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THE SIMEX EXPERIENCE: IMPLICATIONS FOR THAILAND'S FUTURES EXCHANGE

Introduction

The tumultuous world economy in the decade following the end of the Cold War might have signalled yet another structural adjustment toward a new world political and economic order. Indeed, the recent financial crisis in Asia could have been a long overdue quake across one of the great fault-lines in the world economic landscape. In an age of digital technology, international capital flows freely across porous borders at an astonishing speed. Countries that are adequately prepared are poised to exploit all the benefits that the new world has to offer. In this new environment, countries are finding it increasingly difficult to implement and control their own economic policies. Corporations and investors alike are facing a more volatile and interconnected environment, and feel an urgent need for ingenious financial tools or instruments to survive and function in an increasingly capricious environment. Derivative securities, ranging from simple futures contracts to fancy options and swaps, are gaining worldwide acceptance as essential and indispensable tools in risk management. In more advanced countries, derivatives markets have long been part of their day-to-day business. However, Thailand and most developing countries are still denied the benefits of these sophisticated yet valuable instruments.

The bull market of the early 1990s in Southeast Asia (see Table 10) highlighted the need for restructuring outdated infrastructure in the region. A combination of domestic and foreign demands pushed for the liberalisation of the financial sector in preparing for the new world economy.

Thailand is determined to catch up with, or at least not to be left behind by, those in the modern league, and has been planning and developing its own futures market (to be followed by the options market in due course) for quite some time. The priority is

even more pressing in the light of the current economic crisis, following the currency floatation. Many business executives blamed the lack of risk management products and that of general awareness of the impact of market volatility, as major culprits for their financial problems. The futures market is essential in an increasingly fickle economic environment, because it allows users to manage inherent business risks more effectively. By locking the prices of securities/assets, individuals or firms can concentrate more on their production and operation. The distinctive quality of using futures to manage risk is its low cost and convenience.

Realising that the shortage of knowledgeable human resources could pose a grave threat to the success of a commodity exchange, the office of the Securities and Exchange Commission of Thailand (SEC) has commissioned several studies and carried out consultations with experts from around the world. The Thai authorities need to learn fast from these specialists, especially with regard to policy implications. However, many issues and conclusions remain to be debated and decided. Although the Thailand situation is unique, studying the Thai experience can help provide an insight into the relevant costs, both explicit and implicit, of ill-informed policies.

Singapore, a centre of finance, trade and commerce in Southeast Asia, is in many ways a model for successful economic development. Singapore's cultural diversity and open market atmosphere could be easily associated with those of Thailand. Most importantly, Singapore is home to the first financial futures exchange in Southeast Asia — the Singapore International Monetary Exchange (SIMEX), which started trading financial futures on September 7, 1984. SIMEX has pioneered a unique system of mutual offset with the Chicago Mercantile Exchange (CME), which could be the model for the future.

Singapore has three separate exchanges, listing and trading derivatives: the Stock Exchange of Singapore (SES), SIMEX and Singapore Commodity Exchange (SICOM). SES has tried to introduce options on local stocks with limited success, but has found a better business with warrants. SICOM is a much smaller market and specialises in the rubber trade. The most successful exchange is SIMEX, which has overshadowed the other two. Since Thailand is embarking on the futures business, the lessons from the success of SIMEX are worth probing into.

In this paper I investigate some analyses and summarise the operations and experiences of the Singapore futures market, specifically SIMEX, and attempts to adapt the lessons learned, for Thailand. Hopefully, this will contribute to a better understanding of the industry, and, hence, towards better decisions and planning for the development of the country's futures exchange. In particular, I have focused on critical factors that contribute to the success of SIMEX in the world futures industry. Global trends in the industry are also investigated. Finally, I incorporate these issues into an analysis of Thailand's program to develop its own futures exchange by the end of this millennium.

Definitions

Futures Contract and Trading

A futures contract is an agreement between two parties, a buyer and a seller, to exchange at a future date, particular goods or services at a pre-specified price. The price is determined through the bidding and offering process and subject to the rules of an organised exchange.

An exchange is, typically, a membership organisation established as a means of facilitating transactions involving large and diverse groups of people, in order to adjust and allocate resources optimally. The counter-party credit risk, which is the risk that one party may default on his obligation, is undertaken by the exchange clearinghouse, which acts as a middleman between buyers and sellers. The clearinghouse controls default risk through the margin deposits scheme.

A margin deposit is a special account, in which buyers and sellers are required to maintain a certain minimum balance as a show of good faith. The margin deposits, therefore, act like performance bonds for both sides of the trade. Profits and losses from open positions are then credited to or debited from the margin accounts of contracting parties at least once every twenty-four-hour period. The process is crucial as it prevents a build-up of losses.

A futures trading, in its general form, is unique in that:

- futures trading is conducted in an organised exchange, with a common set of rules governing all the transactions;

- futures contracts are standardised with respect to size, date of delivery, delivery location, and delivery procedure;
- futures trading is impersonal, since all trading must go through the clearinghouse;
- futures contracts can be legally cancelled by offset, which requires traders to open an opposite position;
- an exchange clearinghouse acts as a common guarantor for all contracts; and consequently, members of the clearinghouse must maintain the minimum required capital.

The term “futures contract” is applied to a special type of forward contract bought and sold under the rules of an organised exchange, with a clearinghouse that settles and guarantees all trades and which allows cancellation by offset. Legally binding contracts to buy or to sell a stipulated amount of a carefully specified product or service during an agreed future period at a given price, are determined by public auction, through electronic means or on the floor of the exchange. All trading activities are subject to the rules and regulations of the exchange where the contract is made.

Economic Functions of a Futures Exchange

The principal contributions of a futures market to the economy, consist of three functions:

Hedging — these are trading activities to reduce the risk associated with a given market commitment; this is done *via* risk shifting. Although price risks in the economy cannot be fully eliminated, they can be transferred. A futures contract permits and expedites the transfer of risks of price change from those who have but want to be rid of them (hedgers), to those who are willing to take them on, at a price (speculators). A large number of hedgers are farmers who want to assure the future prices of agricultural products.

Speculating — trading activities attempting to make profit through the assumption of risk. Speculators are willing to assume risks in exchange for an expected profit. The benefits to the economy are realised if the speculators possess special expertise, and hence are more efficient in managing risks. Speculators are an indispensable factor in the futures market as they play the opposite role to *hedgers* and provide liquidity in the market.

Price discovery — revelation of the expected underlying asset prices, as reflected in the futures prices from trading activities, in which market participants employ all available information and views about the current supply and demand from twelve to eighteen months in advance. Although it does not mean that the futures price is a prophecy that will hold true, the price is probably the best prediction, compared with those of other methods. It reflects the consensus of the market, which changes as conditions change and as new information arrives. The information generated through futures trading is extremely consequential for business planning as it reduces costs and improves efficiency.

A Brief History of SIMEX

The origin of Singapore's futures market dates back to 1969 when the gold market was established. After 1973, local residents were allowed to participate in the market from which point on, the gold market enjoyed an increasingly liberalised environment as the authorities tried to promote Singapore as the regional hub for a gold market. In 1978, the new and improved market was officially named the Gold Exchange of Singapore (GES). Singapore then became the first in the Asia-Pacific region to have a comprehensive gold futures market open to international investors. Nonetheless, as a result of keener competition and loose supervision, rampant abuse and fraud began to take its toll. In the early 1980s, the Monetary Authority of Singapore (MAS), the *de facto* central bank, began to explore the viability of a financial futures exchange in Singapore. In 1983 the MAS teamed up with the gold industry to revamp the GES and transform it into an internationally focused trading centre under a new name, Singapore International Monetary Exchange or SIMEX.

As part of the effort to push Singapore to become the financial centre of the Southeast Asian region, SIMEX was contrived in collaboration with the Chicago Mercantile Exchange (CME), the second largest futures exchange in the world. The result was the SIMEX-CME's Mutual Offset System (MOS), an electronic linkup between the two exchanges that allowed traders to open contracts in one exchange and close it in the other. The linkage bridged the thirteen-hour time difference between the two cities, permitting traders to eliminate overnight risk at a lower cost.

The hook-up with the CME meant that SIMEX had to adopt the CME's methods and practices of trading such as the use of voice and hand signals in an open trading pit, called open outcry, which has lasted until today. Singapore brokers also had to adopt stricter US methods of accounting of customers' money and making margin calls.

The cooperation was not without obstacles. The move aroused an initial fear that the financial integrity, reputation, and high standard of American futures exchanges might be jeopardized by compromising some practices of an overseas market, beyond American jurisdiction. Some critics were even nervous that the linkage would be used to circumvent tax laws or shelter foreign investors from US disclosure rules and regulations. SIMEX and CME authorities managed to overcome these concerns, eventually. The first batches of contracts transacted through the mutual linkage were two international financial futures contracts: the Deutschemark and the Eurodollar deposit rates. The Euroyen followed later. SIMEX, since, made its mark by becoming an active international derivatives forum, listing and trading futures and options based on offshore financial and commodity indexes.

The connection with other international exchanges underlies SIMEX's international focus, which is also evidenced in the contracts currently traded on SIMEX. Its initial success encouraged SIMEX to forge other similar international connections. In June 1995, SIMEX launched the world's first mutual offset energy contract, the Brent Crude Oil futures, with England's International Petroleum Exchange (IPE). Later, in 1996, SIMEX also teamed up with the New York Mercantile Exchange (NYMEX) for all energy derivatives trading. The latest, and probably the most ambitious link, is with the GLOBEX system to trade Eurodollar and Euroyen contracts over three continents — America (CME), Asia (SIMEX), and Europe (MATIF).

The international emphasis, by listing contracts on a number of the world's major financial benchmarks (e.g. the Nikkei 225 stock index, Euroyen deposits, Japanese Government Bonds (JGB), Eurodollar deposits etc.), helped propel SIMEX to become the fourteenth largest futures and options exchange in the world, with an annual turnover of 27 million contracts in 1998. In Asia, SIMEX ranks third behind the Tokyo International Financial Futures Exchange (TIFFE) and Tokyo Commodities Exchange

(TOCOM). It should also be noted that only one of SIMEX's seventeen (17) derivatives contracts references to the local equity benchmark, namely, the MSCI Singapore Stock Index. With this strategy, SIMEX has attracted the interest and attention of offshore hedgers and speculators. Approximately 80 percent of its client base (primarily institutional) resides outside Singapore.

In addition to its practice of trading derivatives based on highly liquid international financial instruments, a portion of the Exchange's success is attributed to its aggressive cost cutting policies. Altogether, the strategy has made SIMEX one of the most intimidating exchanges in the Asia-Pacific region.

The Clearinghouse

At the centre of the exchange is the clearinghouse, which serves as the middleman between buyers and sellers. In general, it performs two critical functions. First, it ensures that every trade takes place. Second, and more importantly, the clearinghouse guarantees the performance of its members' trades. Therefore, the financial integrity of the exchange depends on the financial integrity of the clearinghouse. The SIMEX clearinghouse is able to guarantee all cleared trades by holding each corporate clearing member accountable for every trade, regardless of who has initiated it; hence, all corporate clearing members are jointly and severally liable for the obligations of the clearinghouse. This arrangement provides SIMEX customers with confidence, since they are protected by the consolidated resources of large corporate clearing members of the Exchange.

Most of the successful futures exchanges in the world are member-owned and operated organisations. SIMEX is no exception. The exchange has three types of corporate memberships and one type of individual membership:

- Corporate clearing members, who have full trading rights on the floor and can execute and clear their own accounts and client trades
- Corporate non-clearing members, who have full trading rights and can execute their own account trades but cannot execute or clear client trades
- Commercial associate members, who can execute their own account trades in energy contracts only
- Individual non-clearing members, who can execute their own account trades only

As of January 1999, SIMEX had thirty-five (35) corporate clearing members, twenty-two (22) corporate non-clearing members and eighteen (18) commercial associate members. SIMEX's corporate clearing members are a very important group since it is their financial strength that upholds the integrity of the exchange. They consist mainly of large international names, such as ABN, AMRO, Credit Lyonnais, Goldman Sachs, ING, Merrill Lynch etc., which not only add to the integrity of the Exchange but also enhance its image as a truly international player.

Monetary Authority of Singapore (MAS)

SIMEX is governed by the Futures Trading Act 1986 and is regulated by the Monetary Authority of Singapore. Although SIMEX also self-regulates *via* its comprehensive set of rules and regulations and various specialised departments set up to focus on their respective areas of regulatory duty, MAS is the final authority.

In the past, various functions related to banking and finance were performed by numerous government departments and agencies. The arrangement worked well until the late 1960s, when it became necessary to bring all these bodies under one organisation for the sake of efficiency and a unified direction. The demands of an increasingly complex banking and monetary system, however, necessitated the streamlining of the system, so as to enable the development of a more dynamic and coherent policy on monetary matters. Accordingly, in 1970, Parliament passed the Monetary Authority of Singapore Act. The Act sanctioned MAS with the authority to regulate all elements of monetary, banking, and financial aspects of Singapore. Its creation marked an important milestone in the financial history of the island (see Table 9).

Under the Monetary Authority of Singapore Act (Cap 186, 1985 Revised Edition), the MAS has the following mission and objectives:

Mission: MAS seeks to promote sustained and non-inflationary growth of the economy and to foster a sound and progressive financial services sector.

*Objectives:*¹

- To conduct monetary and exchange rate policies appropriate for steady and non-inflationary economic growth

- To maintain conditions conducive to a sound financial services sector
- To act as a banker to, and financial agent of, the government
- To develop a competitive and progressive financial services sector
- To build a cohesive organisation of excellence, one which will attract, motivate and retain employees of quality
- To foster sound working relationships with other central banks, international financial organisations, and public and private institutions in Singapore

In practice, MAS assumes many roles and duties, such as:

1. banker and financial agent to the government;
2. manager of the country's official foreign reserves;
3. facilitator in the issuance of government securities;
4. banker to the financial institutions;
5. administrator of the banking and finance company act;
6. supervisor and regulator of Singapore's financial services sector, including the banking, securities, futures and insurance industries;
7. catalyst of financial development; and
8. research and publication.

Its authority was broadened through a series of new laws to empower the MAS to monitor and strengthen futures trade, as follows:

- A new Futures Trading Act passed by the Parliament in 1986 expanded the power of the MAS to regulate and supervise futures trading
- Amendment to the Futures Trading Act in 1995 raised the standard and rules of conduct of futures brokers and further strengthened the power of MAS
- New tax concessions in 1995 encouraged and invigorated more high value-added financial activities on SIMEX

Lessons from SIMEX

The SIMEX experience provides valuable lessons for other countries (including Thailand) aspiring to develop their own futures exchange. In the process of studying the evolution at SIMEX, I have isolated some notable issues and trends, through the eyes of an outsider. In the following section, I will discuss some consequential aspects which, in my view, are decisive in determining the success in developing and maintaining a futures exchange in Singapore and elsewhere.

Innovation

The history of the futures market is strewn with innovations, successes and failures. A futures exchange is a dynamic undertaking, that requires constant product innovation to meet the needs of an ever-changing demand. To qualify for the big league, an exchange must be constantly vigilant and alert to new trends. SIMEX has shown an uncanny ability to adapt to a fast changing business and economic environment. While not all products offered by SIMEX have been successful (such as the Hong Kong or Thailand equity index), continuous innovation has helped it maintain its leadership in the region.

The pioneering decision of linking up with the CME, the first of its kind, and the early capture of the Eurodollar and Euroyen interest rate futures, gave SIMEX a headstart in the futures business. With the right partners at its side, it moved aggressively to expand and capture new territory. SIMEX is at the forefront of new product development. When the exchange opened in 1984, there were only four products traded, namely the Deutschemark, Eurodollar, Japanese yen, and gold futures. Subsequently, SIMEX added numerous new products to its portfolio. The number of products offered as of May 1999 totalled seventeen (17) contracts, ranging from the futures contract on the Eurodollar to the option contract on the Taiwan Index (see Table 1). The struggle was partly due to the small size of Singapore's domestic economy. By adding more international products, SIMEX could increase the traffic and activities needed to sustain its dominant position. Nonetheless, this also reflected the spirit of innovation to keep the exchange on the move.

Thanks largely to the nature of the futures contract — which can be created on any kind of underlying asset as long as there are sufficient volatility and interested traders — SIMEX has adopted numerous new “imitating” equity indexes that mimic other countries' equity benchmarks, without the need to obtain an agreement or approval from the host nations. The rule-of-thumb is that an “imitating” index must possess an acceptably high correlation with the original one. An example is the MSCI Hong Kong Index (Whims), re-launched last year at SIMEX after a period of inactivity. The index, which is compiled by Morgan Stanley Capital International, comprises 35 stocks covering 68 percent of Hong Kong's market capitalisation, and has a 99.995 percent correlation with the Hang Seng Index.

The most recent equity index (debuted in 2 Nov.1998) on SIMEX is a stock index futures contract on the Thai market. The Thai product could help expand the variety of the SIMEX portfolio, which is already crowded with the inclusion of the Singapore index futures,² along with contracts on the Japanese and Taiwanese equities. However, since the financial crisis erupted in 1997, interest in Thai equity products waned although, as the economy begins to pick up again, so will the Thai index futures contract.

The practice of coming up with *imitating equity indexes* (see Tables 1, 5, 6), has created tension and resentment among Singapore's neighbours in the region, especially when the host countries are still far less developed in this area, and so are afraid that SIMEX's trading may derail their own ambitious programs. In recent years, SIMEX was involved in disputes with the Malaysian and Hong Kong authorities, when it tried to introduce stock indexes based on the countries' equity benchmarks. Increasingly fierce competition will likely bring about more eruptions of cross-border skirmishes, such as those with Malaysia and Hong Kong.

Other new contracts planned to be launched in 1999, were options on the Euroyen LIBOR (following the success of the Euroyen LIBOR futures contract) and the Singapore dollar interest rate, which would allow local and foreign banks to hedge their interest rate risks. So far, Singapore has resisted having a Singapore dollar interest rates contract, since it is concerned about the effects of internationalising the local currency. However, the demand pressure is too great, particularly as the country is working hard to promote its capital markets to the world.

Innovative ability is not only reflected in the invention of new products but also in ingenious and better ways of conducting business. The move to link up SIMEX with the world's top players in the futures industry, such as the a linkage agreement with Germany's Deutsche Terminbourse (DTB) and Japan's Tokyo Stock Exchange (TSE) in 1997 (see Tables 3, 5), as well as participation in the GLOBEX network in 1999, is also an indication of SIMEX's fast reception to new ideas and changes. The next move toward screen-based trading and the virtual market of the Internet represents a new paradigm, which will underline SIMEX's creative capability, yet again.

Efficiency and Low Transaction Costs

Market forces ensure that international investors or financial institutions will execute their trade on the exchange that offers them low transaction costs, liquidity and efficiency, regardless of the location of the underlying cash market of a futures contract and the exchange itself. Computer networks make possible the transfer of funds from one corner of the world to another point in seconds, at a low cost. International linkages — such as the mutual offset of SIMEX and the CME — that allow the opening of only one margin account instead of two, and only one commission to be paid, are able to greatly reduce transaction costs. The new GLOBEX alliance, in which SIMEX participated in 1999, promises to further lower transaction costs through trading over multiple outlets across three continents and time zones.

SIMEX is obviously well aware that low transaction cost is a significant factor in attracting international institutions to the exchange. Besides adapting to electronic networks, SIMEX has consistently kept its pro-competitiveness policy on brokering firms, which has decisively secured its place among the world's top exchanges. It has minimised entry barriers for brokers and puts no restriction on (minimum) commissions. The exchange also keeps its mission strictly to running a well-regulated, efficient and cost-effective facility for futures trading. Its practices contrast with those of the Securities Exchange of Singapore (SES), which has kept a tight control on brokering licenses and fixed commissions at levels higher than would prevail under free competition.

When the financial crisis struck in 1997, the Singapore government quickly responded to the situation by initiating a major restructuring of its businesses, including a cost-cutting program, with the cooperation of the business sector, to maintain the competitiveness of the republic. Government worked together with labour leaders and unions to prepare the groundwork, and ensured that the workers affected by the cost-cutting program, which included a cut in provident fund contributions, understood what was at stake and supported the government effort. As part of the agenda, the MAS carried out changes to the financial sector with the active involvement of the financial community, such as formulating new rules for fund managers, developing a new framework for corporate governance, and restructuring the stock exchange and SIMEX.

By charging low commissions, requiring low futures margins, paying interest on margin deposits and imposing no tax on transactions (which provoked Hong Kong to accuse SIMEX of predatory practices), SIMEX emerged as a leaner and more dominating organisation.

The orchestrated effort paid off handsomely as Singapore was one of the least affected countries in Asia during the devastating crisis.³ SIMEX also maintained its ground during the turbulent period. Its total trading volume even jumped from 23 million in 1997 to 26 million in 1998 (see Table 2).

International Linkage

One disadvantage of Singapore is its small size and thus, its domestic economy. Added to that is the lack of important natural resources. However, with a well-educated work force, its most logical alternative is to concentrate on the service economy, particularly financial services. By leveraging its strategic location in Southeast Asia, augmented by the region's rapid economic growth, Singapore has set its eye on becoming a financial centre, a stepping stone and a springboard to the whole region. To achieve the desired end, critical financial institutions such as well-developed securities markets, as well as a first-rate international financial network must be provided.

The Mutual Offset System (MOS), which is a product of close cooperation between SEMEX and CME, and other similar linkages that enable clients to establish, transfer, and close positions on one of the two exchanges at any time and to settle open positions at expiry at the same price on different exchanges, is a step in the right direction. The success of a system like this lies in calibrating a number of its contracts so that they are completely 'offsettable' with those listed on the other exchanges (e.g. the Eurodollar contract is 'offsettable' on the CME, while the Brent oil contract is 'offsettable' on the IPE). The MOS not only helped SIMEX stand on its feet in the beginning but has benefited the CME as well. It was the harbinger for what would come later.

Specifically, the MOS has the following implications:

1. expansion of the trading hours of the exchange to cover several time zones, allowing investors to better manage the risk of overnight price movements;
2. lowering of transaction costs, by allowing investors to maintain only one margin account⁴ for their trading on all exchanges, and pay only one commission instead of two; and
3. improvement of the global distribution, a key competitive advantage in the business.⁵

Among the benefits to the *CME* are:

- expansion of the trading hours of the CME, giving US traders access to easy, inexpensive overnight trading;
- better management by traders of their risk exposure by permitting them to respond to market-moving news during the night;
- significant reduction of the transaction costs for hedging, speculating and arbitraging; and
- improvement of its trading volume.

The benefits to SIMEX are:

1. helped jump-start the futures exchange business
2. instant liquidity
3. synergy with other SIMEX products, or the mutual flow of benefits, especially in gold futures
4. provision of much needed world-class experience
5. enhancement of SIMEX's reputation, integrity, and image
6. contribution to the improvement of Singapore's chance against competitors, such as Hong Kong, as the primary financial centre in Asia

Buoyed by the success of the CME connection, SIMEX has further widened its web, albeit a far less extensive one than expected. In 1997, SIMEX signed an information-sharing agreement with the Tokyo Stock Exchange (TSE).⁶ The agreement initiated a formal avenue of communication between the Nikkei index futures and options market on SIMEX and the underlying stock market in the TSE. A year later, SIMEX entered into a similar agreement with the Tokyo International Financial Futures Exchange (TIFFE) for Euroyen futures and options, which are traded on both exchanges. In 1998, SIMEX launched another inter-time zone link with the Deutsche Terminbourse (DTB) for trading DTB's Schatz, Bund and Bobl futures. These German interest rate products added to the already large portfolio of international financial

futures contracts in SIMEX, giving it the widest coverage round-the-clock for US, European, and Japanese interest rates.

Around the world, electronic linkups have sprung up as the cost of technology keeps declining, while its power grows and liberalisation sweeps across the globe. In Europe, EUREX, the alliance of Switzerland's SOFFEX and Germany's DTB, is working hard to build up its links with other derivatives exchanges, including SIMEX, the Chicago Board of Trade (CBOT), and France's MATIF. Nonetheless, the most promising link at present is the GLOBEX alliance, which consists of three main partners: America's CME, Europe's MATIF and Asia's SIMEX.

The GLOBEX link allows SIMEX members to trade products with their American and European counterparts on a more sophisticated computer system than that of the MOS. It allows trading that spans the world's three major time zones, and covers the broadest range of derivative products denominated in the world's leading currencies. Significant cost savings through cross-margining between products traded at the exchange is also another vital by-product of the strategic alliance. To make all this possible, the linkage will establish a set of harmonised electronic trading rules and policies, so that traders are not burdened by different sets of policies at each exchange.

Interestingly, Singapore was not part of the GLOBEX network when it was initiated in 1987. Back then, the project was initiated by the CME and Reuters. The plan was to offer a twenty-four-hour trading platform spanning three continents. MATIF joined GLOBEX in 1988, followed by CBOT in 1990. The promise of GLOBEX in global futures trading was alarming, even more so for small Asia-Pacific financial futures exchanges. By providing an alternative continuous trading route, SIMEX's very existence was seriously threatened. GLOBEX had strong potential to supplant the strategic role of SIMEX in bridging the trading time gap between Europe and US. SIMEX was either going to be part of the club, or left out of it to fall into oblivion. The choice was clear.

On February 2, 1999, the world witnessed the announcement of a new futures trading platform, the GLOBEX alliance. The group consisted of the Chicago Mercantile Exchange (CME), the Société des Bourses Françaises (SBF) and SIMEX.⁷ Trading was scheduled to begin in the third quarter of 1999. GLOBEX is expected to reinforce

SIMEX's position as an international exchange for trading Asian derivatives and as the Asian exchange for trading international derivative products.

The success of these international computerised trading networks will hinge primarily on how fast and extensive financial liberalisation takes place around the world. This will depend on the extent to which each country perceives the need to control its own economic destiny.⁸

Liquidity of the Market

Since virtually all derivatives are contrived on the dynamics of the underlying instruments — not the other way around — the pre-conditions necessary for the establishment of a futures market lie in the extent to which a strong and liquid cash market in the underlying securities already exists. Liquidity reflects both the number and the size of transactions and this fact seems to favour large and active economies.

Although Singapore's economy is growing fast through its financial services industry, the limitation of land and human resources puts it at great disadvantage, when compared with its competitors in the Asia-Pacific region. Unlike Japan, which possesses a large domestic market, and Hong Kong, which has a much longer history of well developed institutions (under the British) and proximity to the huge China market, Singapore is a new economy separated from Malaysia in as recently as 1965. However, Singapore's position in Southeast Asia does capture one of the world's key strategic locations.

The right products. The obvious and viable route for SIMEX to survive and succeed is, therefore, to adopt an international orientation from the start. In order to ensure sufficient volume and liquidity for the exchange, SIMEX has selected certain key international financial products, such as major world currencies and equity indexes for trading in its market.

Big players. Another measure to sustain adequate liquidity is to attract big, well-capitalised financial institutions to become corporate clearing members. These large institutions are themselves major dealers and brokers. With active government support, Singapore has succeeded in drawing influential global players to the island and to transact through SIMEX. The result has been impressive. High traffic in its products

and trading volume translates directly into liquidity. A liquid market is important, since it allows both small and big buyers and sellers to transact in the market without affecting or distorting the price of a contract, and incurring the so-called “liquidity cost.” Interestingly, liquidity in the futures market is self-perpetuating. Lack of liquidity in a certain contract drives away big traders to other exchanges and makes some brokers hesitant to invest in facilities and necessary training of staff, which in turn, further exacerbates the liquidity problem. Although SIMEX has succeeded in various international financial products, it has trailed behind Hong Kong’s renewed Hang Seng Index futures trading since November 1998. The Hong Kong Futures Exchange may have won out because it offered higher liquidity. Indeed, liquidity makes the market.

Contribution of locals. Lessons learned from the experiences of Chicago and other exchanges, such as LIFFE, is that the market cannot sustain a high level of liquidity without active participation of the locals or individual members who trade on the exchange floor for themselves. The fact is that, on the average, 40 percent of SIMEX and more than 50 percent of Hong Kong futures turnover is provided by local retail investors. Some contracts may be more suitable for locals, and so more popular. Some SIMEX critics claim that the low trading volume of the recent debut of the Singapore stock index is due to the fact that it is not on *open outcry*. As the screen-based electronic trading is starting to make inroads, SIMEX has tried to balance the transition period by taking in some contracts that are better suited to open outcry, due to its popularity among local traders who are more familiar with it and who contribute to the liquidity and lubricate trade. To attract greater domestic participation, the requirement for a local trader is simply that the individual either buys a seat from SIMEX at S\$50,000, from another local, or is permitted to lease one.

Being well connected pays. Another mechanism that generates huge liquidity for SIMEX comes from inter-exchange connections like the mutual linkage with the Chicago Mercantile Exchange (CME). The linkage connects SIMEX to the huge Chicago market. The payoff is evidenced in the number of transactions carried out through the link. Out of a total of 23 million futures contracts traded in 1997, 8.7 million came from Eurodollar and 1.7 million from Euroyen contracts transacted through the link, representing 45 percent of the futures trade altogether. In terms of the

total number of contracts traded, SIMEX is currently among the world's top fifteen futures exchanges. Tables 2 and 8 show SIMEX's annual volume of trade and reveal the explosive growth and immense liquidity enjoyed by SIMEX since its inception in 1984.

Reliable Regulation and Supervision

In a study into issues concerning the development of a futures market in Thailand, Power Research (1994) commented that:

“It may be that the most important criteria for measuring ‘readiness for the development of an exchange’ rest more on the qualitative aspects of a society's legal-economic-social relationship, and the technology that facilitates the making of contracts than on quantitative measure of turnover, liquidity ratios and number of transactions. The institutional arrangements that buyers and sellers need to conduct their business easily, quickly, efficiently and with confidence in the financial soundness of their counter-parties is the essence of an exchange, and that is based on legal-economic-social and technological developments. This is not to suggest that one should expect to start a futures exchange in a vacuum or in the complete absence of a cash market. It is only to emphasize that once a certain set of legal-economic-social relationships are in place, an organized futures exchange can emerge and that such emergence, especially when coupled with modern technology, will likely create a ‘critical mass’ and foster the rapid growth of the cash market.”

Interestingly, a right combination of legal-economic-social relationship and technology is probably the strongest and most unique quality of Singapore that sets it apart from other less successful competitors. The most recent praise for the Singapore economy came from the Heritage Foundation and the *Wall Street Journal* in 1998. In their ranking of economies, which took into account ten factors — comprising trade policy, taxation, government intervention in the economy, monetary policy, capital flows and foreign investment, banking, wage and price controls, property rights, regulation, and the black market — Singapore won the top spot as the world's freest economy. Singapore surpassed Hong Kong, its archrival, on monetary policy, as well as wage and price controls, and matched Hong Kong's scores on trade, government intervention, foreign investment, property rights, regulation, and the black market. In 1998 the US-based *Fortune* magazine selected Singapore as the best city in Asia to do business in.

The *Fortune* survey, which looked into issues such as the number of new businesses, increase in employment, crime rates, quality of life, and the environment, put Singapore ahead of Tokyo, Osaka, and, again, Hong Kong.

It is widely recognised that the chief objective of a futures exchange is to provide a trustworthy, reliable, and efficient institutional framework for traders and investors to meet and conduct businesses. Evidently, the market and government are not distinct entities but rely heavily on each other. Like other financial institutions, the name of the game here is “trust” and “confidence”, and this is where the government plays a distinctive role.

Generally, there are good reasons for government involvement. Firstly, market participants demand that the government protect their finances. Secondly, macroeconomic stability depends on government actions over money and credit. There are various ways in which it may exercise its influence over the market to ensure a trustworthy environment for business operations. It could, for example, let the market operate and take care of itself, while government carries out the job of maintaining law and order.⁹ Another alternative could be that government runs or directly intervenes in financial markets, under a set of rules. This is the issue of regulation and it is in this respect that Singapore sets itself apart from its competitors.

Regulation theory. I would like to introduce some interesting views here about regulation, in order to inject a perspective. According to renowned Harvard economist George Stigler (1971), a traditional view is that “regulation is instituted primarily for the protection and benefit of the public at large or some large subclass of the public.” This is a view from normative economics (i.e. what regulation ought to be). However, Stigler proposes a new and startling perspective based on positive economics (what regulation actually is), which breaks new ground in the modern theory of regulation. In essence, Stigler attempts to explain through his theory, “who will receive the benefits or burdens of regulation, what form regulation will take, and the effects of regulation upon the allocation of resources.” He, then, suggests that “as a rule, regulation is acquired by the industry regulated and is designed and operated primarily for its benefit,” even though the regulation might initially have been thrust upon the industry against its opposition. Stigler goes on to identify four main channels through which the regulatory authorities

can exert the power of the state to benefit particular industries, namely: subsidies, price fixing, entry controls, and restriction of substitute products. Other positive properties that protect and benefit the public are just the “side effects” according to this view.

Stigler, however, recognised that while regulators have deep and enduring ties to the industries they oversee, they have other constituencies as well and it is these constituencies that frequently call for regulation.

The creation of SIMEX could be explained by Stigler’s theory. SIMEX was a product of the transformation of the Gold Exchange of Singapore at the initiative of the GES top management and its members to protect their own interests, with support from the Singapore authorities. Cooperation among relevant parties was harmonious as both sides saw an urgent need to revamp the old gold exchange. In 1982, the GES was rife with fraud and malpractice and was on the brink of disintegration, due to internal problems and competition from the much stronger Hong Kong gold market (Chia and Soh, 1984). After the successful restructuring and transformation of SIMEX, the monetary authorities exercised greater control over the new exchange with help from a series of Futures Trading Acts.

The MAS moved in the right direction by strengthening the regulation and supervision of SIMEX, which has since earned a good reputation and gained success. The revamp provided market participants with a reliable environment and was well timed as the Southeast Asian economy began to take off in the latter half of the 1980s. In February 1995, speculation in the Japanese index futures contract by Nick Leeson, a rogue British trader on the SIMEX, brought down the prestigious Barings Bank and generated shock waves throughout the industry. The incident served to alert SIMEX and other exchanges around the world about the dangers of loose supervision (albeit on the side of the bank in this case) and prompted a tightening of regulations in Singapore, Britain, and Hong Kong.

In the light of the Barings debacle, SIMEX, already one of the most regulated exchanges, further improved risk management, increased surveillance, and formed a committee to oversee and refine policies on membership, capital, financial and segregation requirements, position limits, and reporting. As cited in the MAS annual report 95/96:

“Financial institutions will be exposed to excessive risks if they transact treasury and complex derivatives products without a proper understanding of the risks involved, and instituting the necessary internal controls to monitor and manage these risks. The Barings debacle, which resulted from a lack of basic controls at the local and head office level, is a timely reminder of the need for stringent internal controls. Fortunately, the Barings incident did not have a systemic effect on the financial markets.”

SIMEX survived the Barings incident without tarnishing its reputation and in many ways, emerged as a victorious party. The close co-operation between the exchange and the authorities assured the public of the integrity of the exchange under pressure. The total amount of \$400 million pledged by banks and financial institutions in Singapore to SIMEX during the critical moment, was returned without being used.

The rapid growth in the size and the complexity of the treasury and financial derivatives market, coupled with increased linkages among the major financial centres, has heightened the possibility of systemic disruptions in financial markets. To maintain the soundness and integrity of the financial system, MAS instructed banks in Singapore to be circumspect and prudent when engaging in treasury and financial derivatives trading. They were instructed to institute sound internal risk management procedures and systems to ensure that their treasury and financial derivatives trading activities are conducted prudently.

Compared to Hong Kong, Singapore’s approach to regulation represents a different mindset. While the Hong Kong government is more liberal and seems to prefer market forces to shape outcomes freely, Singapore leans towards a more strong-handed approach of management by having a competent team of professional bureaucrats run the country even in the micro details. Perhaps due to its small size, Singapore has centralised its regulation since 1970, by vesting the MAS with full authority in monetary and financial affairs. The strategy has worked well so far. Positive response from the business community is widespread, and as one managing director of a futures trading firm admitted recently, “from a regulatory perspective, Singapore has the clearest and most concise regulatory structure...Singapore knows firmly where it wants to go and how to go about it” (*Business Times*, 3/5/99).

Despite all the success, some signs of resentment have emerged. A growing number of financial institutions feel that the MAS' heavy-handed approach is too rigid. Many traders see the compliance regulations as a straitjacket on their investment behaviour, a barrier to making the returns of which they feel capable. Strict regulations are also blamed for discouraging the development of derivatives based on local indicators. Some critics accuse Singapore of having an authoritarian government with corporatist leanings, referring to the fact that the government could dictate a broad strategy of cost cutting by 20 percent to improve competitiveness during the Asian financial crisis in 1998. Many business leaders often think that the relatively hands-off approach of the Hong Kong government encourages a more innovative environment and culture. In fact, the perception of a strong hand of government is not only limited to businesses but also extends to other aspects of Singapore society. Lately, its government has begun to take notes and started to loosen its grip, which has served the country well for so long. Interestingly, it has been noted recently that as Singapore is loosening its strict regulation, its main rival, Hong Kong, is moving in the opposite direction as the authorities there have increasingly intervened in financial markets.

Outlook and Trends in Asia-Pacific Region

The financial crisis of 1998 in Asia significantly slowed down the momentum of the region's economies but most analysts agree that the worst is now over and that Asia will move on. In a broader sense, the crisis did not stop the prevailing trends in the world economy; it simply put a brake on some weak Asian economies. In the futures industry, some trends are clear and unavoidable. In this section, I outline three major courses that, I believe, lie ahead and will shape the industry in years to come.

Convergence of Securities Exchange

Although trading stocks and trading futures are quite different in terms of the objectives, procedures, and risks involved, they also share many fundamental processes and structures. In fact, as far as the structure of the exchanges is concerned, the similarities more than outweigh the differences. In principle, the stock exchange brings people with excess capital together with those who need capital for investment. The exchange's

main function is to facilitate the transfer of capital under a trustworthy atmosphere. A futures exchange also acts to bring people together to discover prices and to transfer the risk of price changes. Both share the fundamental objective of facilitating the allocation of capital to its best uses and also share one significant characteristic: providing a reliable platform for trading. Accordingly, both types of exchanges perform many overlapping functions.

Consequently, the merger of the stock and futures exchanges could improve the efficiency of the markets and create a more competitive environment, although this may not be the only solution. Co-operating or integrating several key and common functions is another way to obtain synergy. The principal contribution of a merger is the establishment of a single trading platform, one that will also be perfectly consistent with the forthcoming electronic trading. In the future, all market participants will be able to trade stocks, futures, and other activities from the computer terminal in a comfortable environment. The increased convenience is likely to generate even more liquidity, as more people will be attracted to the system.

As a result of merging, there will be fewer futures and stock exchanges in each time zone, albeit larger and more efficient ones. At present, there are numerous small exchanges that are inefficient and expensive, while more latecomers are struggling to join the bandwagon. Again, market forces will ensure that only the well connected, most adaptable and efficient exchanges survive this natural selection process. Already the stampede is on among the world's top futures and stock exchanges, although the final outcome will take a while to surface.

Exchanges in Europe are among the first to experience the shake-up because of the advent of the Eurocurrency, automation and forging of new alliances. As in Europe, there will be a contraction of the big American futures houses. In Asia, the big boys of exchanges in the region, including Hong Kong, Japan, Australia, and Singapore (SIMEX), have already laid out a blueprint for the eventual merger of stock and futures exchanges as part of a world-wide trend towards a more competitive and globalised environment. For example, Hong Kong announced a plan in March 1999 to merge the territory's stock and futures exchanges by the year 2000. Australia also declared a

planned merger of the Australian Stock Exchange (ASX) and Sydney Futures Exchange (SFE) during the same period.

Not to be outdone, Singapore has likewise planned a merger of the Stock Exchange of Singapore (SES) and the Singapore International Monetary Exchange (SIMEX). The Singapore program is even more demanding. The agenda calls for SES and SIMEX to merge by the end of 1999, and its shares to be listed in five years.¹⁰ However, there are still three major securities markets in Singapore, the SES, SIMEX, and SICOM. To be completely unified, SICOM will have to join as well. Currently, SIMEX is paving the way for the merger with SICOM by abolishing some old barriers¹¹ between the two exchanges, which significantly simplifies the process for investors who trade on both exchanges.¹² SICOM is particularly vulnerable since it has only one viable product, the rubber futures contract.

Furthermore, to strengthen the merger plan, the Singapore authorities are considering the demutualisation of the SES and SIMEX to increase transparency and accountability of management in the new merged exchange. Demutualisation is the process of separating ownership from management. The concept is the foundation of the modern corporate structure. It will make the exchange respond better to its members by eliminating a conflict of interest, which arises when the management is preoccupied more with its own interests than those of its customers. Demutualisation is an industry trend to improve competitiveness, and SIMEX has been quick to respond to the proposal. The integrated trading platform is part of the Singapore government's ongoing financial liberalisation drive to be more in keeping with the practices and trends in other major global financial centres.

Coming Age of Digital Technology

The progress in computer technology and microelectronics is changing the world, especially the way we conduct business. The falling price to performance ratio of computer technology is a major factor in accelerating the adoption of electronic trading. No one can predict the exact date when the cost and efficiency advantages of electronic trading become overpowering, but we may be nearing an inflection point. Technology impacts upon the futures trading in at least three major areas. Firstly, it is the backbone

in the link-up network that is beginning to shape worldwide competition. Secondly, it will supplant the old way of conducting futures trade, specifically, the increasingly outdated method of open outcry trading. Thirdly, it is paving the way for a virtual exchange — the Internet trading.

Computerised linkup network. On the linkup network front, the two largest networks, EUREX and GLOBEX, are engaging in a battle for domination. EUREX is the alliance of the German and Swiss futures exchanges (DTB and SOFFEX), which pioneered electronic trading, network in Europe. Recently, the EUREX group faced a setback when it lost Italy's MIF exchange to the GLOBEX network in 1998 and failed again to attract the largest futures exchange in the world, the Chicago's CBOT, to join it in early 1999. However, EUREX now is moving forward by trying to link up with Japanese exchanges for Asia, after SIMEX turned it down in 1998. SIMEX is presently part of GLOBEX, which includes the CME and the MATIF exchange. SIMEX has also renewed the Mutual Offset System with the CME until 2004, when the GLOBEX network is expected to take root firmly.

From the MOS to the GLOBEX network, SIMEX has come a long way in keeping up with trends in the worldwide futures trading network.

Open outcry vs. electronic trading. The power of technology is also pushing itself onto the trading floor. Electronic trading is now challenging the tried-and-true method of open outcry. In the open outcry system, traders come to meet each other face-to-face in a trading pit and negotiate prices for buying and selling. It provides the excitement of gamesmanship and a sense of competition that draws out all sorts of emotions in a person. More information also is indirectly collected and spread out in a face-to-face negotiation. Electronic trading, by contrast, offers a higher degree of transparency and accessibility, as well as simplicity in processing data.

The SIMEX-CME co-operation back in 1984 led to SIMEX's adoption of the open outcry trading practice of the Chicago exchange, which was the best method around at that time. In the wake of new trading technology, SIMEX recently announced that it was purchasing a French software, so that it could offer electronic trading alongside its traditional open outcry trading (*The Wall Street Journal Europe*, 02/08/1999). Although SIMEX trades on the open outcry basis on the floor of the

Exchange, it also offers an overnight screen dealing system, which permits electronic trading of the Euromark, Euroyen, Japanese government bonds and currency futures from 11:30 to 17:00 GMT. The move is another step in the transformation process underway at SIMEX to eventually switch to an electronic trading system. The change is also vital for future linkups with computerised trading networks. While SIMEX is trying to accommodate new technology on its trading floor, the Hong Kong Futures Exchange (HKFE) is scheduled to switch to a fully electronic trading system in mid-1999, putting an end to the colourful open outcry system it has been using for twenty-three years. One clear example of the growing influence of electronic trading is the case of London International Financial Futures and Options Exchange (LIFFE). It dominated futures trading in Europe for many years, but when it refused to switch to electronic trading to keep up with Deutsche Terminbörse (DTB) in Frankfurt, it watched helplessly as DTB wrested away control of Europe's benchmark-bond contract, the Bund, in 1998.

However, switching to electronic trading has not been without costs; SIMEX invested heavily in the old-fashioned open outcry method since it linked up with the CME. As of February 1999, less than 10 percent of the daily volume traded on SIMEX was electronic, while at the CME, electronic trading drew an even smaller share of business. The successful tradition of open outcry trade at SIMEX, over the years, has attracted about five hundred local adherents, who trade for themselves on the floor of the exchange and provide up to 40 percent of SIMEX's trading volume. In the immediate term at least, SIMEX may have to stick it out with the old system; local traders are a valuable asset and the exchange needs to find ways to best integrate them into the electronic trading environment. Moreover, changing to electronic trading seems to be a delicate balancing process but SIMEX will have to rely on its adaptability, once again, to address this issue in the near future.

Internet Trading. The concept of trading securities on the Internet is still relatively new and is starting to create an impact on the trading scene, notably in stocks trading. Many stockbrokers currently offer on-line trading that is extremely convenient and much less intimidating, especially for rookie traders. This mode of trade has even spurred a new phenomenon of teenage and high school traders in the US, recently. Very soon, this new trading methodology will spill over to derivatives trading and beyond.

A vital lesson learned through the brief history of SIMEX is that technology is a key to success in the futures business. Exchanges must quickly adapt to this new technology that is fast evolving and change the old ways of conducting business in order to sustain their success, if not survival.

Competition

As the world shrinks with the development of increasingly powerful computer technologies and more liberalised political and economic conditions, competition among nations, in trade, is getting fiercer. These new forces have transformed the economic landscape and the rules of the game that govern it.

The nature of competition in the world's futures exchanges has changed to reflect the power of the post-Cold War market, fuelled by the advancement of communication technologies. Today, exchanges around the world are struggling not only for success but also for their own survival. Linkages between exchanges through computer networks, similar to the mutual offset system pioneered by SIMEX and the CME, are threatening the relevance of numerous futures exchanges around the world. Some predict that out of more than fifty (50) futures exchanges in the world today, only fifteen (15) will still be around in the next ten years. Consequently, the justification for the existence or development of any new exchange is beginning to draw doubt and concern, particularly when the bloated ambition behind it is founded on misinformation and self-delusion. The global trend toward the convergence of securities exchanges, stock and futures exchanges in particular, has added more confusion although it has created opportunities.

In the Asia-Pacific region, the harsh reality of fierce competition is just starting to emerge. Japan's Tokyo International Financial Futures Exchange (TIFFE) is gearing up to bolster its futures market with a similar system employed earlier by SIMEX and the CME in 1999. The so-called 'giving up' facility permits a customer's trade executed by one exchange member to be cleared by another member, much like the system that contributed to making SIMEX one of the most competitive exchanges in the region. With the new system, TIFFE expects to maintain its top position in Asia,¹³ specifically in the Euroyen market, which used to be the world's largest interest rate contract after the

Eurodollar.¹⁴ Backed by its own colossal domestic economy, Japan will continue to be a leading force in futures trading in the foreseeable future.

Another strong competitor, the Sydney Futures Exchange (SFE), recently affiliated with Dow Jones Indexes to create a set of investment indices known as the Asia-Pacific Extra Liquid Series (AP/ELS). The SFE will be entering an index market already occupied by SIMEX, HKFE and the Osaka Securities Exchange, and its strategy is to “become a one-stop shop for Asia-Pacific investment and price-risk management products.” This indicates that the SFE is serious about becoming an even stronger regional force. However, the new GLOBEX alliance, in which SIMEX participated in 1999, will also push SIMEX’s volume to a higher level.

The situation is different for other smaller members in Southeast Asia. As one of the most aggressive organisations, promoted by an equally aggressive government, SIMEX’s foresight and its growing influence have begun to stir resentment among its neighbours in the region. Interestingly, the success of SIMEX in bringing international investors to the region could be a benefit to its neighbouring countries by generating liquidity from the huge base of international customers through its global network. Accordingly, it could be viewed as a positive force in the development of an efficient risk management system for the region by reducing redundancy and costs associated with developing separate new exchanges. However, impelled by the need to control their own money supply and monetary policy, many developing nations in Southeast Asia, including Thailand, maintain a policy of preventing securities trading, including futures contracts, in overseas markets. National pride and politics are another big issue. Virtually all countries aspire to having their own exchanges, even costly ones.

As a result, small and less developed countries like Malaysia, and even Hong Kong, are afraid that SIMEX’s expansion into their own benchmark index will draw away attention and much needed liquidity from their own markets. For these reasons, the international orientation of SIMEX, specifically the listing of equity index contracts of its neighbours regardless of their being approved or not, is viewed as a threat by some, especially Malaysia, and to a lesser extent, Hong Kong.

SIMEX initially planned to launch a Malaysia contract in 1998 based on the Dow Jones Index, which is closely correlated with the Kuala Lumpur Commodity Index

(KLCI), but has since postponed the plan due to waning interest in the Asian equities market following the onset of the Asian financial crisis. Nonetheless, Malaysia treats the announced intention by SIMEX seriously and has since come up with many measures to undermine Singapore's financial markets. One of these is the passing of a new law to put an end to the trading of Malaysian equities on Singapore's over-the-counter market in May 1999 (*Business Times*, 09/01/98). The latest incident has added to the growing tension between the two close neighbours, and is likely to worsen in years to come.

Even a better-equipped city like Hong Kong feels the heat of competition from SIMEX. Like Singapore, Hong Kong is a small city-state, predominantly Chinese, internationally oriented and a key financial centre in the Asia-Pacific region. Due to similar characteristics and strengths, both countries see each other as a major rival to becoming the supreme regional financial and economic centre. Although Hong Kong has three times the population and twice the market capitalisation of Singapore, SIMEX has managed to outshine the HKFE, especially in international financial products. The faster and more adaptable SIMEX is far more aggressive and innovative. On November 23, 1998, SIMEX re-launched the MSCI Hong Kong index (HiMSCI), which has a 99.995 percent correlation with the Hang Seng Index. The index is the mainstay of the HKFE, accounting for over 90 percent of its turnover. At least for now, HKFE is still ahead in HiMSCI's liquidity and by moving into electronic trading, the HKFE authorities expect to protect its turf better. The winner of the battle between these two archrivals for number one spot in the region is still unknown. All may hinge on the prospect of China and its economic clout in the next century. If China takes off smoothly, HKFE may have an edge as the gateway to the big China market; otherwise, SIMEX's superior international connections may pay off in the long run.

On November 2, 1998, SIMEX launched the Dow Jones Thailand Stock Index futures to satisfy the growing demand for risk management in Thailand's market. However, the fallout from the Asian crisis significantly dampened activities in the trading pit. Could the trading of the Thai stock index cause another tension between the two countries? After authorities learned about SIMEX's intention to start trading on the Thai stock index, Thailand's Securities Exchange Commission (SEC) sent a letter to SIMEX stating its concern over the decision (*The Nation*, 6/12/98).

In the futures game, an exchange that is inefficient, of high cost, or one that takes anti-competitive action against the interest of customers, will find itself powerless to prevent business from flowing to its competitors or the OTC market. In the medium term, small countries, such as Malaysia and Thailand, which are not ready to fully liberalise their financial sector, will have to contend with low liquidity and the high cost operations of their own small futures exchanges that cater only to modest local commodities. In the long run, as more countries liberalise their finance sector and open their local economy wider, the electronic networks of cross-exchange trading like GLOBEX and EUREX will pose a great threat to the existence of small local exchanges across the globe, including Asia. Some industry insiders foresee that, over the next decade, two or three groups of futures and options exchanges will emerge, competing against each other based on global networks.

In the end, Asia's futures exchanges will not only compete with their regional counterparts, but also with the likes of GLOBEX. If the present trend continues, they might just as well prepare to become another outlet for the worldwide trading networks.

Thailand's Futures Exchange

Thailand's interest in setting up its own futures exchange, stems from its enormous economic expansion from 1986 to 1994 and a more liberalised financial environment since 1993. The latter half of the boom period (1990-1994) witnessed a surge in the number of companies listed on the Stock Exchange of Thailand (SET). Huge foreign capital inflows were channelled to both direct and portfolio investment opportunities, pushing up the GDP growth rate to nearly 10 percent a year during that period. The Thai equity market grew rapidly in size and scope as strong returns attracted the attention of both domestic and foreign investors. The SET index went straight up to an all-time high of 1740 in January 1994 while market capitalisation doubled to US\$130 billion between 1992-1993.

At the height of the euphoria in 1994, the Securities and Exchange Commission (SEC), the main regulator of Thailand, commissioned various consulting firms to study and survey the possibility of establishing a futures market in the Kingdom. The enthusiasm and the money were ready and available. The preliminary plan was to create

an exchange to trade agricultural futures (rice, rubber) and financial futures (stock index futures, currency futures). However, Thailand's subsequent financial liberalisation program, which began in 1993, proved fatal as it encouraged even greater capital inflow while offering no mechanism to control and manage the massive influx. The ensuing squandering and misuse of money, corruption and bad politics further weakened the institutions, particularly those that supervised and regulated financial sector. At the same time, the surge in America's prowess in computer technology and related applications, together with the consequent improvement in productivity, began to tip the world to a new equilibrium. The higher returns from the US technology sector and optimism about its economy, along with shaky confidence in the global arena, started to draw capital back from Asia, including Thailand. Economic decline was evident as the SET index receded continuously from its peak in 1994.

The party was definitely over by 1997 when the financial crisis erupted in full force and Thailand turned to the IMF for assistance. The SET hit rock bottom at 230 in 1998.

Fallout from Financial Crisis

The crisis depleted much of Thailand's capital reserves, brought on a tremendous amount of debt, and severely slowed down, if not completely stopped, many development projects. It complicated many issues, such as economic liberalisation and its direction, growth and development. The futures exchange project was also affected, as the shrinking budget found other more urgent uses.

Since hitting its lowest point in 1998, Thailand slowly recovered as global economic conditions began to show signs of optimism. The funding packages from several international institutions, such as the IMF, World Bank, and the Miyazawa program, helped Thailand sustain some critical national developments. Nonetheless, the futures market program which was expected to cost one billion baht (approx. US\$28 million) and to be completed in 1999, was delayed again after the government cut the national budget from 982 billion baht to 800 billion baht for the 1998 fiscal year. Although the futures project may ultimately be scaled down, the interest is still there.

Parliamentary approval of the draft laws for setting up the country's first futures market was expected to pass within 1999 (*The Nation*, 1/29/99).

Indeed, there are probably more reasons now than ever to allow investors and firms in Thailand to have access to efficient risk management technology that the futures market provides. The financial crisis has highlighted the uncertainty faced by many investors and businesses. The floating of the baht at the onset of the crisis in 1997 is a reminder that risks are always around. From now on, businesses in Thailand will have to cope with an increasingly volatile environment. The crash of the SET index at the onset of the crisis wiped out the lifetime savings of numerous retirees, as the once unshakeable mutual funds collapsed. Furthermore, the Ministry of Agriculture has been frustrated by the lack of reliable information with regard to the condition and prices of agricultural products. The futures market can come to the rescue through its "price discovery" function. Besides, the global liberalisation trend implies that Thailand must restructure its financial institutions to keep up with the competition.

In the end, a new exchange project comprising only commodities may move forward, but only after a long delay, due to its high cost and a series of budget cutbacks. The most viable and fastest route now is the trading of index futures and options on the existing facility, the SET, which is likely to commence by the end of 1999.

Nevertheless, some questions have to be addressed if Thailand wants to go ahead with the futures exchange program. One question is: what kind of futures products should the exchange offer?

Potential Products for Initial Trading

Selecting the proper products for initial trading is one of the key issues to be decided. The most obvious factor lies in the underlying securities to be traded.

Firstly, there should be sufficient demand for hedging, to begin with. This would mean assets that have many market participants and considerable volatility to induce the demand for hedging and speculating. Although anything with sufficient "volatility" could theoretically be put on the market for trade, the appropriate securities must also play a crucial role in the economy. Secondly, the underlying securities should be actively traded in order to facilitate arbitraging. Slow moving trade makes it more

difficult and risky for arbitrage and consequently creates the potential for mispricing and short-term price manipulation (*Power Research*, 1994). With these factors in mind, some researchers have suggested the equity index and a few commodities as candidates for initial trading in the Thai futures exchange.

The SET index is a natural choice, since it is a benchmark representing the Thai equity market. While some critics may argue that many stocks on the SET are not actively traded, and would prefer the SET 50, a new index that includes only a handful of large and actively traded stocks, the two exchanges have been shown to have a correlation of 98 percent. The SET futures will also be useful for the big institutional investors, especially foreign ones. Since the average institutional portfolio is highly diverse, it is more representative of the market portfolio. Moreover, the adoption of the SET index in the futures exchange can enhance the “depth” and “breadth” of Thailand’s equity market and encourage the expansion and development of the mutual fund and professional money management in Thailand. One important fact is that SIMEX is currently trading the Thai’s index futures contract based on the Dow Jones index.

Certain commodities representing the key strategic agricultural output could also be put on the exchange. The Minister of Commerce has selected four commodities for trading on the new separate exchange: rice, tapioca, shrimp, and rubber. These commodities form the staple of the Thais and are the top exports of the country. Including these essential commodities in the futures trade would help a many farmers protect themselves against price fluctuations.

The latest information indicates that in the first phase, rice, tapioca, shrimp, and rubber will be put on the new exchange. The stock index will be added later. However, there are some complications concerning the index futures. For one thing, the Thai authorities did not expect SIMEX to list the Thai stock index in November 1998 when they laid out the blueprint as early as 1994. The net effect from SIMEX’s trade is still inconclusive, but it is likely to have at least some negative psychological impact similar to the aforementioned case of Malaysia. Secondly, the stock index futures is not a commodity product, and this is the reason officials at the Ministry of Commerce have used to justify the Ministry’s jurisdiction over it, no matter how ridiculous it appears. So, the index futures will be traded on the SET, just as the SET officials argued for.

The index option is another derivatives product under serious study at present and is expected to be traded on the SET very soon. Fragmenting the operations along these lines, will definitely create problems in areas like cost, technology, and link-up. At this stage, its future is still unpredictable, especially after the crisis. Other products, which may be considered in the next phase of development, include currencies and interest rates.

Separate Regulatory Agencies and Exchanges

Whether there should be a separate exchange for futures contracts and which agency should regulate futures trading in Thailand, is an issue of present debate. Although many studies have suggested that all securities trading should be integrated under one regulatory body, the Thai authorities are doing the opposite. Thailand has decided to create a separate exchange for commodities trading under the jurisdiction of the Ministry of Commerce. All financial derivatives products, including stock index futures, currencies, and interest rates futures will be traded on the SET, together with stocks. The Securities Exchange Commission, which regulates the SET, is sanctioned to regulate these financial derivatives trading.

The separation is largely politically motivated. The study of the SIMEX experience supports a unified approach and is consistent with the recommendation of earlier studies. Singapore's winning formula in finance is the merging of all aspects of financial regulation and supervision under one single regulatory body — the MAS. This approach has proved to be efficient, responsive, and yet flexible. Although there are three exchanges in Singapore that separately trade stocks, financial futures, and commodities, these exchanges are in the process of merging in response to the global trend. Putting everything in the right place now is critical for Thailand's success, since only diminutive investments have been committed so far to the program.

Nevertheless, the separation outcome has not been entirely unexpected. Like many countries, Thailand's agricultural constituency is a major political force with influential organisations supporting it. A new commodity exchange is a tempting target for politicians eager to make political capital out of it. The Ministry of Commerce has found an opportunity to enhance its prestige and jurisdiction by taking the new exchange

under its wings. The Ministry argues that since it already supervises the cash market in commodities trading, it has a duty to look after the new exchange. Public ignorance about the nature of futures trading may also play a material part. For most people, including politicians, anything that is related to commodities trading should automatically be left to the Ministry of Commerce.

The price of this misguided course namely, separation of exchanges, includes:

- significantly higher cost for extra facilities and personnel, thus hindering development;
- greater likelihood of a linkage problem, if the need arises to link the two exchanges, due to software incompatibility and other problems; and
- loss of synergy, efficiency and liquidity.

Furthermore, with a separate new futures exchange comes a new regulatory body that is under the Ministry of Commerce. However, the trend in futures and options regulation around the world points to a single regulatory agency for both securities and futures trading. The long list of countries where this exists includes Britain, France, Australia, Hong Kong and Singapore. In addition, several countries support the development of self-regulating organisations set up by the industry itself. The organisations are supervised by government agencies and authorised with limited powers to monitor trading among its members.

The situation in the USA is different, however, where securities markets and options are regulated by its Securities Exchange Commission while all futures and options are regulated by the Commodity Futures Trading Commission (CFTC). The separation is due to historical events surrounding the development of futures trading in the US and the political tug-of-war between the SEC and CFTC. The SEC's failure to recognise the significance and ramifications of futures trading ultimately put the industry into the hands of the CFTC, which has since steadfastly protected its own turf. Some may argue that multiple agencies may be a benefit to consumers through competition among groups. But so far there is no sufficient evidence to support that claim, since exchanges are already competing internationally. Whereas most critics see no economic justification for two different regulatory bodies, politics sometimes dictates otherwise. The separate regulatory agencies of Thailand will give rise to duplication and bureaucratic overlaps that can drive away prospective traders, local and foreign.

The crisis may eventually solve the problem of separate exchanges and regulating agencies. It has made investing in a new exchange prohibitively expensive¹⁵ and, at the same time, emphasised the wisdom of using the SET's existing trading facilities to accommodate new futures products.

Electronic Trading

SIMEX is well known for its noisy and chaotic trading pit, the system it adopted from the Chicago traders, fifteen years ago. Nonetheless, the exchange has recently started to change from open outcry to electronic trading. In view of this trend, Thailand should also adopt electronic trading for its futures exchange. A second reason is that all trading in Thailand has always been in the electronic format and all securities brokers and finance companies already have substantial investments in computers and related facilities, as well as a well-trained workforce. A third justification for electronic trading would be the problem of training pit traders, which could be a costly and time-consuming process.

Liquidity Problem

The lack of liquidity is probably the most serious threat to any new exchange. Cognisant of this problem, the Thai authorities have selected only a few high profile products to be put on the exchange, including the stock index and commodities such as rice, tapioca, shrimp, and rubber. Besides, the original plan for a new commodity exchange also called for a 24-hour trading day to attract more participants and help with liquidity problem.

However, all these measures may not be enough to ensure liquidity. Thailand obviously needs to do more in law reform in order to attract more market participants, particularly foreign traders. An outdated code of laws and a rigid legal system are very serious problems in Thailand. The pattern truly reflects the inferiority and weakness of the Thai legal system, a far cry from conditions in Singapore, where SIMEX flourishes. Thailand has to amend a number of its old trade laws, which have made the Thai market unattractive for the big players. Fortunately, the Ministry of Commerce is about to revise at least thirty-three trade laws to assist manufacturers and exporters (*The Nation*,

3/21/99). The revision will include a section on the futures market. For example, Thailand's authorities must: (1) amend the money remittance law that restricts the transfer of profits/losses; (2) revamp the trading rules to allow short-selling, to encourage arbitrage activities, and bring about the equilibrium between futures and cash market prices; and (3) reduce the many unnecessary restrictions on securities trading that drive away speculators.

Another measure that can help improve liquidity is the support of locals, which SIMEX enjoys. Although the electronic trading in the Thai exchange is different from the open outcry method at SIMEX, participation by locals or designated individual traders should be encouraged.

Intervention by the government in commodity prices is another major problem. This needs to be corrected to make it consistent with the operation of a futures exchange. Normally, intervention aims to help stabilise the prices of certain commodities in order to relieve pressure on the farmers. For example, in 1998, the Thai government announced a plan to inject 41 billion baht through several agencies as part of its rice policy and to prevent prices from falling further. In that same year, the Farmers' Assistance Policy Committee earmarked one billion baht to prop up shrimp prices and arranged special low interest loans for cold-storage operators to buy shrimp from farmers in the first quarter of 1999 (*Bangkok Post's* 1998 Year End Review). The list goes on. The practice is typical of many nations, which have no other means of protecting their farmers from prices fluctuation.

Well-developed countries with sophisticated market mechanisms need less government intervention. Price intervention reduces volatility, which is precisely what brings hedgers and speculators together to do business in the first place. Without a sufficient number of speculators, the market will not survive. The futures market substitutes for government intervention as farmers can now hedge the risk themselves using the futures contract. But the transition period could be tricky. At a minimum, a great degree of advocacy, information dissemination, and training for both farmers and government officials is necessary.

The potential liquidity problem in index futures is due to competition from SIMEX's Thai index. Even though Thailand cannot do much about it, the Thai

exchange must at least be sensitive to the disparities in services and respond by becoming more competitive. The question here is whether the trading in Singapore helps build up liquidity or takes business away from the Thai exchange. In other words, is it about competition or about complementation? Evidence from SIMEX's Nikkei 225 contracts trading suggests a complementary outcome, as it promotes worldwide trading in the index. However, the Japanese trading facilities and services, unlike those on the Thai exchange, are at least on par, with SIMEX's. This could mean a potential problem for Thailand.

Nonetheless, SIMEX's experience indicates that Thailand futures products will be limited to domestic commodities only. The trend in the global futures industry, together with the increasing competition as technology advances, will allow only a few serious and competent global players to survive and prosper in this business.

Offshore Derivatives Trading on Thai Benchmark

As Thailand's futures program is still in a limbo, the derivatives market based on the Thai benchmark, namely the SET index, has been gradually developed overseas. At the time of writing, at least two markets were already in action. One was the SET-based OTC futures market in Hong Kong, which had been trading futures and futures options based on Thai stocks and the indices since before the crisis. The market was reportedly very active, and was even more so during the crisis, when the tumble of SET index increased opportunities for speculation. Another was Singapore's SIMEX, where the Thailand index futures contract was introduced in November 1998. In addition, a dollar/baht futures contract is now traded on the New York Cotton Exchange (NYCE), since the offshore dealers' access to local derivatives is limited.

The impact of these markets on Thailand is still unclear. I would like to identify at least three possibilities.

- (1) The impact of offshore derivatives trading on the inshore cash markets. A large number of studies have focused on this relationship. The results are negative as far as the direct impact is concerned.
- (2) *The liquidity problem induced by rival markets.* As discussed earlier, it could be viewed as either a competitive or complementary effect. Whatever the outcome, it has already caused some tension between countries e.g. the wrangling between Singapore and Malaysia and Hong

Kong, over SIMEX's new equity index futures, which are based on the latter's benchmarks.

- (3) *Offshore trading* is beyond Thailand's jurisdiction. The Thai authorities will be powerless to regulate any practice deemed undesirable and this could give rise to multiple markets with different sets of rules. Offshore trading, then, represents the loss of a market that could have been onshore to benefit the Thai securities industry and economy.

Sadly, the presence of offshore markets simply reflects Thailand's failure to develop its own trading facilities. It has also proved that where there are interest and traders, there will be a market, whether onshore or offshore. One irony is that even though Thailand is the largest producer and exporter of rubber, it does not have a systematic commodities market. Singapore, which is bereft of natural resources, including rubber, possesses one of the most active rubber futures markets. Moreover, there are as many Japanese futures traded on the SIMEX as in Tokyo.

Unfortunately, the crisis and the growing trend toward electronic network trading will widen the gap that Thailand must bridge with these offshore markets. An economically sound strategy (but unlikely to be adopted any time soon) is to allow Thai investors/traders to trade in overseas markets, for example at SIMEX. If nationalistic zeal and the need to control domestic monetary policy are too strong, then a scaled-down version that involves limited cooperation with SIMEX, might be a solution.

CONCLUSION

The triumph of SIMEX in the international futures market scene is remarkable. Obviously, an affiliation with the world's second largest futures exchange helps. However, SIMEX's ability to have pulled off the deal fifteen years ago, and to maintain a high standard of service throughout the years, is laudable. Who would have imagined that this tiny city-state with three million people, bereft of natural resources, has a futures exchange that ranks among the top fifteen (15) in the world and second only to Japan's in Asia? While Japan is the world's second largest economy with a huge domestic one and a world currency, Singapore's economy is relatively small (approx. US\$92 billion), not to mention that it has only been independent for thirty-four years.

It is hard to perceive a replication of SIMEX anywhere. SIMEX has had to overcome many obstacles but has succeeded in pushing itself to the front of the pack with a combination of decisive factors. It possesses financial integrity, innovation, liquidity, efficiency, low cost, international connections, as well as a superb regulating and supervising system. These are decisive factors for the successful development of a futures exchange and offer a lesson for Thailand, in its effort to set up one of its own.

It will be impossible for Thailand to duplicate the success story of SIMEX. Thailand may overcome some impediments and obtain a fraction of the critical ingredients mentioned above, but the recent financial crisis in Asia has severely interrupted the project's momentum while the world futures industry is evolving continuously to a new stage. What Thailand lacks, which is probably the most important ingredient of all, is a special blend of culture, leadership and determination. After all, an institution does not exist in a vacuum; it is part of an interdependent *nexus* of several factors. However, a modest futures exchange in Thailand is still conceivable. The many strengths and weaknesses of the Thai economy will be crucial in determining the outcome of the futures development program. Some factors, however, are also related to non-economic aspects of Thai society, such as the judiciary system — its laws and regulations as well as their implementation. Thailand possesses a sizeable and quite a dynamic domestic market, as well as strong growth potential, especially with the end of the financial crisis but its leaders must learn to make hard choices and be fiercely determined to attain the objectives they are seeking.

NOTES

1. Source: the MAS annual report
2. As of September 1998
3. After slowing down in 1996 on the back of a downturn in the global electronics cycle, the Singapore economy expanded by a healthy 7.8 per cent in 1997.
4. Margins are a performance bond put up to show that a trader can endure financial losses.

5. For a fee, members of each exchange will get to trade the futures and options products that the other members of the alliance carry on the electronic system. That means the CMC's leading product, the Eurodollar contract, will become available in Asia, and Chicago traders will have greater access to futures on Japanese government bonds, a staple at SIMEX.
6. On 12 October 1997
7. During 1998, GLOBEX signed up two European partners: the Spanish MEFF and the Italian MIF derivatives markets. The three big futures exchange groups in Europe now are England's LIFFE, the EUREX, and the GLOBEX.
8. In order to satisfy its nationalistic temperament.
9. A great deal of the distortion in any economy has been the result of government departing from its principal function. And what is exactly its principal function anyway? There seem to be diverse views on that although some interesting arguments suggest that it is: establishing and maintaining of property rights, especially those of the society. According to this view, the government does its job when it acts to establish and maintain property rights (i.e. property right to clean air) and, thus, many cases of "market failure" (such as "intense and free competition in manufacturing causes air pollution problems in developing countries") are better characterized as "government failures". In this case, it is the failure to correctly price the property right of clean air.
10. Ed. Note: See www.SIMEX.com.sg. SGX celebrates its official inauguration on 1 Dec. 1999, when SES and SIMEX are coming together to create a powerful new force in the world financial marketplace.
11. From January 1999, SIMEX's members could trade on SICOM by applying for a licence. Previously, SIMEX firms that wanted to trade on SICOM had to set up a completely separate legal entity with its own staff and capital requirements, estimated to cost about US\$5million (S\$8.5 million) for international companies. And they could not "bypass" SICOM, either, as they were barred from trading commodity contracts in other exchanges that competed with SICOM.
12. Investors no longer perform duplicate functions such as sending two sets of statements to one customer or have two back-room offices.

13. TIFFE's trades totaled 19 million contracts, compared with 8.76 million contracts at SIMEX in the 12 months leading to February 1999.
14. The financial problems of Japanese banks in the mid-1990s, however, resulted in a drastic cutback in credit lines for speculative trading and a decline in the Euroyen volume.
15. The futures exchange project may not proceed as planned because of budget constraints. The government has set aside 70 million baht for the project. Two Japanese candidates, Mitsui and Fujitsu, have bid in excess of the stipulated amount (*The Nation*, 3/3/98).

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Abbreviations

ASX	Australian Stock Exchange
AP/ELS	Asia-Pacific extra liquid series
CBOT	Chicago Board of Trade
CFTC	Commodity Futures Trading Commission
CME	Chicago Mercantile Exchange
DTB	Deutsche Terminborse
GES	Gold Exchange of Singapore
HKFE	Hong Kong Futures Exchange
IPE	International Petroleum Exchange
JGB	Japanese Government Bonds
KLCE	Kuala Lumpur Commodity Exchange
KLCI	Kuala Lumpur Commodity Index
KLOFFE	Kuala Lumpur Options and Financial Futures Exchange
KLSE	Kuala Lumpur Stock Exchange
LIFFE	London International Financial Futures Exchange
MAS	Monetary Authority of Singapore
MATIF	Marché à Terme International de France
MOS	Mutual Offset System
NYMEX	New York Mercantile Exchange
OSE	Osaka Stock Exchange
SBF	Societe des Bourses Francaises
SEC	Securities Exchange Commission of Thailand
SES	Stock Exchange of Singapore
SET	Stock Exchange of Thailand
SFE	Sydney Futures Exchange
SICOM	Singapore Commodity Exchange
SIMEX	Singapore International Monetary Exchange
SOFFEX	Swiss Options and Financial Futures Exchange
TIFFE	Tokyo International Financial Futures Exchange
TOCOM	Tokyo Commodity Exchange
TSE	Tokyo Stock Exchange

Table 1: Futures and Options Contracts Currently Trades at SIMEX

Futures

Interest Rate Products

Three-Month Eurodollar*

Three-Month Euroyen TIBOR*

Three-Month Euroyen LIBOR*

Japanese Government Bond*

Equity Products

SIMEX MSCI Hong Kong Stock Index

SIMEX Dow Jones Thailand Stock Index

SIMEX MSCI Singapore Stock Index

SIMEX MSCI Taiwan Stock Index

Nikkei 225 Stock Index*

Nikkei 300 Stock Index

Commodity

Brent Crude Oil**

Options

Eurodollar

Euroyen

Japanese Government Bond

Nikkei 225 Stock Index

Nikkei 300 Stock Index

SIMEX MSCI Taiwan Index

Note: * Contracts traded on the SIMEX-CME Mutual Offset System.

** Contracts traded on the SIMEX-IPE Mutual Offset System.

Source: SIMEX website, May 1999

Table 2: SIMEX Annual Volume and Open Interest

Year	Futures	Options	Exchange Total	Open Interest
1984	145,907	—	145,907	1,335
1985	538,829	—	538,829	3,160
1986	875,556	—	875,556	18,678
1987	2,130,020	11,963	2,141,983	23,832
1988	2,789,333	83,335	2,872,668	35,025
1989	6,256,770	14,157	6,270,927	45,331
1990	5,645,430	75,180	5,720,610	67,031
1991	5,981,380	86,664	6,068,044	130,843
1992	11,818,786	361,388	12,180,174	255,533
1993	14,768,322	961,465	15,729,787	491,697
1994	22,383,719	1,676,555	24,060,274	749,976
1995	22,135,821	2,115,518	24,251,339	598,930
1996	21,751,494	817,051	22,568,545	650,969
1997	22,953,892	1,136,393	24,090,285	861,816
1998	26,337,972	1,523,190	27,861,162	688,959

Source: SIMEX website, 1999

Figure 1: The Growth of SIMEX

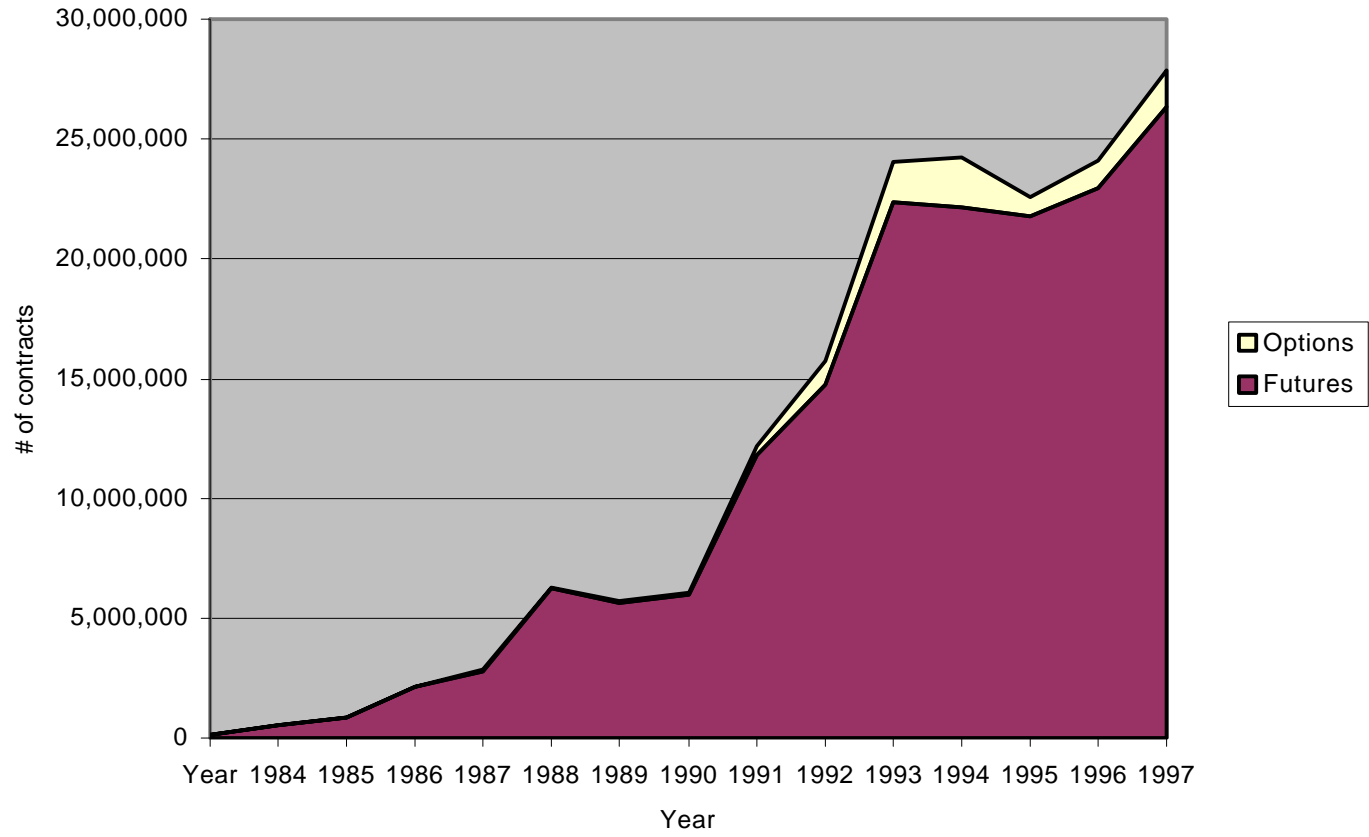


Table 3: Asia Pacific/Global Cooperation

Regional Exchange	Overseas/ Regional Exchange	Product	Co-operation
HKFE	PHLX	All PHLX options	Daylight trading via HKFE
SIMEX	CME	Eurodollar futures	Mutually Offsettable
SIMEX	CME	Nikkei 225 futures	Fungible contract for extended trading day
SIMEX	IPE	Brent futures	Mutually Offsettable
SIMEX	LIFFE	Euromark futures	Fungible contract for extended trading day
SIMEX	NYMEX	All NYMEX energy derivatives	Daylight trading via NYMEX ACCESS*
SIMEX	OSE	Nikkei 225 futures	Fungible contract for additional regional trading
SIMEX	TIFFE	Euroyen futures	Fungible contract for additional regional trading
SFE	NYMEX	All NYMEX energy derivatives	Daylight trading via NYMEX ACCESS, overnight trading via SFE SYCOM
SFE	NZFOE	All NZFOE derivatives	Daylight trading by SFE members
TIFFE	LIFFE	Euroyen futures	Creation of Euroyen contract offsettable by LIFFE members on TIFFE ^a
TSE	LIFFE	JGB futures	Fungible contract for extended trading day

Source: Erik Banks, *Asia-Pacific Derivative Markets*, 1996

^a Proposed

Table 4: Influence of Singapore Futures Markets on the Region

Japanese equity exposures	Tokyo Stock Exchange (TSE) Topix futures/options and warrants Osaka Stock Exchange (OSE) Nikkei 225/300 futures/options Nagoya Stock Exchange (NSE) Nagoya 25 options SIMEX Nikkei 225/300 futures/options
Australian equity exposures	Sydney Futures Exchange (SFE) All Ordinaries futures/options Australian Stock Exchange (ASX) Derivatives All Ordinaries Twenty Leaders or Gold Index options Australian Stock Exchange (ASX) warrants
Hong Kong equity exposures	Hong Kong Futures Exchange (HKFE) Hang Seng futures/options Stock Exchange of Hong Kong (SEHK) equity options and warrants SIMEX MSCI HKI futures/options
Short- or Long-term US interest rate exposures	Tokyo International Financial Futures Exchange (TIFFE) Eurodollar futures/options Tokyo Stock Exchange (TSE) US Treasury bond futures SIMEX Eurodollar futures/options
Short- or Long-term Japanese interest rate exposures	Tokyo Stock Exchange (TSE) Japanese Government Bond futures/options Tokyo International Financial Futures Exchange (TIFFE) Euroyen futures/options SIMEX Japanese Government Bond futures/options and Euroyen futures/options
Short- or Long-term Southeast Asian interest rate exposures	Malaysia Monetary Exchange (MME) KLIBOR futures Hong Kong Futures Exchange (HKFE) HIBOR futures Manila International Futures Exchange (MIFE) Philippine Treasury bill futures
US dollar/Japanese yen currency exposures	Hong Kong Futures Exchange (HKFE) rolling spot currency futures Tokyo International Financial Futures Exchange (TIFFE) currency futures Manila International Futures Exchange (MIFE) currency futures SIMEX deferred currency futures
Benchmark grade crude exposures	Sydney Futures Exchange (SFE)/New York Mercantile Exchange (NYMEX) light sweet crude futures SIMEX/International Petroleum Exchange (IPE) Brent crude futures
Benchmark grade rubber exposures	Kuala Lumpur Commodity Exchange (KLCE) rubber futures Tokyo Commodity Exchange (TOCOM) rubber futures Kobe Rubber Exchange (KRE) rubber futures Indonesian Commodity Exchange Board (ICEB) rubber forwards Singapore International Commodity Exchange (SICOM)
Gold exposures	Hong Kong Futures Exchange (HKFE) gold futures Tokyo Commodity Exchange (TOCOM) gold futures SIMEX gold futures

Source: Erik Banks, *Asia-Pacific Derivative Markets*, 1996

Note: The dominance of Singapore in the Asia-Pacific derivative markets can be inferred from the number of major cases of risk protection and speculative opportunity, which can be executed through Singapore, compared to its competitors in the region.

Table 5: SIMEX's Milestones Since Its Inception in 1984

7 September 1984	<ul style="list-style-type: none">• Official opening of the Singapore International Monetary Exchange (SIMEX) –Asia's first financial futures exchange.• Establishes world's first Mutual Offset System (MOS) with Chicago Mercantile Exchange (CME) for trading Eurodollar futures round-the-clock.
3 September 1986	Launches Nikkei 225 futures – world's first futures contract on the Japanese stock market.
22 February 1989	Launches High Sulphur Fuel Oil – first energy futures contract in the Asia-Pacific.
27 October 1989	<ul style="list-style-type: none">• Moves to bigger trading floor at heart of the Central Business District.• Named "International Exchange of The Year" by International Financing Review (IFR).• Total annual volume surpasses 10-million mark with 12,180,174 contracts.• Named "International Exchange of The Year" by IFR for the second time.
11 June 1992	Becomes the first exchange to trade on a national public holiday.
3 September 1993	<ul style="list-style-type: none">• Open interest surges past the 500,000 mark, to 508,070 contracts.• Named "International Exchange of The Year" by IFR for the third time.• Total annual volume surpasses the 20-million mark with 24,060,274 contracts.
1 September 1995	<ul style="list-style-type: none">• Opens New York office.• Total annual volume hits a record 24,251,339 contracts.
2 February 1996	Launches home page at www.simex.com.sg
6 March 1996	SIMEX Euroyen futures contract begins to trade around-the-clock on the SIMEX-CME Mutual Offset System.
15 March 1996	<ul style="list-style-type: none">• Signs international information sharing agreement for futures and options.• Launches the Automated Trading System (ATS) – an electronic extension of the normal open outcry trading session.
9 January 1997	Launches MSCI Taiwan Stock Index futures – world's first futures contract on the Taiwanese stock market.
24 June 1997	SIMEX signs a linkage agreement with Deutsche Terminbourse (DTB) to allow German futures contracts to be traded on SIMEX.
28 August 1997	Open interest surpasses one million mark, with 1,004,252 contracts.
21 October 1997	SIMEX and Tokyo Stock Exchange (TSE) signs an information sharing agreement allowing the two to exchange regulatory information and consult each other during emergencies.
21 January 1998	SIMEX can now trade on the Singapore Commodity Exchange, in line with developments in other major global financial centres.

16 February 1998	Opens new upper trading floor.
12 March 1998	Open Interest soars to record high of 1,171,211 contracts.
27 April 1998	Signs Licensing Agreement with Dow Jones to offer Dow Jones Malaysia and Thailand Stock Index contracts.
5 May 1998	SIMEX allows stockbrokers to sell stock index-linked futures contract traded on SIMEX.
7 September 1998	Launches MSCI Singapore Stock Index futures – world’s first futures contract on the Singapore stock market.
9 September 1998	Trading volume sets a single day record of 322,679 contracts.
September 1998	<ul style="list-style-type: none"> • Exchange’s monthly trading volume hits all-time high of 3,180,314 contracts. • Average daily trading volume soars to record high of 147,072 contracts.
2 November 1998	Launches Dow Jones Thailand Stock Index futures.
23 November 1998	Re-launch of MSCI Hong Kong Stock Index futures.

Source: SIMEX, January 1999

Table 6: Summary of Major Developments in Singapore's Futures Markets Since 1990

2 May 1990	SIMEX launches its revamped gold futures contract.
19 June 1990	SIMEX launches the world's first options on Euroyen futures contract.
21 June 1990	SIMEX launches Dubai crude oil futures contract.
20 September 1990	SIMEX launches three-month Euromark interest rate futures contract.
1 January 1991	SIMEX raises the minimum adjusted net capital of its clearing corporate members from \$3 million to \$4 million, and that of its non-clearing members from \$500,000 to \$1 million.
25 June 1991	SIMEX launches gas-oil futures contract.
28 February 1992	Among the tax changes announced in the 1992/93 budget is the clause requiring profits from SIMEX corporate members' spot transactions in designated currencies to be taxed at a concessionary rate of 10%.
19 March 1992	SIMEX launches options contract in Nikkei futures.
10 July 1992	SIMEX raises the minimum adjusted net capital of its corporate clearing members from \$4 million to \$5 million, and that of its corporate non-clearing members from \$1 million to \$2 million.
8 February 1993	MAS and Taiwan's Securities and Exchange Commission signs an agreement for Taiwanese investors to trade futures contracts on SIMEX by the end of 1993.
31 March 1993	SIMEX launches a new Hong Kong stock market futures contract, which is based on the Morgan Stanley Capital International (MSCI) Hong Kong Index.
14 June 1993	SIMEX lowers the margin requirements for trading on Nikkei futures.
1 July 1993	SIMEX raises the Singapore dollar-lending limit for offshore banks from the current \$70 million to \$100 million.
2 July 1993	SIMEX raises the initial minimum margin requirements for locals trading in Nikkei 225 futures from 1 million yen to 10 million yen.
1 November 1993	SIMEX launches two deferred spot currency instruments – the US\$/mark and US\$/yen contracts.
11 May 1994	SIMEX launches Long Term Japanese Government Bond futures contract.
27 September 1994	SIMEX and London's International Petroleum Exchange sign a letter of intent to trade in Brent crude futures under the mutual offset system.
3 February 1995	SIMEX launches the Nikkei 300 stock index futures.
9 June 1995	London's International Petroleum and SIMEX launch the joint Brent crude futures contract.

6 March 1996	SIMEX and the Chicago Mercantile Exchange expand their mutual offset system to cover Euroyen futures.
15 March 1996	SIMEX launches its automated trading system.
2 January 1997	The Futures Trading Act (Amendment) takes effect. Under the new regulations, futures brokers have to ensure that their adjusted net capital does not fall below \$2 million (previously \$1.5 million) for four consecutive weeks.
9 January 1997	The Singapore International Monetary Exchange (SIMEX) launches its Taiwan stock index futures.
16 January 1997	MAS and Hong Kong's Securities and Futures Commission sign a pact to work closely together on the regulation of securities, futures, and options trading.
24 June 1997	SIMEX signs a linkage agreement with Deutsche Terminbörse to allow German futures contracts to be traded on SIMEX
11 October 1997	Trading on MSCI Taiwan index futures on SIMEX is extended from the floor pits to the computer screen, in which the Taiwan index futures contracts are listed for after-hours trading on the Automated Trading System.
21 January 1998	SIMEX members can now trade on the Singapore Commodity Exchange, in line with developments in other major global financial centres.
9 February 1998	SIMEX frees its minimum commission rates on all its remaining futures contracts — the Nikkei 225, the Nikkei 300, the Japanese government bond and fuel oil contracts.
27 February 1998	The 1998/1999 Budget provides tax incentives for the financial sector: tax holiday for SIMEX extended again, to year 2003; tax incentives for venture capital funds to be extended on a case-by-case basis by up to a further 5 years beyond the current maximum of 10 years.
5 May 1998	SIMEX allows stockbrokers to sell stock index-linked futures contracts traded on SIMEX.
2 November 1998	SIMEX launches the new stock index futures contract based on the Thai market.
22 February 1999	SIMEX launches Euroyen LIBOR futures contract.

Source: MAS annual reports, *1990/91, 91/92, 92/93, 93/94, 94/95, 95/96, 96/97, 97/98*

Table 7: Summary of Major Developments in the Asia-Pacific Futures Markets

1960:

Sydney Futures Exchange (SFE) established.

1979:

The SFE becomes the first Asia-Pacific futures exchange to launch a financial contract.

1984:

Birth of SIMEX, with a special linkage with the Chicago Mercantile Exchange (CME).

1985:

Japan re-enters the futures market when the Tokyo Stock Exchange (TSE) launches its successful 10-year Japanese Government Bond contract.

New Zealand Futures Exchange opens.

1986:

Hong Kong Futures Exchange (HKFT) restructures to accommodate financial futures by listing stock index futures.

Competition starts to heat up, particularly the rivalry between SIMEX and the SFE.

1987:

May: gradual liberalization of Japanese futures trading initiated. Japanese firms now are allowed to trade in overseas futures and options markets for their own accounts. Orders begin to flow to the regional market.

June: Osaka Securities Exchange (OSE) opens.

October: international stock market slump, following crash of American markets, puts a brake on futures trading but stimulates interest in futures as a risk management instrument, especially in equity investments.

1988:

Year of revival for many exchanges, as SFE, SIMEX, TSE, and OSE; all set trading volume records and international investors resume active trading.

1989:

Tokyo International Financial Futures Exchange (TIFFE) opens.

1991:

Kuala Lumpur Options and Financial Futures Exchange (KLOFFE) opens.

1992:

Malaysia Monetary Exchange (a subsidiary of KLOFFE) launched.

1997:

January: SIMEX launches the MSCI Taiwan Stock Index futures to manage risk on the Taiwan stock market.

A total of 24,090,285 contracts were traded in 1997, the second highest volume in the history of the exchange (6.7percent increase from 1996), making SIMEX one of the world's top 15 futures exchanges.

Year-end open interest hits new peak of 861,816 contracts (record breaking – 14.9percent more than the previous year-end record set in 1994).

Asia's financial crisis begins to ravage many economies in the region.

1998

May: SIMEX adds the 10-year Japanese government bond futures to Mutual Offset System (MOS) with the CME.

SIMEX launches more Asian equity index futures — MSCI Singapore stock index futures (August) and futures contracts based on the Dow Jones Malaysia and Thailand stock indexes (November)

Table 8: Singapore International Monetary Exchange: Turnover and Open Interest (Futures and Options)

Contracts

		Total Turnover			Average Daily Turnover			Open Interest		
		Total	Total	Total	Total	Total	Total	Total	Total	Total
		For The Period						End of Period		
		1=2+3	2	3	4 = 5 + 6	5	6	7 = 8 + 9	8	9
1994		24,060,274	22,383,719	1,676,555	94,776	87,905	6,871	749,976	523,629	226,347
1995		24,251,339	22,135,821	2,115,518	95,918	87,441	8,477	598,930	429,660	169,270
1996		22,568,545	21,751,494	817,051	87,859	84,597	3,262	650,969	539,587	111,382
1997		24,090,285	22,953,892	1,136,393	94,035	89,516	4,519	861,816	683,617	178,199
1998		27,861,162	26,337,972	1,523,190	108,961	102,936	6,025	688,959	556,545	132,414
1997	APR	1,902,189	1,807,414	94,775	87,198	82,759	4,439	818,226	666,280	151,946
	MAY	2,458,937	2,347,686	111,251	112,461	107,256	5,205	899,488	724,151	175,337
	JUN	2,078,379	1,982,842	95,537	98,786	94,237	4,549	775,061	638,861	136,200
	JUL	1,766,665	1,687,152	79,513	77,291	73,785	3,506	844,027	687,528	156,499
	AUG	2,068,266	1,964,144	104,122	98,095	93,141	4,954	1,025,797	816,566	209,231
	SEP	1,976,284	1,892,981	83,303	92,000	88,043	3,957	923,229	748,606	174,623
	OCT	2,546,263	2,447,465	98,798	111,641	107,224	4,417	1,045,046	827,065	217,981
	NOV	2,150,415	2,051,164	99,251	109,835	104,566	5,269	1,122,688	863,092	259,596
	DEC	1,921,258	1,791,949	129,309	86,267	80,394	5,873	861,816	683,617	178,199

Table 8 Singapore International Monetary Exchange: Turnover and Open Interest (Continued)

1998	JAN	2,135,408	2,057,940	77,468	105,079	101,141	3,938	901,508	708,757	192,751	
	FEB	1,977,369	1,849,980	127,389	99,492	93,015	6,477	1,014,291	779,087	235,204	
	MAR	2,345,887	2,152,126	193,761	106,203	97,400	8,803	924,284	698,371	225,913	
	APR	2,042,076	1,892,810	149,266	95,121	88,130	6,991	1,006,817	752,431	254,386	
	MAY	1,954,543	1,829,320	125,223	94,849	88,564	6,285	1,145,471	846,494	298,977	
	JUN	2,873,544	2,703,976	169,568	129,946	122,247	7,699	977,644	761,088	216,556	
	JUL	1,927,165	1,807,739	119,426	84,501	79,197	5,304	1,040,629	786,715	253,914	
	AUG	2,559,881	2,438,226	121,655	120,915	115,147	5,768	1,144,779	842,402	302,377	
	SEP	3,180,314	3,066,568	113,746	147,072	141,594	5,478	968,310	724,009	244,301	
	OCT	2,924,604	2,775,790	148,814	132,275	125,516	6,759	1,000,644	728,900	271,744	
	NOV	2,136,008	2,018,191	117,817	103,774	97,849	5,925	1,007,981	717,895	290,086	
	DEC	1,804,363	1,745,306	59,057	81,819	79,055	2,763	688,959	556,545	132,414	
1999	JAN	1,882,274	1,793,150	89,124	94,773	90,135	4,638	754,361	584,523	169,838	
	FEB	1,988,551	1,832,681	155,870	109,455	101,302	8,153	928,589	694,543	234,046	
	MAR	2,576,511	2,405,831	170,680	113,170	105,437	7,733	892,329	678,611	213,718	
	APR	1,766,518	1,648,112	118,406	81,148	75,521	5,627	955,242	750,406	204,836	

Source: Simex website, 1999

Table 9: MAS Chronology

1970

The Monetary Authority of Singapore Act establishes MAS in September, with the power to act as banker and financial agent to the government, and the responsibility of promoting monetary stability, and credit and exchange policies to support the growth of the economy.

1971

MAS officially starts operations on 1 January 1971.

1972

The Monetary Authority of Singapore (Amendment) Act 1972 further enables MAS, *inter alia*, to act as lender of last resort.

1973

The Association of Banks in Singapore (ABS) is inaugurated, as is the Securities Industry Council, which offers advice on the administration of the Companies Act and the Securities Industry Act.

The Singapore Dollar is floated and exchange and investment controls are liberalized to allow residents greater freedom, and to encourage the development of financial services to non-residents.

1975

The Singapore Merchant Bankers' Association is formed.

1976

Exchange rate controls are further liberalized.

1978

MAS removes all exchange controls and allows merchant banks to deal in gold and foreign exchange.

MAS allows offshore banks to offer credit to Singapore residents.

The Gold Exchange of Singapore starts operations.

1979

Singapore's first Automated Teller Machine (ATM) goes into operation.

1982

The Automated Cheque Clearing House starts operations.

1983

The Gold Exchange of Singapore reaches an agreement with the Chicago Mercantile Exchange to develop a financial futures market in Singapore.

The Gold Exchange restructures itself into the Singapore International Monetary Exchange (SIMEX) and launches futures trading.

1984

The Monetary Authority of Singapore (Amendment) Act 1984 gives MAS wider powers to regulate the financial system and provide banking and advisory services to the government. MAS also takes over the responsibility for administering the Securities Industry Act 1973.

The Automated Cheque Clearing House launches the Interbank Giro System.

1986

Electronic Funds Transfer at Point of Sale (EFT-POS) is launched.

1987

The Stock Exchange of Singapore Dealing and Automated Quotation System (SESDAQ) opens.

1995

Members of the Central Provident Fund (CPF) are allowed to invest in overseas stocks.

1998

In February, the Government announces a major reform of the Singapore financial sector in order to create more depth and opportunities in the financial sector, with the aim of establishing Singapore as a world-class financial sector.

The Monetary Authority of Singapore (Amendment) Act 1998 increases the MAS Board from 7 to 10 members, and establishes financial sector promotion as a main objective of the Authority, alongside its supervisory role.

Source: MAS annual reports

Table 10: Asia-Pacific Equity Market Capitalisation

Country	1990	1991	1992	1993	1994
Australia	140.9	186.9	281.0	342.2	323.6
China	0.0	2.0	18.3	40.6	43.5
Hong Kong	83.4	122.0	172.1	385.2	269.5
India	38.6	47.7	65.1	98.0	127.5
Indonesia	8.1	6.8	12.0	33.0	47.2
Japan	2,917.7	3,130.9	2,399.0	2,999.8	3,719.9
Malaysia	48.6	58.6	94.0	220.3	199.3
New Zealand	8.8	14.3	15.3	25.6	27.2
Philippines	5.9	10.2	13.8	40.3	55.5
Singapore	34.4	47.6	48.8	132.7	134.5
South Korea	110.6	96.4	107.4	139.4	191.8
Taiwan	100.7	124.8	101.1	195.1	247.3
Thailand	23.9	35.8	58.3	130.5	131.5
Total (US\$ bn)	3,521.5	3,884.0	3,386.2	4,782.7	5,518.3

Source: World Bank, 1995

Table 11: Current Products Traded at HKFE

Equity Index Products
Hang Seng Index Futures
Hang Seng Index Options
Hang Seng 100 Futures
Hang Seng 100 Options
Hang Seng China-Affiliated Corporations Index Futures (Red-Chip Futures)
Hang Seng China-Affiliated Corporations Index Options (Red-Chip Options)
Hang Seng Properties Sub-index Futures
Hang Seng Properties Sub-index Options
HKFE Taiwan Index Futures
HKFE Taiwan Index Options

Equity Products
Stock Futures
Cheung Kong (Holdings) Limited Futures
China Resources Enterprise, Limited Futures
China Telecom (Hong Kong) Limited Futures
CITIC Pacific Limited
CLP Holdings Limited Futures
Hang Seng Bank, Limited Futures
Henderson Land Development Company Limited Futures
Hong Kong Electric Holdings Limited Futures
Hong Kong Telecommunications Limited Futures
Hopewell Holdings Limited Futures
HSBC Holdings plc. Futures
Hutchison Whampoa Limited Futures
New World Development Company Limited Futures
Shanghai Industrial Holdings Limited Futures
Sun Hung Kai Properties Limited Futures
Swire Pacific Limited "A" Shares Futures
The Wharf (Holdings) Limited Futures

Interest Rate Products
One-Month HIBOR Futures
Three-Month HIBOR Futures

Currency Products
Rolling Forex

Source: Hong Kong Futures Exchange website, 1999

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