

SUCCESS FACTORS FOR THE REGION'S DERIVATIVES EXCHANGES

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Some derivatives exchanges in the region have shown outstanding growth. Study of their success does not reveal any obvious factors that can be applied universally. Nonetheless, it seems that the market authorities together with their participants were able to capture the spirit of the market community at a particular time and sustain that spirit to power a period of growth.

The regional derivatives landscape has changed dramatically in the last few years. Prior to 1996, there were no exchange-traded derivatives in Korea; now, as of first half 2003, the Korea Stock Exchange (KSE) is the world's derivatives leader by contract volume. There are other interesting stories in Singapore and Taiwan. As Hong Kong appears to be emerging from an equity market downturn, it may be useful to see what can be gleaned from this experience to guide the next phase of market development.

This article reviews the experience of regional derivatives exchanges for any apparent success factors. The focus is on financial derivatives. Commodities exchanges are not discussed except incidentally, nor are structured products such as derivative warrants. The article begins with an overview, then taking a case study approach each market is considered individually. Any lessons emerging are then discussed.

The article is based on interviews with regional exchange executives, regulators and practitioners; since it includes interpretation of events, it may be subjective. Following industry practice, the article focuses on contract volume as the main success measure. However, it should be borne in mind that the contracts of different exchanges vary greatly in size and are therefore not strictly comparable. Other potential measures of success such as exchange profitability or regulatory integrity are not considered in this article.

Overview

The region's derivatives exchanges are rather diverse in performance. The KSE, with 1,405 million contracts traded in the first half of 2003 by far the world leader, is the only Asia-Pacific representative in the global top 10. The Tokyo Commodities Exchange and the Dalian Commodity Exchange feature in the next 10. Thereafter, regional exchanges are spread more evenly through the world rankings.

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It should also be noted that some countries have more than one derivatives exchange. Japan has 10; Korea, Mainland China, Singapore and Indonesia have at least two each. Formerly, Hong Kong and Malaysia also had more than one derivatives bourse, but these have been merged into a single entity. The Korean exchanges are to be merged in 2004.

Statistics on some 19 regional derivatives exchanges are shown in Table 1 below. Eighty-seven per cent of total 2003 January to June volume is provided by the leader, the KSE. In fact, there are a few other derivatives exchanges which have not been included in the table, but generally their volumes are small - the Surabaya Stock Exchange, the Jakarta Futures Exchange, the Chinese Gold and Silver Exchange (in Hong Kong) and the Singapore Commodity Exchange.

Table 1: Asia-pacific region derivatives exchanges contract volume

Exchange	Rank		Contract volume		
	World	Regional	Jan-June 2003	2002	2001
Korea Stock Exchange	1	1	1,405,786,455	1,932,691,950	854,791,792
The Tokyo Commodity Exchange	14	2	45,811,801	75,413,190	56,538,245
Dalian Commodity Exchange	17	3	36,144,289	48,407,404	n.a.
SGX-Derivatives, Singapore	22	4	17,645,280	32,887,395	30,989,862
Central Japan Commodity Exchange	23	5	17,520,994	30,011,863	27,846,712
Shanghai Futures Exchange	26	6	16,869,980	12,173,083	5,610,335
Zhengzhou Commodity Exchange	27	7	15,863,362	18,271,658	14,639,446
Osaka Securities Exchange	31	8	11,949,026	20,584,972	17,470,349
Taiwan Futures Exchange	32	9	10,248,576	7,944,254	4,351,389
Tokyo Stock Exchange	35	10	8,031,926	14,759,690	13,535,291
Tokyo Grain Exchange	36	11	7,538,529	18,728,266	22,816,404
Korea Futures Exchange	37	12	6,742,968	15,073,295	11,468,991
Hong Kong Exchanges & Clearing	38	13	6,499,223	11,029,404	10,549,552
Osaka Mercantile Exchange	39	14	3,002,457	5,207,652	3,387,170
Kansai Commodities Exchange, Japan	41	15	1,687,415	4,491,954	2,907,648
Tokyo International Financial Futures Exchange	44	16	1,312,612	4,470,763	7,642,462
Fukuoka Futures Exchange, Japan	46	17	1,100,765	3,170,986	6,367,607
Malaysia Derivatives Exchange Berhad	51	18	912,407	1,276,787	822,805
Yokohama Commodity Exchange, Japan	52	19	900,824	1,507,210	1,312,871

Source: Futures Industry Association, Zhengzhou Commodity Exchange and Dalian Commodity Exchange

Exchange Experience

In this section, the experience of selected regional derivatives exchanges is considered by market.

The Korean exchanges

The success of the Korea Stock Exchange (KSE) in trading the KOSPI 200 Index option is possibly the most outstanding story within the derivatives exchange world. Introduced in 1997, volumes in the index option were negligible at first. Then in 1998 volume exploded to 32 million contracts and each year thereafter the volume doubled or tripled. How did this come about?

Table 2. Korea Stock Exchange derivatives contract volume

	Jan-Jun 2003	2002	2001	2000	1999
KOSPI 200 Futures	33,392,012	42,868,164	31,502,184	19,666,518	17,200,349
KOSPI 200 Options	1,372,386,296	1,889,823,786	823,289,608	193,829,070	79,936,658
All Options on Individual Equities	8,147	57,918			
Total	1,405,786,455	1,932,749,868	854,791,792	213,495,588	97,137,007

Source: Futures Industry Association

With hindsight, it can be seen that favourable conditions were present at the time of the contract's launch. Korea already had a large, active retail investor population. Turnover ratios on the KSE are among the highest in the world. There had just been liberalisation of commissions and of the "good faith" deposit that customers had to make with their brokers. In 1998, ceilings on foreign investment in the stock market were abolished. And as stock prices declined with the onset of the Asian Financial Crisis in 1997, investors were ready to try something new. Given the pre-existing restrictions on the market, the investment opportunities available to the retail investor at that time were not too many. And it could be expected that the Korean people would devote themselves to any new fad with their characteristic dedication - their *shimbaram*. So, with hindsight, it can be said that mighty forces were in place, requiring for their release only the stimulus of a new product.

The key feature that seems to have attracted this latent interest to index options - rather than to the index futures that had been introduced earlier, in 1996 - was the option's responsiveness to volatility. Korea is a volatile market, and with the onset of the Asian Financial Crisis, stock prices fluctuated even more widely. Investors saw that the stock index option enabled them to profit from volatility. The options contracts were in small sizes suitable for the retail investor. In 2002, 64 per cent of KOSPI options trading was by individuals. A deep out-of-the-money option might only cost the equivalent of a few US dollars, and then perhaps double or triple in value over a few days or even a day. Trading options was a game that anyone could play.

For many investors it was an electronic game. The Korean government, pushing for the country to become a knowledge economy, made broadband access cheap and encouraged households to get online. Securities firms provided their clients with PDAs (personal digital assistants) almost free. The KSE disseminated its market data widely and free of charge. It provided an efficient trading system that could handle the high volumes, and allowed its members who met the order flow criteria to apply for more connections to the host without limit. Korean investors took to online trading and became the world leaders in that as well. Fifty per cent of KSE securities trading, and 50 per cent of options trading, is online.

The Korean securities houses played an important part in supporting the new product. They too were keen to find something new to offer their clients. Many were large firms with substantial distribution and promotion capabilities. They gave seminars to clients to promote understanding of options. They also wrote options to provide liquidity to the retail market.

It should be understood that by international standards the Korean options market is not particularly sophisticated. There are no official market makers; the functionality of the KSE's self-developed trading and clearing mechanism is relatively limited. All KSE members are participants in the options market, there being no separate qualifications. In compensation for the

lack of more sophisticated risk management measures, margins are relatively high - which increases costs for the investor - and there are limits on individual speculative positions. Yet these factors do not seem to have deterred players. The attractions of liquidity and profit opportunity seem to have outweighed any frictional costs in the market structure.

The experience of the Korea Futures Exchange (KOFEX) provides an interesting contrast with that of the KSE. KOFEX has seen a level of activity in its short existence - with turnover rising to 15 million contracts in the fourth year of operation - that in anywhere but Korea would be considered highly creditable. KOFEX also has a diversified product portfolio. Why could it not achieve success on the level of the KSE?

Table 3. KOFEX derivatives contract volume

	Jan-Jun 2003	2002	2001	2000	1999
Korea Treasury Bonds Futures	5,452,139	13,227,991	9,323,430	1,538,507	295,833
CD Interest Rate Futures		2,100	1,410	2,801	349,812
Monetary Stabilization Bond Futures	152,086	1,688			
KOSDAQ 50 Index Futures	399,012	380,491	466,479		
US Dollar Futures	738,502	1,434,591	1,676,979	1,355,730	259,249
Gold Futures			608	62,936	40,509
Korea Treasury Bond Options	1,229	24,790			
US Dollar Options		1,600		16,705	61,398
KOSDAQ 50 Index Options		44	85		
Total	6,742,968	15,073,295	11,468,991	2,976,679	1,006,801

Source: Futures Industry Association

The profile of KOFEX could be described as that of a normal developing country derivatives exchange. The flagship product is the Korea Treasury Bond (KTB) futures contract, to which in 2001 the exchange added a CD (certificate of deposit) interest rate future. Won/US dollar futures attracted a respectable level of turnover, 1.4 million contracts in 2002. Currency contracts rarely trade well in developed markets because the banks are usually in place with a rich over-the-counter offering. However, in Korea since exchange controls had only recently been relaxed the banks may have lacked the network for currency trading, and so took to the exchange-traded product.

However, the exchange seems to have exploited the more evident opportunities. The turnover ratio (notional versus cash) of the KTB futures contract already approaches five times, and may be nearing saturation. The exchange tried to emulate the KSE by launching futures and options on the KOSDAQ 50 index, but these saw only slight interest. It appears that retail investors prefer the liquidity of the KSE product, while institutions are not active investors in the underlying KOSDAQ stocks and so do not need the product for hedging purposes. Another drawback may be that KOFEX also has lacked the ready-made membership base of the KSE. The merger of the two exchanges with KOSDAQ in 2004 may make good this shortfall.

The Japanese exchanges

The Japanese exchange environment has a number of unusual features. The first is the large number of exchanges, which in turn relates partly to the long history of securities and derivatives

trading - Japan's rice exchanges of the eighteenth century were the first commodity futures exchanges in the world. Rivalries between local communities kept in existence marginal exchange operations that might otherwise have disappeared. The second feature is the division of labour among exchanges. Under a kind of gentleman's agreement, each exchange tends to focus on a particular product area and minimises competition with the others. This is changing - for example, the Osaka and Tokyo stock exchanges both trade stock options - but the change has not yet proceeded far. Thus there are a relatively large number of exchanges, each with a relatively narrow product franchise. The third characteristic of the Japanese environment is that the stock exchanges also trade securities-related derivatives.

As shown by Table 1 above, some of Japan's commodity futures exchanges are quite large in terms of contract volume. Financial derivatives volumes are lower. Restrictions imposed by regulators, sometimes on the basis of misunderstanding of the impact of derivatives, have tended to keep the financial derivatives market small. Securities firms have not been able to promote derivative products to the mass retail market. The institutional fragmentation of the market has probably not helped its development.

The experience of the Tokyo International Financial Futures Exchange (TIFFE) perhaps highlights the dangers of too narrow a product range. When this exchange was founded in 1989, securities-related products (stock index and bond futures) were the preserve of the stock exchanges, while commodity futures were for the commodity exchanges. The franchise left to TIFFE was thus the narrow one of monetary derivatives. TIFFE tried Eurodollar futures and Yen/US dollar currency futures, but its only successful product has been the Euroyen future - domestic interest rates being insufficiently free at that time to provide much scope for derivative products. The Euroyen contract boomed, turnover reaching 36 million contracts in 1996. Unfortunately, the "zero interest rate" policy of the Bank of Japan reduced the scope for interest rate fluctuation and hence the need for derivatives. TIFFE, a single-product "boutique-style" exchange, had no other active products to fall back upon.

Singapore Exchange-Derivatives

SGX-Derivatives (formerly the Singapore International Monetary Exchange, SIMEX) has enjoyed steady growth more or less continuously since its founding in 1984. The exchange is unique among its world peers in having a predominantly foreign product portfolio. Indeed, because of restrictions on the Singapore dollar, for most of its life the exchange has only had foreign products. What accounts for this unique success?

Table 4. SGX derivatives contract volume

	Jan-Jun 2003	2002	2001	2000	1999
Eurodollar Futures	10,097,520	19,504,044	17,684,054	10,083,633	8,999,879
Singapore Dollar Interest Rate Futures	32,983	128,034	111,210	61,300	18,725
Nikkei 225 Futures	3,229,526	4,857,565	4,573,348	4,484,978	5,429,843
Nikkei 300 Futures		3,000	29,439	38,304	34,273
Straits Times Index Futures	2,272	7,329	20,023	47,106	
S&P CNX Nifty Index Futures			1,800	20,403	
Dow Jones Thailand Index Futures				950	1,347
MSCI Hong Kong Index Futures					2,597
MSCI Japan Index Futures		1,433			
MSCI Singapore Index Futures	483,251	711,687	488,489	479,486	291,527
MSCI Taiwan Index Futures	2,570,870	4,628,247	3,902,738	3,390,153	2,362,385
Brent Crude Futures			50	3,980	18,853
Middle East Crude Oil Futures	2,217	1,282			
Euroyen Tibor Futures	592,075	1,812,175	2,711,826	7,149,469	6,777,548
Euroyen Libor Futures	73,660	255,256	452,559	326,849	374,198
5 Year Singapore Government Bond Futures	675	68,327	79,246		
Japanese Government Bond Futures	51	360		718,353	168,829
Mini Japanese Government Bond Futures	445,610	630,761	545,189		
All Futures on Individual Equities	325	13,690	6,575		
Eurodollar Options			10		
EuroYen Tibor Options	6	14,855	47,127	57,095	234,630
EuroYen Libor Options			2,000		
Japanese Government Bond Options				299	1,962
Mini Japanese Government Bond Options	635	247	228		
MSCI Taiwan Index Options	11,035	47,897	42,899	1,107	8,828
Nikkei Option	102,569	201,206	291,052	708,498	1,137,716
Total	17,645,280	32,887,395	30,989,862	27,571,963	25,863,140

Source: *Futures Industry Association*

In its early years, the exchange gained by its association with the long-established Chicago Mercantile Exchange (CME). The Singapore exchange adopted the market model of its US mentor, and established a mutual offset arrangement whereby a Eurodollar futures contract opened in one market could be closed in the other, so presenting traders with a seamless extended marketplace. The mutual offset facility, innovative in its day, was apparently requested by global financial firms based in Singapore. The facility has since been extended to the Euroyen and Japanese Government Bond futures contracts.

With its base established in the Eurodollar contract, the Singapore exchange was able to exploit less sophisticated neighbouring markets. SIMEX listed the first futures contract on the Nikkei 225 index, before the Japanese exchanges had developed their own. And during the early 1990s, when derivatives were being blamed by the Japanese authorities for the decline of their stock market and shackled by regulations, trading on SIMEX expanded further. It seems that SIMEX promoted its product actively to the Japanese traders as a way for them to circumvent the restrictions of their home market. A similar strategy was adopted in respect of Taiwan, SIMEX listing a Taiwan index product before a domestic one was available. However, the strategy did not work in respect of Hong Kong. A Hong Kong index future launched by SIMEX in 1998 was unable to establish any liquidity. This may have been because the existing product in the domestic market - Hong Kong's Hang Seng Index future - was traded in an open basis without undue restrictions. SIMEX had no additional value to add.

The rise of the Singapore exchange was no doubt helped by government's policies, which included tax breaks for the exchange and its traders, and even grants and financial incentives for financial firms setting up in the republic. Until recently, such government support was aimed at channelling activity towards the international sector, the authorities being generally hostile to domestic products because of concerns about the stability of the Singapore dollar. Under the current policy of financial openness Singapore products are permitted, although they do not trade very actively. A stock options market, launched by the stock exchange in 1993, was eventually closed.

Taiwan

Facing a similar environment to that in Mainland China, namely a speculative retail population and a proliferation of illegal operators, the Taiwanese authorities chose to ban derivatives altogether rather than let them get out of control. By the time the official derivatives market opened on the Taiwan Futures Exchange (TAIFEX) in 1998, most of the black market firms had already been suppressed. TAIFEX has its own membership, distinct from that of the stock exchange and subject to a separate set of regulations, albeit that securities firms can obtain a licence for concurrent securities-related futures business or act as introducing brokers. Perhaps as a result, the growth in derivatives trading has been more moderate than might have been expected given the high level of activity on the stock market. Another limitation might be the pre-emption of interest by Singapore's Taiwan index future. Certain restrictions on foreign investors in the market probably did not help, although these restrictions are now being relaxed.

Nonetheless, TAIFEX has seen good growth, and in the TAIEX option introduced in 2001 it appears to have struck a winner. There has been some relaxation of pre-existing regulatory restrictions, and the continuing efforts of the exchange and the futures industry appear to be bearing fruit. It will be interesting to see whether the exchange can capture the full energy of Taiwan's retail investor base.

Table 5. TAIFEX derivatives contract volume

	Jan-Jun 2003	2002	2001	2000	1999
TAIEX Futures	2,434,040	4,132,040	2,844,707	1,339,908	971,578
Mini TAIEX Futures	546,569	1,044,058	413,343		
Taiwan Stock Exchange Electronic Sector Index Futures	394,279	834,920	635,661	409,706	87,156
Taiwan Stock Exchange Bank & Insurance Sector Index Futures	393,705	366,790	452,541	177,175	18,938
Taiwan 50 Index Futures	225				
TAIEX Options	6,333,272	1,566,446	5,137		
All Options on Individual Equities	146,486				
Total	10,248,576	7,944,254	4,351,389	1,926,789	1,077,672

Source: Futures Industry Association

Hong Kong

In Hong Kong, exchange-traded derivatives have an eventful history. The futures exchange initially traded commodity products in modest volumes, but with the launch of the Hang Seng Index (HSI) future in 1986, it found sudden success. Daily volumes quickly rose to over 20,000

contracts - small by global standards today but outstanding then. This was the heyday of exchange-traded derivatives in Hong Kong, perhaps the counterpart of the more recent surges of enthusiasm in Korea or Taiwan.

Unfortunately, the enthusiasm outstripped the risk management measures. The rudimentary state of the latter was exposed by the October 1987 stock market crash. A number of futures brokers collapsed and the government had to organise the rescue of the futures market. In subsequent years, the futures exchange built up its volume and reputation. However, alarmed by rising volumes, in August 1998 the government intervened in the market again, this time to counter alleged speculation against the Hong Kong dollar. The following month, numerous measures were introduced to restrict derivatives trading. Perhaps partly because of these measures, Hong Kong's volumes have not risen in line with the global growth trend. New product launches have seen limited success, and trading continues to be dominated by HSI products and stock options.

Table 6. Hong Kong derivatives contract volume

	Jan-Jun 2003	2002	2001	2000	1999
Hang Seng Index Futures	2,996,057	4,802,422	4,400,071	4,023,138	5,132,332
Mini Hang Seng Index Futures	564,016	1,107,964	769,886	120,165	
MSCI China Free Index Futures	142	1,869	3,141		
Hang Seng 100 Futures			78	30,991	66,822
Hang Seng Properties Sub-Index Futures					341
Dow Jones Industrial Average Futures	4,984	6,773			
Red-Chip Index Futures			533	3,801	30,753
Rolling Forex Futures		3,053	4,226	3,279	9,042
One Month HIBOR Futures	50	970	14,315	12,075	9,726
Three Month HIBOR Futures	24,729	280,257	629,491	325,155	308,646
Three Year Exchange Fund Note Futures	1,115	3,673	1,175		
All Futures on Individual Equities	7,961	21,056	7,756	3,322	5,696
Hang Seng Index Options	1,111,397	1,070,431	716,114	544,047	714,309
Hang Seng 100 Options			111	5,893	51,393
Mini Hang Seng Index Options	20,493	6,176			
Hang Seng Properties Sub-Index Options				2	2,330
Red Chip Index Options					10
All options on Individual Equities	1,768,279	3,724,760	4,002,655	4,188,702	2,197,972
Total	6,499,223	11,029,404	10,549,552	9,260,570	8,529,372

Source: Futures Industry Association

Malaysia

There has been a commodity futures exchange in Malaysia since 1980 and a stock exchange for a much longer period, yet when exchange-traded financial derivatives were introduced in the mid-1990s, two new exchanges were created for the purpose - the Kuala Lumpur Options and Financial Futures Exchange (KLOFFE) and the Malaysian Monetary Exchange. Such fragmentation of resources did not produce dividends, and the new exchanges struggled to attract volume. In response to the Asian Financial Crisis, the authorities clamped down on the derivatives sector, which did not help. The three derivatives exchanges have now been merged into the Malaysian Derivatives Exchange, which is itself within the Kuala Lumpur Stock Exchange group.

The merger of exchanges made it easier for stock market intermediaries to trade derivatives. The introduction of electronic trading was also well-received by the market. However, volume in the

first half of 2003 was still below one million contracts. The general readiness of the Malaysian market community for derivatives may be lacking. Foreign firms, whose expertise might make a useful contribution, are generally restricted from participating. Regulatory restrictions on derivatives trading and short selling also hamper efforts to build volume.

Indonesia

The Surabaya Stock Exchange launched the LQ45 index future in 2001. Trading has been at a low level, amounting to only 47,000 contracts in 2002. The securities commission Bapepam has nonetheless been pressing for product diversification, for example the introduction of stock options. However, the stock market itself is underdeveloped, capitalisation at the end of 2002 amounting to just 15 per cent of GDP, with only a few tens of thousands of investors and many brokerage firms in difficulties. It may be too early for the market to trade derivatives.

Mainland China

The three Mainland China derivatives exchanges, Shanghai, Dalian and Zhengzhou, are quite active, trading a total of 124 million contracts in 2002. They currently trade only commodity futures, and so are largely outside the scope of this article. However, during the early 1990s when the futures market was more or less unregulated, more than 40 derivatives exchanges were active in Mainland China. In the peak year, 1995, more than 600 million contracts were traded. This reflected the energy of an investor population which lacked other investment outlets. The two stock exchanges traded bond futures in very high volumes. Unfortunately, risk management procedures were not very adequate - margins were as little as one per cent of contract price. In 1995, Shanghai suffered a bond futures trading scandal, following which the authorities closed the bond futures market and set about regularising the futures sector. No financial derivatives have been permitted since, although there is currently discussion of a possible index futures contract.

Other markets

A number of attempts have been made to establish derivatives in the Philippines, and for a few years there was even an active bourse - the Manila International Futures Exchange. However, volumes were modest, with a little over one million contracts traded in the peak year, and following irregularities the exchange was closed by the Securities and Exchange Commission in 1997. Since then, the market environment in the Philippines has generally been poor, and the time may not be ripe for another derivatives effort.

In Thailand, the authorities have been cautious, and after more than 10 years of discussion the country still awaits the enactment of the derivatives legislation. Given rising activity in the bond market, interest rate futures are targeted as the most promising area. Preparations are being made for the introduction of interest rate futures when the law permits.

Success Factors

From the above experience, can any general lessons be drawn?

Firstly, it can be seen that strategy must be appropriate to the conditions prevailing in the respective market. The strategy to promote derivatives in a developing country environment, where investment opportunities are limited, investors are unsophisticated and there are or have recently been restrictions on financial activity, will be very different from that in a open developed-country environment. In a developing milieu, it can be "too early" for derivatives. The investor population may not be ready - as arguably in Indonesia today, or Malaysia or Korea in the mid-1990s, when despite efforts derivatives did not take off. The authorities may also not be ready, as in Mainland China in the early 1990s.

Perhaps it can also be "too late" for derivatives. The Hong Kong retail investor population has been participating actively in Hong Kong's exchange-traded derivatives markets since 1986. Volumes have increased over the years but lag those in many overseas exchanges. The more sophisticated Hong Kong investors do trade derivatives, but in overseas markets, to which they obtain easy access via the many foreign brokerage houses in the territory. It is a challenge to sell new domestic products to such an investor base.

Generally, the trick seems to be to catch the moment when all parties are ready, and the market is only just at the point of opening so that the attention of market users has not yet been caught by the rich array of products available elsewhere. Such pivotal moments are relatively rare, perhaps occurring only once in a market's lifetime. The moment was found in Korea. Possibly it is being found currently in Taiwan. Perhaps Mainland China may offer a similar opportunity at some point in the future.

What of the role of government? Although it is doubtful that government action alone can create a market, government support is helpful. And government hostility can definitely hinder a market or suppress it altogether, as can be seen from the Japanese case, among others.

Regional experience lends some support to the integrated exchange model, i.e. derivatives being traded not by a specialist exchange with a distinct membership but by the stock exchange with its existing membership. It is easier for brokerage firms to sell stock-related derivatives if they are already selling stocks; they have the distribution network, the clients and part of the knowhow, and are funded by an existing business stream. There are arguments for a dedicated derivatives exchange. The systems and procedure are different. The risks are different, and under best practice these risks should be addressed by different forms of regulation. And from a longer term development perspective a dedicated derivatives exchange may find it easier to diversify away from securities-related products than an exchange with a stockbroker-based membership. But the

experience of the regional markets - the positive experience of the KSE and the Japanese stock exchanges as compared with the challenges faced by a KOFEX, a TAIEX or a KLOFFE - does seem to highlight the benefits of integration.

SIMEX's linkage with the CME appears to have been a positive factor when it was introduced in 1984. However, this appears to have been a strategy for a particular time and place. Nowadays, mutual offset would have little to offer. The trading systems of many exchanges, including the CME's GLOBEX, operate almost round the clock, so firms can still go to the domestic market to trade even outside regular trading hours. Few of the many subsequent inter-exchange linkages have been successful.

SIMEX's targeting of overseas exchange products seems to be another strategy for a particular place and time. SIMEX was successful in capturing substantial trade in Japanese and Taiwanese products, but its most recent foray, into Hong Kong in 1998, was unsuccessful. Nowadays, few large domestic markets are as restricted as Japan or Taiwan were in the 1990s.

Diversification of product range is by no means the most important factor. Some exchanges have a long trail of product initiatives that see little volume. For many exchanges, a single flagship product which wins the hearts of investors is the key to success.

Sophistication of market mechanism is by no means essential either. The KSE's options trading mechanism is relatively unsophisticated; SGX-Derivatives still operates largely by open outcry on a trading floor. But risk management, even if crude, must be good enough to prevent systemic disaster.

Conclusion

From this review of regional experience, it seems that by far the most important success factor for a derivatives exchange is liquidity. This might appear to be stating the obvious. But the essential for an exchange is to find a single product that has mass demand, and then launch the product in a manner that will capture that demand. The liquidity thereby generated will in turn attract more users, and so on in a self-reinforcing cycle. Liquidity generates liquidity generates liquidity. Of course, product diversification is desirable too, just as in the consumer market a brand can be extended into other market spaces. Diversification can also reduce vulnerability to a downturn in a particular product. But the key is to establish the brand, the single flagship product, first.

Liquidity in a single product is not the whole story. Risk management also has to be adequate, otherwise a disaster can occur which may set back the exchange indefinitely. The market

mechanism has to be functional, and to handle high volumes smoothly. Costs have to be reasonable. But these factors are secondary beside the crucial building of liquidity.

Generally, the successful domestic derivatives exchanges in the region have been able to capture the speculative interest of their retail market community and sustain that interest to generate further growth. Singapore adopted a different strategy, focusing on an international product base and an international institutional user group to exploit opportunities presented by underdeveloped neighbouring markets. However, in global terms Singapore's success appears to be a one-off. The likely resumption of financial derivatives trading in Mainland China may offer a further domestic success story. Hong Kong's challenge may be to position to play a role in that development.