EEC countries have investor insurance while the other half do not.

2.6 Commissions and Taxation

Until the recent wave of deregulation that affected European financial markets beginning with Lon-

Table 3 (Part II): European Equity Markets: Membership and Regulation (March 1989).

	ACCESS TO FOREIGN FIRMS	ADDITIONAL REQUIREM. FOR FOREIGN.	MINIMUM CAPITAL REQUIREMENTS	ANNUAL FINANCIAL STATEMENTS	OTHER FINANCIAL STATEMENTS	INVESTOR INSUR. OR GUARANTEE	REGULATOR BODY
BELGIUM	NO	--	BFR 10 MLN	YES	QUARTERLY	YES	CB
DENMARK	NO	--	DKK 5 MLN	YES	NO	YES	GBI
FRANCE	YES	YES	FFR 4-40 MLN	YES	NO	YES	COB
GERMANY	NO	--	DM 50'000, DM 100'00,	YES	NO	NO	
ITALY	NO	--	LIRE 500 MLN	YES	SEMI-ANNUAL	NO	CONSOB
LUXEMBOURG	NO	--	FLUX 5 MLN	YES	NO	NO	LSE
NETHERLANDS	YES	NO	DFL 1.0 MLN, DFL 1.25 MLN	YES	QUARTERLY	YES	VVDE
U.K.	YES	NO		YES	MONTHLY QUARTERLY	YES	SIB, TSA SRO, RIE
PORTUGAL	NO	--	ESC. 1000 MLN	YES	NO	NO	BANK/ PORTUGAL
SPAIN	NO	--		YES	NO	NO	JUNTA SINDICAL

Notes:

CB	Commission Bancaire
GBI	Government Bank Inspectorate
COB	Commission des Opérations de Bourses
CONSOB	Commissione Nazionale per la Società e la Borsa
LSE	Luxembourg Stock Exchange
VVDE	Vereniging Voor De Effeckenhande
SIB	Securities and Investments Board
TSA	The Securities Association
SRO	a Self Regulatory Organization
RIE	a Reckonized Investment Exchange

don's Big Bang in October 1986, fixed commissions were the common practice in European equity markets. Since that period, commission have become negotiable in most European exchanges even though a dual system still persists in some markets with the existence of a ceiling on fixed commissions. As indicated on Table 4, in the largest markets, only Italy and the Netherlands have continued to maintain fixed commissions. Nevertheless, it is most likely that commissions will become fully negotiable in most of the EEC stock exchanges by 1993.

Commissions indeed are only one part of the cost of trading, and taxation of capital gains, dividends, and transactions should also be taken into account. Capital gains are normally taxed where the investor resides, regardless of the national origin of the investment (this ensures that domestic and international investments are taxed similarly). Dividend payments are sometimes the subject of withholding tax, although in recent years many countries have removed it in order to attract foreign investment. Transactions tax is usually proportional to the amount transacted or to the commission charged by brokers (as is the case of the value-added tax on commissions prevalent in most EEC countries). Currently, these taxation practices vary across European countries and lead to distortion in the flow and allocation of capital. The harmonization of these taxes can be expected to remain a thorny issue well beyond January 1993 especially in so far as tax issues are still decided by the unanimity rule among member states as opposed to the qualified majority rule.

2.7 Derivative Markets

There are few "active" equity-related derivative markets in the EEC. Nevertheless there are several key formal markets and new product offerings on these markets are being planned and introduced each year with varying degrees of success. As shown on Table 5, currently, there are the London Traded Option Market (LTOM), the London International Financial Futures Exchange (LIFFE),

the European Option Exchange (EOE) of Amsterdam, the *Marché des Options Négociables de Paris* (MONEP), and the *Marché à Terme International de France* (MATIF). Equity-related derivative securities can be option contracts on individual common stock as well as option and future contracts on stock market indices. Option contracts are traded on the LTOM, the EOE, and the MONEP, while futures contracts are traded on the LIFFE and MATIF (see Table 5). Overall, options on international equities introduced in European markets have not been successful (the EOE has now de-listed all contracts on foreign equities introduced earlier).

Close to 70 equity options and one stock-index option were listed on the LTOM in December 1988, with an average daily trading of 36'319 contracts in the fourth quarter of 1988. There were 19 equity options and two stock-index options traded on the EOE. MONEP had 13 equity options listed in December 1988 and trading in two futures contracts on stock market indices and options on these indices started in the first semester of 1988 (MONEP and MATIF). There is also an over-the-counter stock option market in Frankfurt and futures contracts on debt instruments are expected to begin trading in 1990. There are plans to introduce stock index futures as well.

London's LTOM is the most international of all European option markets, yet there are several problems surrounding this market: an overconcentration of liquidity in a few stocks, high admissions costs, and a lack of incentives for market-makers to perform efficiently. These problems in part may explain the relative failure of new contracts on French equities introduced in this market in 1987. Since the 1987 crash, the LTOM has not performed as well as the EOE (often at 50% of the EOE level). The ISE, in recognition of the importance of derivative markets in guarding London's dominant position in world markets has promulgated a reform package encompassing structural, regulatory, and marketing cooperative actions across derivative markets; in this respect, the recent announced merger (spring 1990) between LIFFE and LTOM may

Table 4: European Equity Markets: Commission Structures (December 1988).

	NEGOTIABLE RATES (1)	FIXED RATES	
		STANDARD RATE(S)	SPECIAL LOWER RATES FOR LARGE ORDERS
BELGIUM	NO	0.8% forward market; 1.0% cash market	above BFR 5 MLN above BFR 2 MLN
DENMARK	YES (0.25% - 2.0%)	--	--
FRANCE	YES above FFR 2 MLN (0.215% - 0.65%)	below FFR 2 MLN rates are fixed;	--
GERMANY	YES	--	--
ITALY	NO	0.70%	NO
LUXEMBOURG	NO	0.80%	above FLUX 5 MLN
NETHERLANDS	NO	0.7% - 1.5%	above DFL 1 MLN
UNITED KINGDOM	YES (0.0% - 0.2%)	--	--
PORTUGAL	NO	0.1% - 0.6%	above ESC 50 MLN
SPAIN	NO	0.8 PTS to 1.5 PTS per share prices under 500 PTS; 0.25% for share prices above 500 PTS	NO

Notes:

(1) Data in parenthesis indicate the usual range of observed rates.

hopefully revitalize these derivative markets by diminishing administrative fragmentation [10].

2.8 EEC Legislation in Equity Markets

The EEC directives in the securities sector attempt to create a level playing field for intermediaries and

investors. A vast effort to define standards and harmonize practices is currently underway. If successful, this effort will bring about a number of developments such as more efficient and standardized rules for: (1) admissions to exchanges, (2) listing of company, (3) publication of prospectuses, (4) control of insider trading, (5) disclosures of major ownership changes, (6) regulatory scrutiny,

Table 5: Derivative Securities Markets in Europe (March 1989).

	STOCK OPTION	NUMBER LISTED	STOCK INDEX OPTION	STOCK INDEX FUTURE	OPTION ON STOCK INDEX FUTURE	TRADING MARKET
BELGIUM	NO	0	NO	NO	--	--
DENMARK	YES		NO	NO	--	--
FRANCE	YES	13	YES CAC 40 OMF 50	YES CAC 40 OMF 50	YES CAC 40 OMF 50	MATIF OMF
GERMANY	YES	68	NO	NO	--	GERMAN STOCK
ITALY	YES	0	NO	NO	--	--
LUXEMBOURG	NO	0	NO	NO	--	--
NETHERLANDS	YES	21	YES XMI	YES FTAA	YES XMI	EOE
U.K.	YES	67	YES FTSE 100	YES FTSE 100	YES FTSE 100	LIFFE/LTOM
PORTUGAL	NO	0	NO	NO	--	--
SPAIN	NO	0	NO	NO	--	--

Notes:

MATIF Marché à Terme International de France
MONEP Marché des Options Negociables de Paris
LTOM London Traded Options Market
LIFFE London International Futures Market
EOE European Options Exchange

in addition to, (7) enabling investors to purchase shares in mutual funds across Europe and, perhaps most importantly, (8) enabling intermediaries licensed in one EEC state to offer pan-European securities services without obtaining further approval. In this sense, one can perhaps point to the Investment Services Directive as being the "mother directive" of the securities field, not unlike the Second Banking Directive applicable in the bank-

ing field and after which it is modeled. It is likely that these directives, most of which concern "standardization" or "harmonization" of regulations and practices, will be approved in some form or another. There would be little vested interest for any one country to vigorously oppose, in theory, the creation of a level playing field. Nevertheless, the actual enforcement of some of these directives could prove to be a thorny problem.

For instance, in order to realize the disclosure of large shareholdings directive, honesty on the part of the shareholder will need to be relied upon in some countries (e.g., France and Germany have bearer securities cleared electronically). The directive on insider trading, despite its efforts of defining “insider” will in all probability create monitoring nightmares. It is therefore likely that the EEC will need to create a strong-arm agency like the SEC in the U.S. with a mandate from the EEC for monitoring compliance across EEC equity markets. There may be strong opposition to such a move in certain countries (especially the U.K. which has long had a “self-discipline” philosophy).

3. Implications for Key Market Participants

Capitalizing on the developments and opportunities that are currently arising in the EC equity markets will demand the formulation of new strategies and the acquisition of new skills for each of the three major groups of equity market participants: national stock exchanges, financial intermediaries, and retail and institutional investors.

For each group, surviving and prospering in the 1990s will mean undertaking a realistic assessment of the implications of these developments, both on a macro and micro level, in order to formulate new strategies or acquire new skills. But this endeavour is not an easy one. And nor do the implications that may be drawn on the European or global level readily lend themselves to quick generalizations which are valid at all country levels and which in turn translate into “generic strategies” applicable to all members within any one group.

The success of any individual institution within each group depends less on the concoction of “the one best strategy” or the rapid acquisition of “the latest skill”. Rather what is needed is an ability to constantly gauge changing competitive factors in order to develop flexible and “evolvable” strategies that enable these institutions to effectively manage, and appropriately gain from, the rapid evolution in European equity markets. It is with this in mind that

readers should evaluate the direct relevance, for their particular institutions, of the following macro implications.

3.1 National Stock Exchanges: Leveraging Comparative Advantages Under A Two-Tiered Market Structure

Numerous factors indicate that the continuation of current developments in European equity markets may lead to the formation of a two-tiered market, with London playing a role as the “hub” center for Euro-equities issuance and trading and with the other major Continental exchanges serving as “satellite” centers of varying importance.

Recent events in central and eastern Europe indicate that London’s dominance is not hegemonic in all areas of the financial sector. As such, when viewed in the larger context of the European financial services industry, it is frequently argued that Frankfurt is being viewed by many international financial intermediaries as the future pivotal center for “universal banking” activities with its relatively heavy emphasis on commercial banking. This school of thought argues that the fundamental development of Eastern Europe will rely more upon the commercial banking sector (in which the Germans and the Swiss are skilled at) than upon the securities sector (in which London holds the current lead) [11]. The speed of current events, however, makes it difficult to conclude whether there will turn out to be a single “winning” financial center for all types of products and services, or whether the top role will be shared along product/service sectors as discussed above.

London’s current predominance in securities markets appears to stem from four factors: (1) scale and scope of equity market activity, (2) established cross-linkages to bond, bank debt syndication, and foreign exchange markets, (3) early technology investments for effective data processing and trade execution and settlement and (4) the combination of the first three points which leads to London’s competitive advantage in block-trading, in market-

making; and importantly, in developing deeper and wider equity derivative markets.

In light of this situation, the following question is frequently raised: if major European corporations in the next decade, having "outgrown" their home markets, are advised by the financial intermediaries to issue (with subsequent trading of) their equities in London, what roles can be foreseen for Continental exchanges? Should they attempt to duplicate London's role? Or, should they specialize and, if so, in what segments?

Trying to duplicate London's decades-long consolidated position would be a long, arduous, and most probably a futile effort. Some exchanges have hoped that by focusing on a line of equity derivative products, they would have a "back-door" means of recapturing London's business. Yet, it is hard to see how national exchanges can rely on this route alone to build a long-term, profitable, and viable strategy, especially if significant underlying activity for the upper-end of the market (the most likely type of shares for derivatives) resides in London.

We argue that the investments in technology and on-going self-regulation undertaken by Continental exchanges are beneficial and, in some cases, long overdue. But we also argue that Continental exchanges should not make them in the hope that major national corporate equity issuance and trading will tend to stay with home exchanges (or that the business that once drifted to London will soon flow back). Instead, such investments should be made in order to foster the development of an efficient arena for the listing, issuance, trading, and clearing/settlement of small to middle market corporate equity paper. The business of large, often multinational, corporate paper may hence be viewed as peripheral activity for Continental exchanges (in their capacity as satellite centers for smaller trades and occasional "packaged trades"). In this sense, the realistic alternatives open to Continental exchanges are specialized in terms of "customer", rather than "product" segments, with the possible exception of Frankfurt, which based on recent events may develop along a specialized sector of the financial services industry, namely that of

universal/commercial banking. Interestingly, this customer specialization role is not unlike that played by certain smaller U.S. exchanges which have tended to focus on regional start-ups and new issuance and trading of middle market companies. This double-tiering of European equity markets and consequent specialization for London and Continental exchanges implies different mind-sets and skills.

London will need to continue to foster a market that is conducive to larger corporate issuers, the major intermediaries that serve them, and the large institutional investors that frequently undertake massive block-trading. In this context, it is critical that the on-going debate within the ISE, as to the merits of the order-driven versus quote-driven systems (or some combination of the two) be resolved in a manner that does not dampen the attractiveness of London as an efficient pricing and trading center of large European corporate equities.

Continental exchanges, while continuing to modernize and liberalize, will need increasingly to focus their efforts on their "captive" market of small to middle market corporates, the national intermediaries that serve them, and the assorted group of predominantly national retail and institutional investors that are more likely to (and capable of) evaluating the investment risk of such small capitalization equities. Informational and operational efficiency are key market factors for enhancing liquidity in such equities. This implies that these exchanges may need to grant more flexible listing and disclosure regulations for such companies, the possibility of own-book positioning of such shares for intermediaries adequately capitalized, and more streamlined trade execution, and clearing and settlement systems to encourage investor interest and activity.

3.2 Financial Intermediaries: Deciding to Whom, What, Where, And How to Play in European Equity Markets

The proposed EEC directive on investment services will enable a larger group of financial intermedi-

aries to perform a wide range of securities activities across the twelve European capital markets. Increasingly, market practices and regulations will be harmonized throughout Europe. This environment will be dramatically different from that which now prevails, especially on the Continent, where brokers/dealers are a relatively protected group performing highly limited or specialized activities. Consequently, it is critical for current intermediaries to choose their scope of activity and to decide what aspects of the business they intend to focus on. Only a handful (if any) can hope to be profitable providing all services, to all client segments, in each European capital market.

Intermediaries should first assess their own competitive advantages, to determine the "to whom", "what" and "where", before deciding on the "how" of achieving his goal. This results in a complex multi-dimensional matrix.

For instance, players choosing to target the upper-end of the corporate market will need to decide if they wish to focus on a few activities or provide a range of services from corporate finance, to new issuance, to market-making and own-book positioning (or simple broking), to equity market research for institutional investors. Do they wish to be, or need to be, pan European or can they focus on their home market? Then comes the "how": What financial and human resources are needed? Are strategic alliances or mergers or acquisitions necessary? Similarly, this entire group of questions can be raised for intermediaries choosing to focus on small to medium-sized companies.

It is possible that as European equity markets develop in the 1990s, two groups of intermediaries may evolve. One group may focus on the upper-end of the market (typically with a large market share in the home country) and have significant representation in London for issuance, trading, and institutional investor services. The second group may concentrate more on the medium to low end of the market (acting almost entirely in the home market along with many other local intermediaries) and be linked to the first group for servicing those client needs best served via London. Each group may

focus on equity research in its respective markets and share such research with the other group.

For most Continental equity brokers or dealers, two handicaps will need to be overcome over the next decade: (1) limited capital bases and lack of market making, and (2) own-book positioning skills.

The first factor will become critical, especially for those choosing the upper end of the market, in competing with well-capitalized universal banks. Much of the new activity in equity financing is expected to come from privatization programs and corporate restructurings. A player with "deep pockets" will have a definite advantage over one who argues that he can "eventually find buyers for the paper".

The second factor is the chicken-and-egg aspect of the first in many Continental equity markets. Regulation prevented own-book positioning for intermediaries (based on "investor protection" concerns) and hence intermediaries had little incentive to capitalize themselves; thinly capitalized intermediaries confirmed the regulatory authorities' fears of disrupted markets if own-book positioning were allowed. Even though proposed EEC regulations will permit positions activities, Continental intermediaries may still be hampered by a traditional aversion to "Anglo-Saxon style" position-risk analysis even if such skills could be readily acquired.

3.3 Retail And Institutional Investors: Capturing Diversification Opportunities In An Integrated Market

Recent studies have revealed that during most of the 1980s, the monthly returns of European equity markets were either independent of each other or slightly positively related (this was found to be the case for both "raw" returns and returns adjusted for changes in exchange rates) [12]. This phenomenon implies that diversification across European equity markets would have brought about significant risk-reduction benefits without a commensurate sacrifice in total returns.

Furthermore, these same studies also revealed that standard market indices (both equally-weighted

and value-weighted) were not part of the efficient set of European portfolios (that is, the set of portfolios with maximum return and minimum risk). Hence, dynamic asset allocation strategies across European equity markets could have enhanced return without increasing risk.

Can investors still rely on these diversification opportunities in a post-integration economic market? It is quite possible that European integration may result in significantly stronger interdependencies, over the next five to ten year, among major European equity market returns. And stronger interdependencies mean less diversification gains. However, one could argue that any decline in diversification opportunities from a risk-reduction standpoint will be more than offset by certain key factors, such as increased operational and informational efficiency, and new opportunities in the form of "focused diversification". Let's examine this further. Increased operational efficiency should lead to greater liquidity ("depth") in each major market as well as greater fluidity ("scope") across markets. In other words, as markets integrate, many of the current operational obstacles, such as clearing and settlement differences and inconsistencies, should diminish, encouraging more foreign listings and expanding the choice for investors.

In addition, focused diversification opportunities may arise as markets integrate. For instance, retail and institutional investors could take an "industry sector", "company size", or "economic/geographic pockets" diversification approach on a Europe-wide basis, not unlike that available to investors in the integrated U.S. or Japanese markets.

Diversifying across European equity markets and managing portfolios on a dynamic asset allocation basis demands new skills on the part of most European retail and institutional investors, who for the most part have been pursuing a buy-and-hold strategy of high-grade national paper.

While information is readily available on the upper-end of the corporate market, until the day intermediaries link themselves effectively in providing "small cap research" and liquid trading, investors will need to "piece together" their own portfolios by

dealing with multiple intermediaries, of differing quality, in each European capital market.

Dynamic asset allocation is a difficult proposition in one's home market and may turn out to be a nightmare of sorts on a European level for the unsuccessful investors. End-investors will increasingly demand higher returns, consistently, of their institutional fund managers and will be less hesitant than in the past to shift their assets around. In response, fund managers will themselves carefully need to position their range of pan-European investment strategies in those areas where informational and operational efficiencies are optimal and conducive to their stated approaches.

4. Key Issues for Swiss Participants

How should Swiss financial markets interpret these EEC-wide implications? Are they relevant? And what actions in response need to be evaluated?

Swiss financial markets have traditionally been an integral part of the EEC (and indeed global) financial network. In many ways, therefore, talking about EEC financial integration without mentioning Switzerland makes little sense due to the tremendous cross-border capital flows and the significant level of international banking activity within Switzerland itself.

Furthermore, Swiss financial markets are substantial in size and in scope. Zurich is Europe's fourth largest securities market, after London, Frankfurt, and Paris, with a trading volume in 1989 of approximately \$420 billion. The market is traditionally one of the World's most international with approximately 230 non-Swiss stocks and 900 foreign bonds currently being traded [13].

Yet these strengths (coupled with a typically "Swiss" desire to remain "inside" of EEC and global markets and somehow simultaneously "outside" of its monetary and fiscal constraints), should not blind Swiss participants into a false sense of security. These EEC-wide implications are relevant, not because the main threat lies in a potentially protectionist EEC vis-à-vis Switzer-

land, but because of the competitive reforms being undertaken in key EEC financial markets which themselves are a response to 1992. This "new" competitive threat is especially evident in the hitherto second-tier financial markets as Paris, Frankfurt, and Amsterdam which are rapidly trying to carve out a significant post-1992 role vis-à-vis London.

In light of these competitive trends, it appears to us that Swiss participants need to consider two areas of action that attempt to answer the following question: (1) how can Switzerland avoid getting structurally and operationally cut off from EEC and international financial markets and maintain its stature as a key global financial center? and, (2) in view of the evolution of various security market models in the major EEC financial markets, what internal and external factors should Swiss markets take into account in guiding the current local market reform process?

In answering the first question, we argue that a number of fundamental reforms are needed and long overdue. These reforms are necessary to keep Swiss financial markets at least as attractive as other European markets, if not more attractive, and can be grouped under several headings:

Market Structure: The current seven stock exchanges in place divide trading, reduce liquidity, and as a result, increase the well-noted lack of transparency in Swiss markets. This calls for the creation of a centralized exchange (either physically or, as a second alternative, electronically linked among the existing seven). In the right direction is the consensus reached by the federal committee of parliamentarians in February 1990 on the need to introduce a federal stock-exchange law that is compatible with the EEC directives and which will replace current control of local exchanges by the cantons by national-level control [14]. This will also help give Switzerland a more unified voice in financial market negotiations at the EEC level.

Commissions and Taxation: One of the biggest obstacles to active trading of securities in Switzerland is the stamp tax of 0.315% charged on new

issues of securities in addition to the 0.30% tax on each security purchase. This is especially burdensome for the small and medium sized Swiss financial institutions (as the larger ones can simply move trading to their foreign branches). All participants agree on the need for eliminating this tax but the question up to now has hinged upon how to make up the lost tax revenue. Current plans indicate the possibility of slightly increasing bank profit taxation (which are considered low by international standards).

Trading Mechanisms and Costs: In addition to splintered liquidity created by the existence of seven exchanges, the prevalent method of price-setting, the "open-cry" method of trading, has been charged by some participants as being a sub-optimal method of executing at the best price. Dealing costs on Swiss exchanges are currently high vis-à-vis electronic systems (\$50 on the exchange vs. \$5 through Reuters) [15]. Hence, in addition to the centralization of exchanges discussed above, survival in the 1990s may also mean looking for the most cost-effective means of trading.

A positive trend in creating a more transparent market is the move by the Zurich exchange to begin reporting, daily instead of monthly, the volume of all listed Swiss shares traded on and off the floor. Additionally, more flexibility has been agreed to as of the beginning of 1990 in negotiating the securities brokerage fees; this was especially critical for large institutional investors. All these measures are fundamental if the bulk of the trading is to remain on the exchanges than drift off to OTC-type markets as being promoted by Credit Suisse First Boston (which aims to lower clearing time as well as dealing costs).

The second question calls for more reflection and evaluation as the answer is not quite so obvious. This concerns how Switzerland should guide its own market reform process in view of reforms taking place in other European exchanges. These reforms cut across several aspects of the securities trading business system, including client segment focus (retail and/or institutional and local and/or international); optimal trading methods (on-vs.off-

exchange floors, order-driven vs. price-driven or some combination of each, and the use of technology in achieving these ends); clearing and settlement methods (the question here is how to do this quickly, cheaply, and integrated to the widest range of other major settlement systems).

As each of the major EEC market carries out these various reforms, its ultimate aim is to capture (in some cases, recapture) and maintain the broadest and deepest markets in local and foreign shares. Naturally, the type of reforms these exchanges should take should be based on where they want to end up. Certain reforms may lead to the creation of market structures and operating methods that are more conducive to institutional investors and large corporate issuers; others lead to markets that favor small investors or small capitalization stocks. Some hope to be all things to all people, although few exchanges seem to succeed in doing this. And all are relying heavily on technology that is widely linked to other global markets, to lower cost, increase speed, and gain one notch above the other financial markets.

Examples of recent use of technology to change both the structure and operations of securities trading abound, both in the underlying equity and in equity-linked derivatives. Chicago Board Options Exchange plans to team up with Reuters to create an automated market that ties shares and derivatives together. The Stockholm bourse has established a new electronic market to attempt to win back trading in Swedish shares lost to London. Morgan Stanley sends orders for trades in the 550 biggest American shares directly to the specialist via the NYSE's automated-routing systems instead of using its own floor brokers [16]. And the Swiss options and financial futures exchange (SOFFEX) is equipped with a fully integrated clearing system in addition to an automated trading system [17]. But what do all these developments mean for Swiss equity market players?

Our message to Swiss participants in answering this question is the following: having undertaken the basic reforms discussed in the first question, they should then be on the "look-out" for how the EEC

and international exchanges evolve before themselves expending futile efforts and capital. But this "look-out" tactic should not be a passive one. Instead an "integrative approach" to clearing/settlement initially (and possibly, eventually trading) should be pursued vis-à-vis other major exchanges. And, in addition to monitoring and constantly executing reforms to keep up with other exchanges, Swiss financial players should seek to exploit any gaps in the services of the other major European exchanges through product and service innovation. Let's examine this further.

The situation in Europe's equity markets is as follows: recognizing that competitive pressures both internally and abroad have rendered the structure of Europe's approximately forty stock exchanges precarious, these exchanges are battling for survival from the operations' angle. In other words, it is highly improbable that there is "room" or roles for forty separate stock exchanges in an integrated market, even if one were to ignore the omnipresent threat to all exchanges of less formal screen-based trading systems. And, until early 1990, instead of looking for cooperative arrangements to deal with this situation, each major national exchange seemed to prefer to independently declare itself a major "European financial center" at the expense of others.

The means deployed to reinforce these declarations were legislative reforms, technology-intensive modernization, and an emphasis on product/service innovations. But the need for cooperation is becoming more evident, even to the participants, as they witness rampant competition simply leading yet further splintered markets, be it on-or off-floor. Hence our comment that Swiss participants, in the 1990s, may gain more from seeking to constantly "integrate" their local systems to the most widely possible range of clearing/settlement and trading systems, and then to compete based on other higher value-added factors such as, say, institutional or retail client service, equity market research capabilities, or where possible earning a reputation (and business) as an innovator in filling product/service gaps.

As discussed earlier, numerous ideas are being floated in terms of "integrative" systems on a pan-European scale. The ISE has proposed the concept of a pan-European screen-based trading system for Europe's biggest stocks. The Paris exchange has surfaced the idea of a European "list" of the 300 biggest companies whose shares would be traded on any exchange but reported back to their domestic exchange. And even the Federation of Stock Exchanges in the EEC has proposed a common network for carrying company news, called Pipe, with a trading system built around the network [18].

More recently, London and Frankfurt have proposed to team together to build a single European stock market with the U.K. bringing in technical skills in developing and running markets while Germany would contribute its skills in operating efficient settlement systems as well as the investment power of its banks. And finally an example closer to home: Credit Suisse First Boston played the innovator's role by recently launching, in conjunction with other key financial intermediaries, a new OTC market in European stocks with a secondary placement of Nestlé shares using Reuters screens instead of the Swiss exchanges. Some argue that this could be the harbinger of an OTC market for Europe's 100 largest corporations if certain hurdles such as the lack of a widely-linked settlement system can be effected (instead of the sole reliance on Euro-clear). Which of these various proposals will survive the incubation period to final hatching remains to be seen. But the idea of cooperation is there, and Swiss players should be on the look-out to be affiliated with, and not passive witnesses to, these developments. In this manner, they can piggy-back on the more successful proposals while seeking to carve out niches roles in higher value-added client and product/service segments.

5. Conclusion

Despite its current fragmented character, European equity markets are showing clear signs of structural and operational integration. Competitive forces are

at work across the various national markets and among all categories of participants.

Traditionally undynamic and protected national exchanges are being jolted by the realization that preparations for 1993 by other exchanges may leave them as stagnant backwaters of international finance; they are self-liberalizing and modernizing as never before in their history.

Intermediaries, long used to a cosy existence of monopolistic service provision, are finally realizing that their home governments are opening their markets to foreign participants and that each basis point of even domestic commission income will have to be competed for on the basis of efficient service.

And retail and institutional investors, traditionally confined to passive investment strategies in high-rated paper within their home countries, are increasing in number, becoming more financially sophisticated, and are increasingly ready to cross borders to deal with intermediaries that offer the optimal price-value service on a wide range of pan-European investments.

As these structures and dynamics evolve rapidly over the next decade, it is becoming more evident that the key market participants can no longer count on sharpening their skills on old rules relevant in hitherto stagnant and protected equity markets to tide them over in an integrated and vigorous market. Building a sustainable position in a unified market, where capital and resources flow more freely and where market structures are constantly evolving, requires frequent strategic reassessments of one's current situation, and creativity in coming up with defensible strategies. Swiss participants, in this respect, should not view themselves in a cut-off fashion from other EEC participants, with rules that are only valid and relevant for themselves. The call for reforms within Switzerland indicates this new awareness. Indeed, in many ways, Swiss financial markets are more "integrated" with the financial markets of the major EEC countries than some of the twelve EEC countries. As such, these basic conclusions are valid for major Swiss financial participants. The difference lies in how Swiss

participants go about capitalizing on the major security market developments on the European level. We have indicated that the "integrative" approach appears to us to be more appropriate for Switzerland than a "duplicative" approach. Successful European equity market participants, as a whole, certainly have many pitfalls to avoid and challenges to tackle, but in return for these efforts, have numerous opportunities to pursue, not just on a national or regional basis, but on the European sphere.

Footnotes

- [1] For a more detailed coverage of the topics discussed in Sections 2 to 3 see HAWAWINI/RAJENDRA (1989).
- [2] See "Activités et Statistiques", Rapport 1989 édération Internationale des Bourses de Valeurs, Paris. In evaluating these market size data, note in this respect that NYSE has, following the March 1990 Tokyo stock market decline and the weakness of the Yen, regained its top position in terms of market capitalization.
- [3] These and other factors have permitted London to further consolidate its key position among European equity markets. For instance, approximately 20 percent of the capitalization of the most active French shares are traded in London instead of Paris. This appears to hold true in the case of large block trading of other Continental shares as well. See HAWAWINI (1984), p. 155.
- [4] The auction form of batch system is utilized to establish the opening price in some continuous markets as Amsterdam and Frankfurt. See also COHEN, MAIER, et. al. (1986), p. 17.
- [5] The affirmative obligation stabilization gives the U.S. specialist the responsibility to stabilize prices if transaction-to-transaction price changes or price changes over each thousand-share trades exceed certain limits set up for each stock according to its size. Size is measured by the stock's price and transaction volume.
- [6] "Circuit breaking" refers to the halting of transactions if the stock market index rises over a specified limit during the trading session. It is an example of an administrative stabilization technique.
- [7] See WATERS (1990), p.30.
- [8] SICOVAM: Société Interprofessionnelle de Compensation des Valeurs Mobilières.
- [9] Recent reforms in France now enable foreigners to hold a majority interest in local brokerage houses; similar reforms are under way in Belgium and Spain as well.

These trends are significant in that the emergence of broker/dealer houses with majority interest in several European domestic firms, providing an effective linkage among European markets, should hasten the movement toward integration.

- [10] See SPICER & OPPENHEIM (1990a), p.1.
- [11] See SPICER & OPPENHEIM (1990b), p.4.
- [12] See HAWAWINI (1984) and HAWAWINI/JACQUILLAT (1990).
- [13] See STUDER (1990), p.11.
- [14] Ibid.
- [15] See WITTEBORT (1990), p.29.
- [16] See THE ECONOMIST (1990a), p. 21-24.
- [17] See DULLFORCE (1988), p. 18.
- [18] See THE ECONOMIST (1990b), p. 89.

References

- COHEN, K., S. MAIER, et. al. (1986): "The Microstructure of Securities Markets", Englewood Cliffs, NJ: Prentice-Hall.
- DULLFORCE, W. (1988): "Slow Start Predicted For Softex", Financial Times, May 19.
- THE ECONOMIST (1990a): "Automating Financial Markets", March 10th.
- THE ECONOMIST (1990b): "Plugging Into a Pan-European Stockmarket", March 10th.
- HAWAWINI, G. (1984): "European Equity Markets: Price Behaviour and Efficiency", Monograph Series, New York, NY: Salomon Brothers Center for the Study of Financial Institutions, New York University (Monograph 84/4&5).
- HAWAWINI, G. and B. JACQUILLAT (1990): "European Equity Markets: Toward 1992 and Beyond", in: European Banking Strategies for the 1990s, J. Dermine, editor, Basil Blackwell (Oxford).
- HAWAWINI, G. and E. RAJENDRA (1989): "The Transformation of the European Financial Services Industry: From Fragmentation to Integration", Monograph Series, New York, NY: Salomon Brothers Center for the Study of Financial Institutions, New York University (monograph 89/4).
- SPICER & OPPENHEIM (1988): "Guide to Securities Markets Around the World", New York: John Wiley & Sons.
- SPICER & OPPENHEIM (1990a): "Securities Industry Update", London January.
- SPICER & OPPENHEIM (1990b): "Securities Industry Update", London, April.
- STUDER, M. (1990): "Swiss Stock Markets Implement Reforms to Better Competitiveness", The Asian Wall Street Journal, March 23-24.
- WATERS, R. (1990): "Pipe Brings Dream of Euro-Bourse Closer to Reality", Financial Times, April 19.
- WITTEBORT, S. (1990): "CSFB Issues A Challenge To Europe's Exchanges", Institutional Investor, March.