

A CONSULTATION PAPER

ON THE REGULATION OF

ON-LINE TRADING OF SECURITIES AND FUTURES

December 2000

TABLE OF CONTENTS

A.	INTRODUCTION.....	1
B.	THE WORK OF THE COMMISSION TO DATE	2
C.	FINDINGS.....	3
	IMPORTANCE OF ON-LINE TRADING	3
	CHARACTERISTICS OF ON-LINE TRADING	4
	HONG KONG MARKET SYSTEMS	8
	<i>HKATS</i>	9
	<i>AMS/3</i>	9
	<i>CCASS</i>	11
	HONG KONG ON-LINE BROKERS	11
	MARKET CHARACTERISTICS OF THE HONG KONG ON-LINE TRADING ENVIRONMENT	13
	PROSPECTS FOR ON-LINE TRADING IN HONG KONG	15
D.	REGULATORY AND POLICY ISSUES WITH REGARD TO ON-LINE TRADING.....	16
	REGULATORY APPROACH AND GUIDANCE NOTE DEFINITIONS.....	16
	KEY REGULATORY ISSUES	17
	INVESTOR PROTECTION	17
	<i>Client Identification</i>	18
	<i>Client Agreements</i>	19
	<i>Suitability</i>	20
	<i>Privacy</i>	21
	<i>Client Priority</i>	22
	<i>Disclosure to Clients</i>	22
	<i>Record Keeping</i>	29
	<i>Investor Education</i>	30
	OPERATIONAL STANDARDS.....	30
	(i) <i>System Integrity</i>	30
	(ii) <i>Qualified Personnel</i>	35
	ELECTRONIC INITIAL PUBLIC OFFERINGS (“EIPO”).....	36
APPENDIX 1.....	37	
	TERMS OF REFERENCE	37
APPENDIX 2.....	39	
	MEMBERS OF ON-LINE TRADING WORKING GROUP.....	39

A. Introduction

1. In line with the development of Hong Kong as a premier financial centre and in view of the impact of on-line trading upon the financial services industry, the Securities and Futures Commission of Hong Kong (“SFC” or “Commission”) set up an On-line Trading Working Group (“Working Group”).
2. The Working Group’s remit was to study the growth of the on-line trading market, identify any impediments to its progress and make recommendations to facilitate its development in Hong Kong. Its Terms of Reference are set out in **Appendix 1**.
3. Sections A and B of this Paper set out the Working Group’s Terms of Reference and the Commission’s work to date on the topic. The findings of the Working Group’s study of on-line growth are found in Section C. Section D sets out the regulatory issues that were identified as a result of this study, as well as a number of recommendations concerning the manner in which these issues might be managed.
4. Any person wishing to comment on the recommendations is asked to do so in writing. Comments should be received by the SFC prior to the close of business on Friday, 16 February 2001 and should be addressed to

Securities and Futures Commission
12th Floor, Edinburgh Tower
The Landmark
15 Queen’s Road Central
Hong Kong

Attn : Supervision of Markets Division

Comments may also be provided by e-mail to onlinetradeconsult@hksfc.org.hk. This Paper is also available on the SFC website at <http://www.hksfc.org.hk>.

5. The Working Group is composed of a number of industry professionals and staff from other financial service bodies (including HKEx, the HKMA and the SFC) who have been drawn upon to contribute their expertise and experience in this area. A list of participants is set out in **Appendix 2**.
6. The issues raised in this paper are specifically applicable to the retail market and have arisen in part from the discussions with the Working Group.
7. In conjunction with the issues raised in the Working Group and other work carried out by the SFC, interviews were also conducted with a number of on-line trading organisations about their strategies. Discussions focussed on their expansion plans, system requirements, difficulties experienced in establishing an on-line business in Hong Kong, as well as any regulatory concerns.
8. Work undertaken by other regulatory authorities overseas is also taken into account in this Paper. It is unlikely that Hong Kong will develop in exactly the same manner as overseas markets, but the overseas experience may be relevant. Particular

attention has been paid to the experience of the United States (“US”) and centres in Asia.

9. “On-line Trading” for the purposes of the Working Group and this paper is defined as “the use of the Internet, mobile devices including telephones, Wireless Application Protocol (“WAP”)¹ or a combination thereof, to buy, sell or offer financial products”. Automated Trading Systems are largely beyond the scope of this Paper.
10. The Working Group is aware that the SFC has already issued a number of guidance notes, circulars and guidelines for the broking industry on this topic. Therefore, the recommendations which are put forward in Section D of this paper generally relate to the clarification and/or enhancement of existing guidance.

B. The Work of the Commission To Date

11. The SFC continues to work actively to address issues relating to on-line trading. The Code of Conduct for Persons Registered with the Securities and Futures Commission (“Code of Conduct”) and the Management, Supervision and Internal Control Guidelines for Persons Registered with or Licensed by the Securities and Futures Commission (“Internal Control Guidelines”) form the basic regulatory framework for dealing in securities and futures. However, the SFC has additionally issued a number of guidelines, codes and consultation papers specifically on Internet trading issues, including the following:
 - (i) Guidance Note on Internet Regulation (“Guidance Note”) (issued in June 1999);
 - (ii) Circular on Licensing Requirements for the Provision of Financial Information on the Internet (issued in June 2000);
 - (iii) Circular to All Registered and Licensed Firms on Internet Trading and Advising (issued in July 2000);
 - (iv) Guidelines for Registered Persons Using the Internet to Collect Applications for Securities in an Initial Public Offering (“eIPO Guidelines”) (issued in July 2000);
 - (v) Guidance Note on the Application of the Electronic Transactions Ordinance to Contract Notes (issued in August 2000); and
 - (vi) Consultation Paper on a CIS Internet Guidance Note (Guidance Notes for Persons Advertising or Offering Collective Investment Schemes on the Internet) (issued in November 2000).
12. In addition, the SFC also initiated the formation of the Working Group, whose discussions contributed considerable substance to this Paper.
13. A number of SFC initiatives have operated in tandem with the work of the Working Group. SFC issued a “Questionnaire on the Use of On-line Facilities for Trading Purposes” to 844 securities and commodities dealers, which asked for details of

¹ The SFC notes that WAP applications are not strictly "on-line" applications but have been included in this description due to the similarity in the functions offered by both mediums.

their businesses as at the end of April 2000. Companies were requested to indicate whether they had current on-line trading operations, the general nature of those operations and whether they were planning to provide on-line trading services in the next 12 months. The results of this survey were published in July 2000.²

14. In addition to the survey, the SFC, with the assistance of a consulting firm also undertook a special inspection program focusing on on-line trading issues particularly in areas of investor protection, business conduct, and operational standards.

C. Findings

Importance of On-line Trading

15. The members of the Working Group, as well as the brokers interviewed identified major advantages and disadvantages of on-line trading. In addition, the SFC researched the developments in other jurisdictions.
16. The major advantages of on-line trading include:
 - (i) **Cost.** On-line trading has reduced operating costs for brokers. Traditionally, personnel costs have been the largest expense for a brokerage. The on-line broker is able to reduce its costs by utilising an electronic environment and may pass the savings to the investor by way of lower commission rates. In various markets, commission price wars have been initiated to gain on-line market share and these have also contributed to lower transaction costs. In the US, the commission charged by on-line brokers typically varies between two and eight percent of a full-service broker's cost³ and these commission rates continue to be very competitive. In South Korea, as a result of ongoing price wars commission rates have dropped to as low as 0.029% of the value of the transaction as opposed to fees of 0.5% that traditional brokers charge⁴.
 - (ii) **Convenience and round-the-clock trading.** Trading is no longer restricted by the opening hours of the exchange or the time zone. On-line trading enables investors to trade globally up to 24 hours a day and 7 days a week. Approximately 40% of on-line orders in the US come in after market hours.⁵ WAP and other hand-held trading devices also increase the convenience of trading.
 - (iii) **Best execution & prompt confirmation.** With on-line trading, an investor may receive confirmation of an executed trade within seconds. A number of on-line trading firms in the US are beginning to offer execution choices to

² "Survey on the Use of On-line Facilities for Trading Purposes by Dealers Registered with the Commission" as at 30 April 2000 at <http://www.hksfc.org.hk>.

³ "Online Trading Quarterly" Credit Suisse First Boston - June 1999 and "Internet Broking: Unstoppable" JP Morgan - 3 August 1999

⁴ "A Piece of the Action" – Asia Week – 24 March 2000

⁵ "Lehman Brothers - Asian Online Broking" - 25 October 1999

ensure best execution. This greatly improves an investor's flexibility when trading the market and reduces associated risks and disadvantages.

- (iv) **Availability of market information.** Free or very low cost information is openly available through various Internet websites and portals. This information includes real time quotes, news, company information, research and analysis, and market commentary.

17. The identified challenges of on-line trading include:

- (i) **Information.** While more financial information is offered to investors, the accuracy and reliability of the information cannot be guaranteed. Investors must be educated to distinguish factual information from speculation, rumour or potentially misleading statements. Developing regulation may hold on-line brokers responsible for information found on their websites.
- (ii) **Reliability.** On-line service outages and delays are a major cause of client frustration. In the May 2000 Report of the US Government Accounting Office ("GAO Report")⁶ it was reported that the most frequent complaint that the Securities and Exchange Commission ("SEC") receives is related to investors having difficulty accessing on-line trading accounts.
- (iii) **Security.** Security is one of the foremost concerns of investors in deciding whether to go on-line.⁷ Whilst many sites have been tested and appropriate security systems implemented, hackers and other parties are constantly attempting to break security codes, passwords and other authentication measures to access company and customer information.
- (iv) **Privacy.** Privacy issues are also among the primary investor concerns related to on-line trading, particularly in the US and Europe. According to a recent survey by a technology consultancy, only 10% of European sites post privacy policies even though 68% of these sites collect information from their customers.⁸

Characteristics of On-line Trading

18. Through discussions with the members of the Working Group and interviews with on-line brokers, the following trends and market characteristics relating to the future of on-line trading have been identified:

- (i) The characteristics of on-line trading differ markedly from those of traditional trading;
- (ii) There is evidence that on-line trading is encouraging greater globalisation as well as local diversification;
- (iii) The overseas experience has been that price competition driven by on-line trading reduces the costs of executing transactions;

⁶ US Government Accounting Office website - <http://www.gao.gov/new.items/gg00043.pdf>

⁷ SFC Bulletin - Issue No. 38 - *October-December 1999* - "A Survey of Online Trading" - p12

⁸ "Challenges to the Network: Internet for Development" - http://www.itu.int/ti/publications/INET_99

- (iv) On-line broking has the potential to grow very quickly once a critical mass is reached;
 - (v) Asian on-line broking development varies from country to country.
19. These issues are discussed in detail below. The stages of development in other Asian countries, in particular Korea and Japan, in the field of on-line broking are also examined. Finally, the potential for the growth of on-line-broking in Hong Kong is considered.
 20. The characteristics of on-line trading differ markedly from those utilizing traditional media. These differences may in part be explained by the technological (and therefore capital) requirements of on-line trading and by the requirements of the customers. Successful on-line trading is heavily dependent upon maintaining cutting edge technology. The development of such technology is complex and time-consuming and economies of scale are large. As a result, the on-line market has evolved in a highly concentrated manner. In South Korea, for example, the top five brokers account for approximately 95% of the on-line market.⁹ Similarly, although there are over 160 firms offering on-line trading services in the US, the top 10 on-line brokers together accounted for 91.7% of the total on-line trading volume in late 1999.¹⁰ Other factors that contribute to the success of on-line trading include: “first-mover” advantages, the existence of creative entrepreneurs, growth of Internet companies etc.
 21. On-line brokers are expanding quickly overseas from their home markets. US based on-line brokers have introduced their models in Europe and Asia. Hong Kong based on-line brokers have targeted US and European customers. Cross-border business often requires research and educational materials to be available in different languages. Websites are often originated in English and are ‘regionalised’ with local languages and content as the service develops.
 22. The overseas experience has been that price competition reduces the costs of executing transactions. On-line brokers both in the US and Korea have had commission “price wars” to gain market share, but, as weaker dealers exit or are forced to merge with other market participants, commissions have stabilised. The US, for example, liberalised its brokerage commission structure in 1975. Although some brokers do not charge for executing transactions, they recoup their costs by selling other products or through handling fees. Most on-line dealers do charge commissions for offering a wide variety of services such as research tools, charts and information and they offer prompt service. Research performed by some of the brokers interviewed has shown that customers are willing to pay higher commissions for better services.
 23. The American and Korean experience indicates the potential for growth of on-line trading in Hong Kong, given the right conditions. The US was the first mover in the area of on-line trading. On-line trading volumes accounted for 37% of all retail trades for the first half of 1999, up from 30% the year before.¹¹ As of first quarter

⁹ "Lehman Brothers - Asian Online Broking" - 25 October 1999

¹⁰ US Bancorp Piper Jaffray - Bloomberg - 8 November 1999

¹¹ "On-Line Brokerage: Keeping Apace of Cyberspace" by Laura Unger, SEC Commissioner:
<http://www.sec.gov/pdf/cybrtrnd.pdf> - p15

2000, on-line trades make up to 38% of total trades on Nasdaq and NYSE, a 23% increase from fourth quarter 1999.¹² In 1998 only about 10% of US investors traded on-line. One year later, that number nearly doubled to 18%. The number of on-line accounts in the US has also steadily climbed in the last few years, from 3.7 million in 1997, to 7.3 million in 1998, and to 9.7 million by the first quarter of 1999.¹³ From January to March 2000, on-line brokerages in the US added more than 3 million new customer accounts, bringing the total to about 15 million on-line accounts holding over US\$1 trillion in assets.¹⁴ Although analysts disagree over how many on-line accounts there will be in the next three years in the US, at least one predicts that on-line brokerage assets will reach over US\$3 trillion by 2003.¹⁵ In Asia, Korea was a first mover and on-line trading has experienced extraordinary growth in that country.

24. Asian on-line broking development varies considerably by country. Whilst Korea has the highest percentage of on-line trading in relation to the total market in Asia, on-line trading is still in its infancy in China, Thailand, the Philippines and Indonesia. In Japan, most of the major brokers are introducing on-line broking to maintain their customer base following the deregulation of commission rates.¹⁶ Specific observations on the development of on-line trading in Korea and Japan are summarised as follows:

Korea

- (i) The Korean brokerage industry affords a good regional study of how the Internet may affect investors, the stock market and the financial system. A number of factors, such as government support, deregulation of commissions, the rise in Internet companies and creative entrepreneurs as well as the creation of a Korean “Silicon Valley” contributed to the explosive growth in on-line trading in the country.
- (ii) Korean brokers were the first brokers in Asia to introduce on-line trading to their clients. All of the large local brokers launched on-line services between 1997 and 1998, and, in the wake of a price war, commission rates were as low as 0.029% in late March 2000.¹⁷ The market share of on-line equity trading has seen explosive growth, rising from five trillion Won in 1998 to 111 trillion Won in the first seven months of 1999 at the top five domestic brokerage houses.¹⁸ Recent figures show that on-line trading represented approximately 61% of the total trading volume in Korea in July 2000, an increase of 338 times since January 1998.¹⁹

¹² Statistics from Salomon Smith Barney – as of 29 February 2000

¹³ "On-Line Brokerage: Keeping Apace of Cyberspace" by Laura Unger, SEC Commissioner: <http://www.sec.gov/pdf/cybrtrnd.pdf> - p12

¹⁴ Salomon Smith Barney Report – *Data as of 29 February 2000*

¹⁵ Press release “US consumers to more one-third of investment dollars on-line by 2005”, Jupiter Research – 3 October 2000 – <http://www.jup.com>

¹⁶ “Lehman Brothers – Asian Online Broking – 25 October 2000 – p10

¹⁷ “A Piece of the Action”, Asia Week – 24 March 2000

¹⁸ "Lehman Brothers - Asian Online Broking" - 25 October 1999 - p12

¹⁹ "Monthly Online Securities Trading for July" from *Portfolio Korea* website - The Korea Securities Dealers Association (KSDA) - <http://www.ksda.or.kr/portfoliokorea/online/july/index.htm>

- (iii) The first movers in on-line broking in Korea were all large traditional securities companies and while the on-line trading market in Korea grew by more than 30 times between 1998 and 1999, smaller players have not been able to capture market share from the major brokers. The five major players had 95% of on-line turnover in 1999.²⁰
- (iv) Broking accounts in Korea grew, in absolute terms, by 7.9 times from the end of 1998 to November 1999. On-line account percentages also grew substantially during this time, from 6% of total accounts at the end of 1998 to 24.6% by November 1999.²¹
- (v) Market turnover has increased substantially in Korea since the beginning of 1999. The ratio of total annualised market turnover (3-month moving average) to market capitalisation of the Korea Stock Exchange increased from 175% at the beginning of 1998 to 328% as of November 1999. On the KOSDAQ, which caters to smaller companies, annualised turnover rose as high as 11 times market capitalisation, making it the most actively traded market in the world.²²
- (vi) Currently, Korean brokers face pressure on the revenue side from falling commission rates and pressure on the cost side due to rising expenditure. On-line broking requires large investments in research, systems support and advertising. Only brokers with sufficient amounts of capital backing have been able to afford these investments and a number of the smaller brokers are merging.
- (vii) Price discounting in Korea began with small- and medium-sized brokers in September 1998. The large securities companies, fearing loss of market share, decided to cut their commission rates for on-line trading by 50% to 25 basis points in May 1999. Two months later, all major brokers further reduced on-line commission rates by another 70%.²³ In May 1999, on-line trading volume for the first time went beyond 10% of market turnover as a 50% discount was introduced; and surged to 22% in July 1999 when commission rates were reduced again.²⁴ On-line commission rates currently remain between 0.029% to 0.1% of the total value of the transaction.

Japan

- (i) Retail investors in Japan benefited from a sharp decline in commission rates following their deregulation on October 1, 1999. The deregulation spurred the launch of several new pure on-line brokers. The shift from a laborious licensing system to a simple registration procedure for brokerages in December 1998 is also considered a major force facilitating on-line development in Japan.²⁵

²⁰ "Lehman Brothers - Korea's Online Brokers" - 6 March 2000 - p13

²¹ "Lehman Brothers - Korea's Online Brokers" - 6 March 2000 - p4

²² *op. cit.*, p5

²³ *op. cit.*, p10

²⁴ *op. cit.*, p7

²⁵ "Lehman Brothers - Asian Online Broking" - 25 October 1999 - p23

- (ii) The Japan Securities Dealers Association issued its “*Guidelines of the Internet Trading*” in October 1999. These are basically guidelines that on-line brokers should follow in order to avoid difficulties with their customers.²⁶
- (iii) The Tokyo Stock Exchange also recently produced “*Guidelines for the Internet Investors*” which are aimed at educating investors and include information on basic stock trading and the securities markets. These guidelines also provide a basic explanation of Internet trading and some advice on how to avoid some of the troubles experienced in the US on-line trading market.²⁷

Hong Kong Market Systems

- 25. The SFC survey reported that Hong Kong’s current on-line trading is heavily focused in overseas securities, mainly US securities. In April 2000, on-line brokers in Hong Kong reported that they traded approximately HK\$6,328 million in overseas securities, primarily US securities. The on-line trading of Hong Kong securities amounted to HK\$2,406 million during the same period, which was 1.3% of the overall Hong Kong market turnover.
- 26. One reason behind the Hong Kong securities dealing figures being low as compared to the trading of US securities may be the relative inaccessibility of the Hong Kong market compared to the US market. One on-line broker interviewed commented that he could transact orders far faster in the US market than he could in the Hong Kong market. Also market participants may simply be waiting for full implementation of the Automatic Order Matching and Execution System (“AMS/3”) to fully utilise the Hong Kong securities market.
- 27. The most common reason given as to why on-line trading in Hong Kong has not yet seen an exponential increase in securities trading and why it is not considered a ‘real’ on-line trading market is the excessively manual nature of the current trading cycle. Currently, when a client keys in a trade via their personal computers and sends the order to the on-line broker, the order must then be manually input by the broker for it to be sent through the terminal and executed on the Stock Exchange of Hong Kong (“SEHK”). Once execution has been confirmed by the SEHK back to the broker, the broker may have to re-key the confirmed transactions. The first time for clearing and settlement purposes to Hongkong Clearing as well as a second time for confirmations and contract notes to be sent to the client.
- 28. A number of projects are currently being undertaken to remedy the manual nature of the trading cycle. The following discussion sets out the most recent developments to address these issues, including the introduction of the Hong Kong Futures Automated Trading System (“HKATS”), the development of AMS/3; and CCASS as well as the readiness of brokers.

²⁶ "Lehman Brothers - Asian Online Broking" - 25 October 1999 - p26

²⁷ *ibid.*

HKATS

29. The introduction of the HKATS system, the dismantling of the Hong Kong Futures Exchange Ltd. (“HKFE”) floor and the migration of the futures products to an electronic platform makes Hong Kong more attractive as a centre for on-line trading. The HKATS system was fully implemented in June 2000 and allowed all of the HKFE’s products including the Hang Seng Index Futures to be traded electronically, thus ensuring better transparency and best execution standards.

AMS/3

30. AMS/3 is the third generation of the Automatic Order Matching and Execution System of the SEHK. The majority of the brokers interviewed as well as the members of the Working Group recognise that the implementation of the new system will enable investors to trade on-line via brokers and expect that this may spur growth in the market.
31. The AMS/3 system architecture allows for a direct interface between brokers’ own systems and AMS/3. It can support trading for over 20 hours a day as well as trading in multiple markets. Investors will be able to place orders through the Internet, cellular phone and other proprietary technology. Brokers, who use Internet technology to collect orders, will no longer be required to re-enter clients’ orders into the system, paving the way for the future implementation of straight through processing.
32. The key differences between AMS/3 and the AMS/2 system are:
- (i) When compared with AMS/2, the new AMS/3 system has more extensive capabilities in a number of areas, including the capability of trading in multiple markets, new trading methods, new order types, broker trading facilities and new investor access channels.
 - (ii) Brokers who choose to use on-line technology to collect order flow and transmit it to the AMS/3 system will not be required to re-enter client’s orders into the system. However they may still be required to re-enter the details for the purposes of clearance, settlement, confirmations and contract note generation, depending on the types of Brokers’ Supplied Systems (“BSS”) developed and used by brokers.
33. The main features of the new AMS/3 system that are relevant to on-line trading are as follows:
- (1) Broker Access
 - (i) Brokers may access the Trading Host either through the AMS/3 trading terminals or through an Open Gateway connection.
 - (a) The *AMS/3 trading terminals* are standalone terminals that are similar to the existing AMS/2 terminals. Each trading right allows for one on-

floor trading terminal in the Trading Hall and one off-floor terminal usually located in the offices of the brokers.

(b) Brokers may opt for the *Open Gateway approach*, which is a network communications device installed at the broker's office, to provide an electronic linkage between the trading host system and the broker's trading system. Within the Open Gateway, brokers may select from two separate systems that will act as its broker trading system: the Multi-Workstation System ("MWS") or BSS.

- *MWS trading workstations* are developed by the Exchange and have been designed to support multiple users and remote access to the trading system. MWS has the capability for multi-window concurrent execution of various trading functions (e.g. enquiries of stock prices and approval of investors' trading requests), and to capture electronic trading requests from investors and automatically generate notification of trading results to investors. In addition, the system has quoted processing facilities as well as data import/export functions to support data exchange with the broker's back office systems.
- *BSSs* are the systems that have been developed by individual brokers which allow for the development of trading applications that are tailored to their needs. These systems must follow the specific Open Gateway specification design for BSS.

(ii) As another alternative, investors may electronically access the trading system via the Internet by way of the Order Routing System which routes trading requests to brokers (either through the BSS or MWS) for approval and submission to the Trading Host for matching and execution. Brokers who wish to offer their clients on-line trading access may use the SEHK AMS/3 Access Channel PNS or develop their own proprietary access channels.

(iii) The main AMS/3 components discussed above (the Trading Host, Open Gateway, MWS server and the Frame Relay Trading Network) are scalable and may be modified for additional capacity with some more work.

(2) System Capacity, Performance and Throttle Control

(i) The new AMS/3 system when fully introduced will allow for a peak order input rate of 12,000 orders/minute for a total capacity of 1,200,000 trades per 4-hour trading day. These rates of processing have been significantly improved from the AMS/2 system.

(ii) During discussions with the members of the Working Group, the issue of the throttle control mechanism for AMS/3 was raised. The throttle control mechanism manages the flow of traffic to the system, thus ensuring the integrity and stability of the system under stressed conditions. It is a resource allocation mechanism as well as a precautionary mechanism that has been implemented to guard against potential flooding risk from brokers,

in particular those using BSS systems. Some members of the Working Group suggest that the transaction processing rate is low and may affect their capacity to do more business.

- (iii) The current capacity levels have been reviewed by HKEx assisted by external consultants. The consultants have given an opinion that the current levels will be adequate and provide greater processing power and capacity than the AMS/2 systems. In order to cater for the future growth of business, AMS/3 has been designed with the flexibility for its capacity to be expanded. The Commission notes that to its knowledge a throttle mechanism is unique to the Hong Kong markets. The Commission also notes that HKEx has committed to a further review of the overall AMS/3 capacity and the throttle mechanism soon after AMS/3 has been stabilised.

CCASS

- 34. CCASS introduced Internet access for Investor Participant (“IP”) accounts in October 2000.²⁸ This service is available to existing or new IP accounts and is an additional channel to the touch-tone phone service and counter service offered at the offices of Hong Kong Securities Clearing Co. Ltd. (“Hongkong Clearing”). In recognition of the increased risk that is entailed in expanding access through the Internet, Hongkong Clearing has implemented contingency measures that include full redundancy capability.
- 35. Currently, an investor using the IP account system cannot interface or move shares from their IP account to a broker’s account within CCASS by way of straight through processing. Straight through processing for retail investors to their on-line brokers will be possible only when the trade data captured through the Order Routing System (“ORS”) carries the identification of the IP account and necessary authorisation (through Public Key Infrastructure Technology (PKI)) for account movements. This will be possible when the ORS features are fully implemented with the introduction of the AMS/3 system.
- 36. The members of the Working Group reiterated the current problems with the IP accounts. They acknowledged that the set-up was not popular due to the lack of customer loyalty to brokers the IP accounts foster, the inability for brokers to know if the client has the shares before they sell and the risk of not settling on time if the shares are not transferred to the broker by settlement date, as well as credit management issues.

Hong Kong On-line Brokers

- 37. The on-line trading survey completed by the SFC shows that the numbers of on-line brokers, client accounts and reported trading transaction volumes have increased two to three fold between September 1999 and April 2000, albeit from a very low base.

²⁸ “HKEx introduces on-line access to CCASS for Investor Participants in the system” – Hongkong Clearing – 9 October 2000 – <http://www.hkclearing.com.hk>

38. The ten on-line brokers who were included in the surveys of September 1999 and April 2000 reported a significant increase in trading volume and number of trading accounts. These increases were most marked in brokers with aggressive marketing strategies. In addition to the 28 brokers who were offering on-line trading at the time of the April 2000 survey, a further 242 brokers (out of the 844 surveyed) indicated their intention to launch on-line trading facilities within the next 12 months, i.e. by April 2001.
39. The majority of on-line brokerages presently operating in Hong Kong are participants of the SEHK and the HKFE. Of these firms, only one is currently a purely on-line trading brokerage. A number of banks have also set up on-line trading subsidiaries of their brokerage arms. However, despite the speed and magnitude of these developments, the present number of dealers with on-line operations is still relatively small as a percentage of the industry (less than 4%).
40. In terms of trading hours, of the 28 brokers that responded that they were offering trading on-line, 18 have systems that can accept client orders 24 hours a day. The remaining 10 brokers (all of which trade Hong Kong securities only) only accept orders during the trading hours of the SEHK. The operational hours for execution for the brokerages are dependent on the trading hours of the respective exchanges.
41. In terms of trading functions and channels, the SFC survey reported that all of the on-line facilities used by the brokers contacted can handle client orders and account instructions, send confirmation to clients in relation to executions and order cancellations and provide "real time" status reports concerning the clients' accounts. The brokers' systems also generally have some credit checking functions in relation to the clients' account details, such as cash and stock balances before the execution of clients' orders. The brokers surveyed considered these checks to be a necessary risk management control to help minimise losses that may occur as a result of client default.
42. Although there are a variety of trading channels available, the SFC survey reported that the on-line brokers in Hong Kong are primarily using a combination of the Internet and telephones (touch-tone and mobile) to communicate with clients. Other channels include different phone channels, premises' trading and kiosks. For example a number of brokers that are connected with banks allow clients to place orders via touch-tone telephone systems similar to that of electronic phone banking systems. Another new channel is the use of "Powerphones" which are essentially touch screen telephones, which have been installed at a number of transit points including Mass Transit Railway Corporation stations and the Hong Kong airport with a direct connection to brokers and a number of other financial services providers.
43. Nineteen of the brokers who responded to the SFC survey indicated that they are planning to use WAP phone technology. It is expected that the use of WAP phones will become more popular when the third generation telephone architecture comes into place. Two brokers are also reportedly considering providing their services through the use of a Personal Data Assistant (e.g. Palm Pilots).

Market Characteristics of the Hong Kong On-line Trading Environment

44. The SFC survey revealed that clients trading on-line are generally individuals who reside in Hong Kong. In addition, discussions with Working Group members and interviews conducted by the SFC indicate that on-line trading in Hong Kong has attracted new investors who are generally educated office workers between 25 and 35 years of age. Surveys by brokerages indicate that investors were far more sophisticated than expected. This new type of investor has brought more assets into the market and has traded quite frequently, usually during lunch times or after hours. This group was attracted by the innovations in the market as well as the speed and convenience of trading. Other innovations have been the opening of cybercafes by certain on-line brokers in fashionable areas that introduce a more social trading atmosphere. Younger and more novice investors have been opening accounts in these outlets.
45. The survey also indicated that the on-line trading turnover in Hong Kong securities for the four largest Internet brokers constituted 83% of the total on-line market turnover.
46. Of the 28 on-line brokers who responded to the SFC survey, 24 reported offering on-line dealing in Hong Kong listed securities (of the 24 brokers, two also offered trading in overseas securities), two reported that they offered on-line dealing in overseas listed securities (predominantly US securities) and two were offering trading in futures contracts. The brokers also reported offering other services such as research information and real time price quotations.
47. Some of the market participants interviewed by the SFC said that they do not expect the business of executing equities or futures transactions to be profitable in the long term. Working Group participants noted that whilst US on-line brokers made money by margin lending, research and order flow, payment for order flow was non-viable in Hong Kong because of the absence of ECNs which compete with the SEHK as execution centres.
48. As a result, some of the on-line trading brokerages are looking for alternative methods of profit generation. One popular alternative method is the cross selling of financial products, an activity that may involve funds, insurance, interest products and/or investment arrangements. Of the dealers that have on-line securities operations, half of them have or are planning to launch securities offerings and margin financing business on-line. Packages of personal financial services are also available on a number of Hong Kong and overseas websites.
49. There was general agreement between the Working Group participants and the market participants interviewed that “asset aggregators” have a strong advantage in relation to the future profitability of the market. Banks have a number of advantages that some brokers felt they needed to acquire, including the knowledge of their banking customers, branding and trust management. Banks also have the capacity to offer on-line loan applications, home valuations and cross-sell products to banking customers. For this reason, a few large sized broker firms indicated that they may wish to seek alliances or other relationships with banks.

50. Following the merger and demutualisation of the Exchanges and Clearing Houses, the boards of the respective entities have approved the dismantling of minimum commission rates by 1 April 2002. Earlier this year, one on-line broker (who is not an exchange-participant) departed from the practice of charging minimum commission. Whilst the SEHK's rules state that an Exchange Participant shall charge its buyer or seller the minimum commission, it does not state that investors must pay it. As a result, in a bid to secure a large client base, the on-line broker, who is an affiliate of the Exchange Participant, offered its securities dealing services free to clients for a limited time. The particular on-line broker placed the orders through an affiliated company who is the Exchange Participant which charged the on-line broker the minimum commission in compliance with the SEHK's rules. The SFC has publicly stated that it supports innovations in the market, provided that rules are adhered to and investors' interests are protected. Investors were, however, warned that brokers who are not exchange participants do not enjoy access to the SEHK Compensation Fund in case of default or insolvency. The particular on-line broker has responded by obtaining insurance up to a lump sum of HK\$20 million.
51. These competitive developments will force market participants to reconsider their business strategies. Market participants interviewed by the SFC as well as the members of the Working Group predicted significant consolidation in the market, with smaller brokers either creating alliances, merging with other brokerages or exiting the industry completely.
52. In line with this prediction, a number of Hong Kong firms have recently announced alliances. The SFC survey noted that small to medium sized firms in particular were forming strategic alliances in order to offer securities dealing on-line. The announced alliance of 165 Hong Kong securities firms has been the most ambitious to date though the actual set-up is reported to be still in the formative stage. It is anticipated that more small to medium sized firms will form strategic on-line trading alliances. Taking a slightly different approach, one securities group has announced an alliance with firms throughout the region to offer improved systems and market access to clients of each of the respective firms.
53. Other brokers are taking a more cautious stance before offering on-line trading services. Awaiting the AMS/3 system to be fully tested and run in and the necessary capital expenditures are cited as the major factors behind their decision to hold back. Of the 28 operating on-line securities brokers in the survey, 26 responded they are planning to interface their on-line trading facilities with AMS/3. Of the 242 brokers that were intending to provide on-line trading facilities, 128 brokers or 53% indicated they were planning an AMS/3 interface.
54. It was noted in Working Group discussions that a number of the more conservative brokers may simply be looking for an exit strategy. The SFC survey showed that 574 of the 844 dealers who participated in their survey said they had no intention of moving towards an on-line trading model. These were generally smaller brokers. The clientele of these brokers was reportedly generally more conservative and less technologically sophisticated.

55. The brokerages that intend to exit the market cited a number of factors including:
- (i) the heavy influx of competition,
 - (ii) the excess number of brokers,
 - (iii) small population of users (in comparison to other Asian countries),
 - (iv) the high capital requirements,
 - (v) decreasing commissions,
 - (vi) the costs of ongoing compliance,
 - (vii) severe shortage of experienced management, traders, information technology personnel and technicians,
 - (viii) the lack of guaranteed success, and
 - (ix) generally conventional nature of Hong Kong brokers.
56. The other issue raised by the SFC survey relates to whether the regulators should develop more guidelines to clarify certain areas in the on-line trading area. This is discussed further in Section D, below.

Prospects for on-line trading in Hong Kong

57. Notwithstanding some of the infrastructural issues outlined above, both the Working Group participants and the market participants interviewed believe that on-line trading will prosper in Hong Kong. The reasons given included the heavily retail nature of the Hong Kong market, the existing electronic infrastructure and the relatively high level of technological sophistication of the region. These observations are supported by the relevant statistics. In August 2000, Internet usage in Hong Kong was about 1,442 million minutes.²⁹ The number of Internet Service Providers (“ISPs”) has also grown steadily. As at the end of December 1999, there were 159 ISPs.³⁰ The percentage of households in Hong Kong that currently contain personal computers is estimated at 34.5%³¹.
58. Other positive features include the following:
- (i) Hong Kong’s average settlement period is the shortest in the region with a very low rate of settlement failures or delays,
 - (ii) Market capitalisation of the Stock Exchange of Hong Kong was at US\$616 billion as of September 2000 and is the second largest in Asia after Japan³²; and
 - (iii) The average daily turnover of the stock market at US\$1.8 billion for the first nine months of 2000 was the fifth most active in Asia after Japan, Taiwan, South Korea and China (Shanghai and Shenzhen together).³³

²⁹ Statistics from the Office of the Telecommunications Authority - Hong Kong - as at August 2000

³⁰ Statistics on Internet Access Service-Office of the Telecommunications Authority – as at December 1999

³¹ Statistics from the Fact Sheets of Information Technology and Telecommunications Bureau

³² Statistics from the Stock Exchange of Hong Kong (<http://www.sehk.com.hk>) and The International Federation of Stock Exchanges - <http://www.fibv.com>

59. The Working Group and the brokers interviewed have remarked that Hong Kong's financial services sector has achieved considerable progress over the last twelve months towards an on-line trading environment. Internet start-up companies, on-line stockbrokerages and banks, financial portals and aggregators, foreign and non-bank lenders, content providers, system enablers and e-finance marketplaces have all established operations in Hong Kong within the last 12 months.
60. The other indicator of a healthy market is the entrance of new players. In recognition of the potential of the Hong Kong market, major US Internet broking firms are entering or have plans to set up operations in Hong Kong. Banks have also entered the fray by setting up on-line trading subsidiaries or partnering with brokerages to aggressively offer securities and futures dealing as well as other services including banking and fund management. These new entrants however, will expose the local brokerages to greater competition in terms of capital backing, electronic sophistication and experience.

D. Regulatory and Policy Issues with regard to on-line trading

61. There are a number of regulatory and policy issues related to on-line trading practices. These issues are discussed in detail in this section and, in response to these issues, a number of recommendations which include the improvement of the Guidance Note are proposed.

Regulatory Approach and Guidance Note Definitions

62. When the Guidance Note was published in 1999, the Commission set out its regulatory approach "that the fundamental principles of regulation for activities over the Internet are not premised on the use of a particular medium of communication or delivery". In particular, the Commission has taken the view that it will apply its principles and its rules in a technologically neutral manner. Those who provide electronic media for trading will not be presented with additional hurdles that disadvantage them when compared to those who use traditional media. The Commission has also taken the view that the discussion of electronic media should not focus on specific present technology. The Commission and the Working Group recognize the popularity of on-line trading has grown as the technology and media, that may be utilised for on-line trading purposes, have advanced and increased. Therefore, as a preliminary measure, the title and contents of the Guidance Note should be amended to reflect the expected use of other media, aside from the Internet, for the purpose of on-line trading. The phrase "electronic trading" may be substituted for the term "Internet".
63. The Guidance Note³⁴ directs that a prominent warning message should be disseminated on Internet pages in such a way that users are alerted to risks associated with Internet trading prior to accessing any services. The SFC survey revealed a wide variety of interpretations of what constitutes "a prominent warning

³³ Statistics from the Stock Exchange of Hong Kong (<http://www.sehk.com.hk>) and the International Federation of Stock Exchange (<http://www.fibv.com>) Shenzhen Stock Exchange Market Statistics and Shanghai Stock Market Monthly Statistics

³⁴ SFC Guidance Note on Internet Regulation, section 9.2 – <http://www.hksfc.org.hk> – Publications section

message”. Information provided on many of websites was not considered comprehensive enough for the purpose of adequate client disclosure. As a result, the Working Group discussed a variety of alternatives. The most popular alternative suggested was the use of pop-up boxes which clients could select to indicate that they had read the disclosure and choose whether to have the disclosure displayed each time they accessed the site. The pop-up boxes should be easily visible to an investor.

Recommendation 1 : Guidance Note Definitions

It is recommended that the Commission’s view on technological neutrality should be reflected in section 5.0 of the Guidance Note. Further, the title and contents of the Guidance Note should be amended to refer to “Electronic Trading”, rather than the “Internet”. “Electronic Trading” should be defined as the use of any electronic medium, including the Internet, WAP or a combination of them, to buy, sell or offer securities, commodities, or leveraged foreign exchange products.

It is also recommended that a description of “a prominent warning message” be added to the Guidance Note to indicate that information that is required to be prominently displayed should be highly visible to an investor. There are a number of ways to address this issue, one way to meet the prominent disclosure requirement would be to use a pop-up box to display required information at the time that the relevant webpage is first accessed. The investor, after reading through the information, may elect not to have the box appear again. Alternatively the investor may elect to have it appear each time.

Key Regulatory Issues

64. Working Group discussions, interviews with brokers and the experiences of other jurisdictions, highlighted the following key regulatory issues:
 - (i) The need for additional guidance with regard to *investor protection*;
 - (ii) The need for suitable *operational standards* for on-line brokers; and
 - (iii) The need to address *new challenges*.

Investor Protection

65. Investor protection issues that were highlighted by Working Group discussions and associated work will be outlined under the following headings and subheadings:
 - (i) Client Identification
 - (ii) Client Agreements
 - (iii) Suitability
 - (iv) Privacy
 - (v) Client Priority

- (vi) Disclosure to Clients
 - (a) *Account Opening*
 - (b) *Market Risk*
 - (c) *Counterparty Risk*
 - (d) *Order Handling*
 - (e) *Trading Right Routing and Preferential Services*
 - (f) *System Delays and Outages*
 - (g) *Chat Rooms*
 - (h) *Confirmation of Order*
 - (i) *Contract Notes and Statement of Accounts*
 - (j) *Resolution of Complaints and Problems*
- (vii) Record Keeping
- (viii) Investor Education

66. The underlying approach of the Working Group in relation to these recommendations is that investors are self-directed. The Commission's approach is that one form of technology should not be favoured over another, and brokers are expected to adhere to the traditional principles of business conduct in their client relations in an on-line trading environment.

Client Identification

67. Issues of how accounts should be opened in an on-line environment and how clients can be properly identified to satisfy the "Know Your Client Rules" (as detailed in sections 5.1 and 5.4 of the Code of Conduct) were discussed at length by the Working Group. There have been a number of industry requests for guidance from the SFC in relation to how dealers should establish the true identity of clients. One major concern is whether a face-to-face approach for account opening should be required as part of this guidance.

Recommendation 2 : Client Identification

- (i) *It is recommended that the applicable sections of the Guidance Note be amended to indicate how a registered person might establish the true and full identity of their client.*

These options might stipulate that account opening either takes place:

- (a) *In a face-to-face meeting between the client and a person who is registered as a dealer's representative of the relevant firm; or*
- (b) *A reliable third party verifying the true and full identity of the client (e.g. a Justice of the Peace, a notary public, a solicitor, a bank manager); or*

- (c) *Using certification services that are recognized by the Director of Information Technology Services as detailed in the Electronic Transaction Ordinance. Currently, the only certification service recognized is the one available from the Hong Kong Post, who issues recognized certificates to support digital signatures for the authentication of the identity of Internet users; or*
- (d) *Using other identification services as the Commission should determine on a case by case basis as technology continues to develop.*
- (ii) *Where the registered person does not conduct a face-to-face meeting when an account is opened for a client, they should ensure that the potential client has been contacted to confirm any account opening instructions before executing any business on the client's behalf.*
- (iii) *Money should only be remitted to an account in the name of the client, on the clear, written authority by the client. Under no circumstances should money be remitted to any account (bank or otherwise) that does not bear the clients' name. Registered persons are expected to comply with the provisions set out at section 4 of Money Laundering Guidelines³⁵.*

Client Agreements

- 68. The results of the SFC survey indicate that not all dealers clearly explain the contents of client agreements and related risks to clients before the agreements are completed, even though this is a requirement of section 6.2.6 of the Guidance Note. In addition, where the Internet is used, they are required to provide clients with adequate information about Internet transactions. Customer feedback indicates that adequate information has not always been supplied.
- 69. The SFC survey also noted that a number of on-line client agreements contained clauses which could potentially be oppressive to client interests. The requirements of the Code of Conduct clearly specify that client agreements should not contain any clauses that are contrary to the interests of client.

Recommendation 3 : Client Agreements

It is therefore recommended that on-line dealers be reminded of their obligations under section 6.2.6 of the Guidance Note. It is also recommended that the applicable sections of the Guidance Note be amended to require registered persons to ensure:

- (i) *Clients can readily access or obtain a copy of the Client Agreement, for example on the website.*
- (ii) *Prior to execution of the Client Agreement, the clients will be provided with all relevant disclosures, warnings, etc. In particular, information about Internet trading and appropriate risk disclosures must be prominently*

³⁵ “Money Laundering Revised Guidance Notes issued by the Securities and Futures Commission” published in July 1997 at <http://www.hksfc.org.hk>.

displayed. One way of accomplishing this will be to require clients to scroll through a page outlining such information, and confirm they have read it, before they can access the webpage that holds the Client Agreement.

- (iii) Client consent must be obtained for using the Internet as a medium for trading or for communication purposes. The client consent may be part of the Client Agreement.*
- (iv) There are means to explain to the clients the contents of the Client Agreement and its related risk, prior to the Client Agreement being executed. This could, for example, be accomplished by written documentation, telephone or email dialogue.*
- (v) The client confirms that he or she has understood the content of the Client Agreement and its related risk. Such confirmation should be detailed in the Client Agreement.*

When opening a new account, the client generally should be expected to complete the Client Agreement concurrently. Normally registered persons should not let a client trade unless an account has been properly opened, and the Client Agreement has been fully executed.

Suitability

- 70. Suitability requirements were originally formulated in recognition of the value that an investor might understandably place on expert advice. By operating on-line trading businesses, brokers present themselves as being experts in this field. It is therefore reasonable to assume that clients, as they are generally inexperienced in on-line trading, might follow what they believe to be the advice of experts.
- 71. As a result, suitability requirements have been formulated by regulators to protect clients from inappropriate advice that brokers might offer. These requirements specify that a broker must first determine the client's financial situation, investment experience and investment objectives. Having regard to the information disclosed by a client, and any other information of which the broker is aware through the exercise of due diligence, the broker should ensure that recommendations made are suitable to the client.
- 72. The main issue identified in relation to suitability requirements in an on-line environment, is what exactly constitutes a "recommendation". For example, many firms utilise data-mining techniques in order to customise securities offerings for certain clients. The SFC believes that if the information is presented to the client in a way that has been individualised on the basis of the personal circumstances of the client, then that offer constitutes a recommendation. This would, in turn, trigger suitability obligations.
- 73. As explained above, the "Know Your Client" rule refers to both knowing (i) who the client is, i.e. the identity of the client; and (ii) the circumstances of the client, i.e. financial situation, investment experience, and investment objectives of the client.

Where a registered person considers an investment is not suitable for a client or group of clients, they may, for example:

- (a) Exclude “low risk investment objective” investors from investing in a class of highly speculative, highly leveraged, or derivative investments. This may be accomplished by denying such investors access to place their orders over the Internet, and by requiring the investors to make a phone call to invest.
- (b) Institute the use of a pop-up box that indicates to investors that the investment they wish to invest in is not suitable (e.g. that the stock has exceeded a prescribed volatility level within the last period).

Recommendation 4 : Suitability

It is recommended that the suitability requirement be updated, so also take electronic trading issues into account. The suitability requirement should be defined and addressed as a separate issue in the Guidance Note.

Registered persons are reminded that suitability requirements arise when they give advice or make recommendations to their clients. They must first ascertain the client’s financial situation, investment experience, objectives and any other information disclosed through the due diligence process to the broker. They should only give advice or make recommendations that are suitable for the client, based on this information. Advice and recommendations will include outright solicitations or offerings, and may also include more subtle approaches. The Commission takes the view that in general, any offer, solicitation or notice, which has been individually customised for the client, will constitute a recommendation.

Privacy

74. The Internet provides a venue where confidential data may easily be gathered from customers or potential customers. This data can be used for a variety of purposes, which may include direct marketing. The privacy concern is that the further usage of this confidential data may not always be disclosed to the client.
75. The Personal Data (Privacy) Ordinance (“PDPO”) came into force in Hong Kong in December 1996. The PDPO set out strict guidelines for persons that control personal data. “Personal Data” for the purposes of this Ordinance refers to information (fact, opinion or personal identifiers) which relates directly or indirectly to a living individual. This information may be documented in paper or in electronic form.

Recommendation 5 : Privacy

It is noted that the provisions of the PDPO offers guidance for on-line trading privacy practices. It is recommended that the Guidance Note be amended to reinforce compliance with the Ordinance as a criterion of fitness and properness. Registered persons are also expected to disclose what their practices are (e.g. on the website) with regards to information privacy.

Client Priority

76. The structure of AMS/2 provided a window of opportunity where a broker might manually choose which order is input into the market system at what time. This choice might compromise the time priority of clients' orders (commonly known as the First-In-First-Out or "FIFO" principle).
77. This potential problem will be corrected if the dealer makes use of the automated order routing functionality under AMS/3. Under such a situation, a client's order (after being received and validated by an Exchange Participant's system) will go straight to the SEHK's central order book and await execution. But if an Exchange Participant uses an AMS/3 Trading Terminal, it will still be required to input a client's order into the AMS/3 Trading Host.
78. The SFC has been advised that it is technically feasible for an on-line dealer to prepare exception reports that highlight orders which were not processed according to the time sequence in which they were received. This is a useful tool for the dealers to ensure compliance with the client priority requirement.

Recommendation 6 : Client Priority

In line with requirements 3.1 and 3.4 of the Code of Conduct, it is recommended that the Guidance Note be amended to require that dealers' systems have the capability to generate reports that highlight exceptions. A time sequence for orders that were received, placed and executed is considered to be a minimum requirement of these reports. On-line broker's systems should be able to differentiate orders in terms of fractions of a second (which would generally be at six decimal places) and assign unique reference numbers to each order for the exception reports.

Furthermore, registered persons are reminded that they should ensure their order routing processes are handled in accordance with the principles set out in section 9.1 of the Code of Conduct. This section provides that a registered person shall handle orders of clients fairly and in the order in which they are received. Orders for clients or transaction to be undertaken on behalf of clients shall have in all cases priority over orders for the account of the registered persons, or any account in which the registered person has an interest or the account of any employee or agent of the registered person.

Disclosure to Clients

79. The discussions of the Working Group, the results of the SFC survey, the special inspection and related interviews by SFC clearly show that there is a significant lack of appropriate disclosure to clients in an on-line trading environment. The most common issues identified were:
 - (a) Account Opening,
 - (b) Market Risk,
 - (c) Counterparty Risk,
 - (d) Order Handling,

- (e) Trading Right Routing and Preferential Services,
- (f) System Delays and Outages,
- (g) Chat Rooms,
- (h) Confirmation of Order,
- (i) Contract Notes and Statement of Accounts, and
- (j) Resolution of Complaints and Problems

(a) *Account Opening*

In the special inspection conducted by the SFC, it was discovered that in many instances the procedure for account opening was not clearly specified. For example, in some instances, clients had an expectation of opening an account on line, when in fact they were required to open an account in the brokers' office.

(b) *Market Risk*

It was also noted that very often the risk associated with the products and/or services available on-line were not clearly stated. There were often no warnings that transactions may be executed at a different price to that displayed when the client places the order. Some of the reasons for this are associated with the routing and handling of the client's order. In other cases, it may simply be that by the time that the client's order has reached the market, the price has changed. Clients should be made aware of this possibility and brokers should provide and explain options that are available to minimise this risk, for example, clients may be given the option of specifying an order as a "limit order".

(c) *Counterparty Risk*

In relation to available investor compensation options, a broker's website should clearly indicate whether or not the broker is an Exchange Participant. The status of a broker and whether they are an Exchange Participant has implications for whether a client may receive any compensation from the investor compensation fund, which is administered by the Exchange, in the event of default by the broker. If the broker is not an Exchange Participant, clients should be advised whether or not they have access to any alternative forms of insurance. If there are any restrictions or thresholds on the amount that a client may claim from any compensation or insurance fund, these restrictions and thresholds should be clearly indicated.

(d) *Order Handling*

On-line dealers should also advise clients that order handling problems may occur. This advice should include the circumstances under which orders may be rejected or cancelled or where dealers will manually intervene in an automated order execution environment. If there are a number of options available (e.g. whether or not to execute an order in the face of an adverse market movement) then these options should be explained and offered to the client at the time of account opening. It should also be established that the client agrees to these options.

(e) *Trading Right Routing and Preferential Services*

The Working Group observed that the rate of processing may be slowed down in times of high market volume or volatility. In addition, the processing level assigned to a trading right connection might also affect the speed of orders flowing through the order routing system.

Clients should be made aware of potential order routing limitations, especially that different trading rights might have different processing levels assigned and therefore the speed at which transactions are completed may be different. Trading rights with high processing levels in particular might suffer during periods of high market volume or volatility.

A number of brokers are considering offering different levels of service which may include preferential treatment and services to valued clients. The existence of different or preferential services and their associated costs should be disclosed to clients. Clients may then make an informed decision about the type of service they pay for. Brokers should be reminded that best execution practices still apply, and must be applied within the service parameters agreed with clients. It is also recommended that a dealer should periodically assess the servicing level of each trading right connection to SEHK.

(f) *System Delays and Outages*

Most dealers that were surveyed experienced some minor system delays or outages over the surveyed period. None of these dealers were seen to adequately display an appropriate warning message on their website concerning the possibility of systems delays and outages.

This does not satisfy the requirement of section 9.2 of the Guidance Note, which states that financial services providers are expected to disseminate a prominent warning message that alerts users to potential risks prior to allowing access to services.

(g) *Chat Rooms*

Some registered dealers sponsor chat rooms / bulletin boards on their websites which are manned by their representatives. The dealers usually seek to limit their liabilities by posting disclaimers on the websites. The lack of adequate disclosure, the inadequate or obscure warnings posted, as well as the misleading impression that may be formed (by an investor) that the views expressed in the chat room have been endorsed by a registered person, are a source of concern. It is also likely that the medium of dissemination (e.g. the Internet) gives the views expressed the appearance of greater credibility than they may have if expressed in a general conversation or a meeting. Investors entering a chat room should understand who is operating and supervising the chat room and whether the views contained are those of the chat room operator or others.

(h) Confirmation of Order

Section 8.2 of the Code of Conduct, which deals with information for clients states that “a registered person... shall endeavour to confirm promptly with the client either orally or in writing the essential features of the transaction”.

On-line trading technology offers a number of new options for brokers to comply with these requirements. Members of the Working Group identified this as an issue and discussed a number of alternatives. One possible solution is for brokers to provide clients with the option of choosing a “passive” order status service. Therefore, rather than actively sending notification to clients, whether by phone or by other electronic means, after an order has been completed, the broker may provide a “passive” order status screen within the website, which the client may access at his or her discretion.

(i) Contract Notes and Statement of Accounts

Under existing legislation, registered persons are required to provide clients with contract notes on the day after the transaction has been affected (so called Trade Date (T)+1). In the existing Code of Conduct, all registered persons are also expected to provide a statement of account, except when the client requests not to be sent such a statement, and this should be on a regular basis and not be less frequent than once every quarter.³⁶ The issue here is whether these documents may be made and delivered in electronic form.

The Guidance Note for the Application of the Electronic Transactions Ordinance to Contract Notes was published in August 2000. The key provisions of the Guidance Note are:

- (i) Contract notes are acceptable in electronic form for most transactions in securities, futures and leveraged foreign exchange trading.
- (ii) The client must consent to the contract note being in electronic form.
- (iii) When delivering or retaining original and copies, dealers must ensure that the provisions of the ETO and the other relevant ordinances are complied with.

(j) Resolution of Complaints and Problems

There have been indications that when problems arise, for example with system outages or delays with order handling, clients are not sure who to contact or how to get these problems resolved.

Recommendation 7 : Disclosure to Clients

It is recommended that the Guidance Note be amended to require the following on a registered person's website:

³⁶ It should be noted however that, pursuant to s75A and s121Z of the Securities Ordinance, where a registered person is providing share margin finance to its clients, a daily and monthly statement of account may also be required.

(a) Account Opening

Clear description regarding account opening procedures should be displayed on the website. If there are any additional account opening requirements, such as opening of bank account in the name of the client or initial deposit requirements for on-line trading, these should be clearly described as well. Any on-line trading agreement or account opening documents should be prominently displayed.

(b) Market Risk

Clear descriptions should be given of the types of services or products that are available on line. Warnings should be displayed regarding delays in executing orders or that transactions may be executed at a different price to that which is displayed. These warnings should be prominently displayed when the client places the order. Brokers should provide and explain risk management measures to clients such as the use of "limit orders" in order to limit losses as a result of adverse market movements.

(c) Counterparty Risk

A broker website should prominently indicate the broker's registration status and whether they are Exchange Participants (i.e. whether they have access to the Exchange Compensation Fund) or whether they have access to any alternative forms of insurance, as well as any relevant restrictions or thresholds.

(d) Order Handling

Information should be provided regarding the time for order submission (e.g. whether orders can be submitted after market closes), how orders submitted will be handled, the circumstances under which orders may be rejected or cancelled; and the circumstances under which dealers may manually intervene during automated trade executions. Order handling options should be offered and explained to clients at the account opening stage. The broker should obtain the client's consent in relation to these options.

(e) Trading Right Routing and Preferential Services

Any potential limitations in processing speed that may result from differences in the designated level of processing should be prominently disclosed to clients. In particular, disclosures should clearly explain that different trading rights may have different levels of processing assigned, which will affect processing speed. Also the processing speed of the trading right may vary according to the changing market environment, such as market volume or volatility.

Brokers who wish to offer preferential treatment and/or services to clients may do so. However, the dealer must disclose these services, the associated costs, requirements, and any limitations of these services, during the account opening process or when the client wishes to change his account status or levels of service. Brokers should also be reminded that best execution obligations still apply in such circumstances, and in this context, apply within the service parameters agreed with clients.

(f) System Delays and Outages

The on-line broker's website should prominently explain that clients may experience delays or outages, the possible causes (such as system upgrades or changes), how these events may affect order flow and what clients should do in order to effect a transaction in the event of a system delay or outage. The website should also explain what clients should do in the event of a suspension or failure of the AMS/3 or HKATS systems and the effect on their orders.

(g) Chat Rooms

It is recommended guidelines should be put forward to the industry for consultation in relation to chat rooms provided and operated by licensed persons. The Guidance Note might be amended to reflect these guidelines.

(i) General disclosures

At a minimum, the operator of a chat room should post clear procedures detailing how the chat room operates and how activities are monitored.

(ii) Disclosures to people who read material posted in the chat rooms

Users of material in chat rooms should be clearly alerted to the risks of relying upon on-line discussion forums or chat rooms for investment decisions. A "warning page" with full disclaimers should be inserted in a web area, prior to access to a chat room or bulletin board. The warning page should alert investors to the dangers of relying on this material to make investment decisions as it is not professional investment advice. The "warning page" should also inform the investor entering the chat room whether the opinions posted in the chat room are the opinion of the operator of the chat room.

(iii) Warnings to people who post material in the chat rooms

People who post materials in chat rooms should also be clearly warned that they are personally responsible for the accuracy and authenticity of the material they post in the chat room. They should also be warned that if their postings contain any misleading or deceptive information, persons acting on such information may take action against them. They should also be asked to state whether they have any interest in the securities to which their postings relate, and if so, what their interests are.

(iv) Obligations of the chat room operator

The operator of a chat room should be obliged to advise the SFC whether they are operating within the proposed chat room guidelines. The operator should also ensure that the chat room contains all the disclosures and warnings required and should provide a link to the SFC website and the SFC Electronic Investors Resource Centre.

Only registered persons should be allowed to make postings about any securities or issuers on behalf of the firm or the chat room operator.

It is also proposed that the operators of chat rooms offer the SFC free access to their chat room, their members' information and postings. It would be helpful if the chat room had a suitable search function (e.g. search by key words, user and company names and dates of postings).

The chat room operator is expected to monitor the traffic within the chat room. Chat room operators should certify to the SFC that they have reasonably adequate procedures and mechanisms to properly identify persons making the postings. They should also monitor whether postings appear to be misleading or deceptive, or likely to amount to illegal or unauthorised activities (e.g. market manipulation, unauthorised offering of securities). It is proposed that chat room operators be required to remove such postings and withdraw the access rights of the persons making those postings.

It is proposed that operators of chat rooms notify the SFC immediately of any complaints they receive about suspicious postings and provide whatever information they may have of the identity of the persons responsible for the postings. Chat room operators would be expected to retain information about postings and the identity of the persons making the postings, as well as other information which may be appropriate, for a period of six months.

(h) Confirmation of Order

Order and trade confirmation procedures must be clearly presented to the client. It is recommended that s6.2.2.4 of the Guidance Note be expanded to make clear that trade confirmation to the client may include a more "passive" viewing of the order status on the webpage of the broker. However, this should only be permitted with the client's consent. The length of time for which such information is available on the webpage should also be disclosed to the client.

(i) Contract Notes and Statements of Account

The Guidance Note should be amended to reflect the passing of the Electronic Transaction Ordinance. A section will be included that details instances where contract notes and statement of accounts may be issued in electronic form.

(j) Resolution of Complaints and Problems

There should be clear contact details for technical support and inquiries, for example, alternative ways of communicating orders in case a client cannot access a dealer's website, a clear warning if no alternative is available, and procedures to follow when there are delays in receiving order confirmation on the website. This information should be highly visible on the website and should be easily accessible to the client. Complaint handling procedures and dispute resolution procedures, where available, should also be displayed or made accessible to clients (e.g. on the webpage).

Record Keeping

80. Following the SFC special inspection, it was noted that a number of on-line brokers have inadequate record keeping and documentation in the areas of systems modification and system delays/outages.
81. Brokers should be able to provide this information to the SFC in the event of an inspection or request. These requirements include comprehensive audit logs and system documentation about system activities as well as access to relevant systems and databases.
82. In addition, having considered the repeated difficulties in other jurisdictions and recurring complaints made to overseas authorities, and the experience of intermediaries within Hong Kong itself, more specific guidelines for the recording of outages and delays have also been proposed.

Recommendation 8 : Record Keeping

It is recommended that the Guidance Note should be amended to require that brokers maintain both audit logs and outage and delay logs.

Audit logs should document the order process and transaction flow through the trading systems. This will at a minimum include:

- (i) Order placement / cancellation / modification / execution (with time stamping and the assignment of unique reference number),*
- (ii) Login attempts,*
- (iii) Quote requests – which for example would include the logging of instances where stock quotes have been requested,*
- (iv) Credit validation exceptions - which for example, may include the logging of instances where the credit limit/cash limits available for trading have been exceeded thereby causing the client to have insufficient credit or cash to execute the transaction,*
- (v) Compliance validation exceptions – which for example may include logging exceptions where the client does not have enough stock holdings to actually sell the shares,*
- (vi) Hierarchical password allocation – where different levels of access are allocated to different job responsibilities within the firm, and*
- (vii) Changes to critical system parameters and master files.*

Outage and delay logs should include:

- (i) a clear explanation of the problem,*
- (ii) the time of outage or delay,*
- (iii) the duration of outage or delay,*

- (iv) *the systems affected at that time and subsequently,*
- (v) *whether this problem or a related problem has occurred before,*
- (vi) *the number of customers who were trading at the time,*
- (vii) *the steps taken to rectify the problem,*
- (viii) *steps taken to ensure that the problem does not occur again, and*
- (ix) *Non-routine occurrences (e.g. abnormal job ends and system failures, including outages and delays).*

The documentation and logs should be diligently maintained and be made available to the SFC upon request. It is important that the logs be reviewed regularly for detecting potential problems and planning preventive measures.

Investor Education

83. The decreased personal interaction between an on-line trading firm and its clients points to the increased importance for investor education. A website is a good place to provide investor education.

Recommendation 9 : Investor Education

It is recommended that dealers should be required to link their websites to the websites of the SFC and the eIRC.

Operational Standards

84. The Commission has stated its expectations in the Guidance Note (section 6.2) that registered persons must put in place additional operational measures if they intend to conduct on-line trading activities. The discussions with the Working Group, the results of the SFC survey and interviews indicate that there are a number of operational issues in relation to on-line brokers in Hong Kong. These issues are of concern to the brokers and may be addressed under the following headings:

- (i) System Integrity
 - (a) *Security*
 - (b) *Reliability*
 - (c) *Capacity*
 - (d) *Contingency Plans*

- (ii) Qualified Personnel

(i) System Integrity

Section 6.2.3 of the Guidance Note separately sets out System Integrity as an issue. The Guidance Note states “*Computer systems that facilitate communication and transaction over the Internet should have sufficient*

operational integrity; and address issues of security, reliability, capacity; and contingency. The Commission would expect a periodic review program to be established to comprehensively plan, test and monitor the computer systems' security, reliability and capacity". Discussions with Working Group members have identified potential issues in security, reliability, capacity and contingency which will be discussed below. It was agreed by the Working Group that brokers will need to address the entire topic of system integrity.

Recommendation 10 : System Integrity

As system integrity lies at the heart of both investor protection and integrity of the market, it can be argued that regulators should set detailed minimum standards. The implementation of this would of course have to be supervised. In many instances, regulators may not have the resources or the expertise for this approach. Moreover, a "one size fits all" set of standards may be inappropriate as different types and level of service may require different standards. It is also possible too that different areas of the system may be configured in such a way that overall system integrity is achieved and maintained without each and every one of those areas meeting the minimum standards.

The Commission is currently considering two initiatives in relation to system integrity. The first initiative the Commission is considering is a requirement that registered persons complete a checklist and provide a standard declaration of system integrity that is approved and signed off by senior management.

The Commission notes that the Hong Kong Monetary Authority on 6 July 2000 issued a Guidance Note on the "Management of Security Risks in Electronic Banking Services"³⁷. In September 2000, the HKMA then issued a new Guidance Note entitled "Independent Assessment of Security Aspects of Transactional E-banking Services"³⁸ which supplemented the July 2000 Guidance Note. In this later Guidance Note, the HKMA has called for independent assessments to be carried out by trusted independent experts which may also include independent parties within the firm (such as an Internal Audit Department) before the launch of the e-banking services. Such assessments will be conducted thereafter generally at least once a year, or whenever there are substantial changes to the risk assessment of the services or in the major security breaches. The assessments should cover the following topical areas: information security policies and practices, system and network security, business continuity management.

The Commission is also considering a second initiative; whether it should require a registrant to obtain an independent certification of its systems. The Working Group members expressed reservations about this proposal. They felt that the requirement of independent certification was a commercial

³⁷ "Management of Security Risks in Electronic Banking Services" – A Hong Kong Monetary Authority Guideline Note – 6 July 2000 - <http://www.info.gov.hk/hkma/eng/guide/index.htm>

³⁸ "Independent Assessment of Security Aspects of Transaction E-banking Services" – A Hong Kong Monetary Authority Guidance Note - 26 September 2000 – http://www.info.gov.hk/hkma/eng/guide/guide_no/guide_1511xb.htm

decision that should be made by the senior management of a firm rather than being mandated as a regulatory requirement.

The Commission recognises that if the requirement for certification is implemented, this will represent additional costs to the industry. However, based on the special inspections conducted, the Commission believes system integrity is an issue that many brokers have not come to grips with. And as system integrity affects investor protection, integrity of markets, and the financial well-being of brokers, the Commission believes that this area should be periodically reviewed and that reviews by qualified independent assessors may be the most appropriate way to achieve this. The Commission specifically invites comments on the desirability of independent certifications of systems.

(a) Security

The members of the Working Group and the brokers interviewed by the SFC identified security as an area of deep concern. This concern was based on the understanding that, while the dematerialisation of trading functions has significantly increased efficiency, the trade-off has been that virtual data is far more susceptible than physical data to unauthorised and malicious destruction. On-line trading has made financial institutions vulnerable in a way that was not possible off-line.

The members of the Working Group expressed a variety of opinions regarding the priority that security considerations should be given. The SFC, however, places a very high priority on security issues and considers the Hong Kong Monetary Authority (“HKMA”) “Management of Security Risks in Electronic Banking Services”, as published in July 2000³⁹, a good example of best practice. This guidance focuses on the key principles of security and recommends a number of sound security practices for operating in an on-line environment.

Recommendation 11 : Security

It is recommended that the HKMA “Management of Security Risks in Electronic Banking Services”⁴⁰ be adopted as mandatory guidelines for on-line brokers. In addition, the Guidance Note should also be amended to cover best practice with regards to certain areas in relation to system administration and security. These areas include:

- (i) proper segregation of employee duties,*
- (ii) the use of alpha-numeric passwords,*
- (iii) a password which must be equal to, or longer than 8 characters or digits,*

³⁹ “Management of Security Risks in Electronic Banking Services” – A Hong Kong Monetary Authority Guideline Note – 6 July 2000 - <http://www.info.gov.hk/hkma/eng/guide/index.htm>

⁴⁰ “Management of Security Risks in Electronic Banking Services” – A Hong Kong Monetary Authority Guideline Note – 6 July 2000 - <http://www.info.gov.hk/hkma/eng/guide/index.htm>

- (iv) *a requirement for clients to change their passwords at regular intervals,*
- (v) *that clients have the option to change their passwords at any time,*
- (vi) *an automatic time-out feature for site access,*
- (vii) *using the latest encryption technology to ensure secured communication with clients,*
- (viii) *transaction database to be logically separated from web servers,*
- (ix) *normally, web servers to reside in the Demilitarised Zone (“DMZ”),*
- (x) *installation of firewalls to shield web servers and internal network from outsiders,*
- (xi) *firewalls to have appropriate rules,*
- (xii) *control and operation of important devices (such as firewall and routers) be divided into two parts resulting in the use of two passwords,*
- (xiii) *intrusion detection devices be implemented to monitor any unauthorised access, and*
- (xiv) *ideally, router access controls to be implemented to provide an additional layer of protection.*

(b) *Reliability*

The SFC survey and special inspections revealed that system reliability was a significant problem in the on-line brokerage industry in Hong Kong. In line with reports of complaints from other jurisdictions, modifications or upgrades were cited as the main circumstance affecting system reliability. Unregulated external systems vendors developed most of the systems surveyed.

During their inspections, the SFC noted that both external vendors and internal staff often did not necessarily monitor their systems adequately. Inadequacy of systems documentation was noted at a number of brokers who failed to keep records of the systems, including modifications or upgrades.

This issue was further discussed with the members of the Working Group who also agreed that documentation of systems as well as system problems was generally weak and could pose a problem in the event the IT personnel left the firm. In response, a number of minimum recording and reporting requirements that a broker should observe were put forward.

Recommendation 12 : Reliability

In view of the difficulties experienced by brokers surveyed in Hong Kong, it is recommended that the Guidance Note should be amended to require that senior management ensure that both internal and external system/program developers observe the following requirements:

- (i) *Systems and upgrades must be properly implemented. Proper planning, testing and documentation must be undertaken and maintained,*
- (ii) *Systems must be monitored on a continuous basis,*
- (iii) *Support must be available in emergencies,*
- (iv) *Problems must be rectified in a timely manner,*
- (v) *Recurring problems must be resolved adequately,*
- (vi) *Proper written systems documentation detailing functional and technical specifications of the major trading, settlement and clearing system must be diligently maintained, and*
- (vii) *A continuous properly documented audit trail of the systems changes or repairs of the systems must be kept.*

(c) Capacity

The Working Group acknowledges that members of Hong Kong's securities and futures industry exhibit wide variations in technological sophistication. Of the members of the Working Group and the brokers interviewed, most indicated they had used as a minimum capacity requirement a measure of three to four times the average number of transactions they have experienced to date in their ordinary broking business and have designed their systems to be fully scalable. Other firms have used different expected capacity levels depending on their expected customer demand and budgeted growth.

The Commission is concerned that some firms may not have fully appreciated the potential impact on their systems should on-line trading grow exponentially. Inadequate capacity is often given as one of the main causes of systems delays and outages. Whilst there is an argument that the level of service provided by a broker, and hence the capacity of its system, is a commercial issue, it must be recognised too that accessibility of services is absolutely vital for investors. Lack of service is not just inconvenient, it can cause actual financial loss to investors where they are relying on an on-line trading system to get in and out of their investments. System downtime is therefore one of the biggest risks that investors face. The integrity of the operation of a broker is called into question when clients cannot execute their trades because the broker has disappeared or does not return phone calls. The same is true when investors cannot access their broker because its on-line website has crashed due to capacity overload. System outages diminish investor confidence, and indeed, confidence in the financial market itself. Therefore it is important for registered persons to ensure that they do have adequate capacity.

Recommendation 13 : Capacity

It is recommended that the Guidance Note be amended to require that firms have an adequate margin above their current capacity to handle their current volume and systematically establish future capacity estimates on a regular basis. In addition, on-line brokers and registered persons should be required to conduct periodic stress tests to assess whether their systems perform adequately in relation to estimated capacity levels.

(d) Contingency Plans

The Working Group acknowledged that the overall objective of contingency plans is to identify and understand the risks posed by potential operational failures, emergencies or disasters. It was felt that brokers should be encouraged to devise measures to cope with the major risks, so as to minimise material disruptions.

Recommendation 14 : Contingency Plans

It is recommended that the Guidance Note be amended with a separate section detailing that an appropriate contingency plan should be documented, maintained and periodically tested to ensure that it is viable and adequate. Fall back systems should be available to ensure that clients' interests are protected when the existing on-line system fails. Backups are generally encouraged, and brokers should normally take into consideration:

- *Having additional backup servers located in separate premises.*
- *Backing up client and transaction databases in an off line medium, such as computer tapes, which are preferably stored offsite. Offsite storage is generally expected to have proper security measures, and be fire and water proof.*
- *The frequency of performing back up functions, which is recommended to be after each trading session for critical data.*

(ii) Qualified Personnel

On-line Trading is relatively new in the financial services area, and there can be a lack of understanding amongst senior management about its potential and implications. On-line Trading very often brings with it new methods to do business, and therefore calls for new ways to monitor the business and to ensure regulatory compliance. The new electronic way of doing business at the front end (i.e. dealing) operation usually acts as a catalyst for increased business, which also means more pressure for the middle and back office in their provision of back-end monitoring and compliance.

In some cases, due to the aggressive development and implementation schedules of on-line trading systems, some firms may not have ensured that the necessary infrastructure is in place so that they have the Information Technology ("IT") as well as Human Resources competence to manage the on-line trading operations. Senior management should recognise that they carry the responsibilities that arise from the launch of on-line trading, the ongoing operations, and with that the management of IT capability. This leads to the whole issue of integration of the IT functions into a firm's regulatory and compliance control procedures. The IT department now has a key role to play in delivering compliance services and satisfying regulatory requirements. From a regulatory point of view, there is a real need to be satisfied of IT competence as part of the "fit and proper" assessment for a registered firm engaged in on-line trading.

Recommendation 15 : Qualified Personnel

It is recommended that the Guidance Note be amended to reflect the importance of IT competence and adequate human resources when registered persons provide on-line trading and other related services. It is crucial that senior management recognise both the possibilities and the challenges of an on-line trading operation. These challenges and possibilities should be considered and it is in the firm's interest to ensure that sufficient investment and resources are dedicated to maintain IT integrity. The role of the IT department in the firm's compliance function has to be recognized and integrated within the firm. High standards for IT capability should be set, implemented and monitored by senior management. Senior management also needs to ensure that plans are devised and implemented that will address the key risks (such as security, outages etc.) in conducting financial transactions in the on-line trading environment.

New Guidance for On-line Trading

Electronic Initial Public Offerings (“eIPO”)

85. The eIPO Guidelines were issued in July 2000. These guidelines apply to registered persons who use the Internet to collect applications from their clients or the public for securities in an initial public offering (IPO).

Recommendation 16 : eIPO Guidelines

It is recommended that the Guidance Note should be amended to reflect the eIPO Guidelines. The Guidance Note should also include new multi-channel eIPO model issues and the requirements for registered persons.

Terms of Reference

To facilitate the fair and orderly growth of on-line trading and to enhance the competitiveness of Hong Kong as an international financial centre, it is proposed that a Working Group be established with the following objectives:

- ❖ To understand the operations and the technological aspects of on-line trading and investing and to remain abreast of the growth and trends to ensure that Hong Kong remains positioned as an international financial centre.
- ❖ To identify the regulatory and operational risks associated with on-line trading and ensure that the identified risks have been carefully considered and properly addressed.
- ❖ To ensure the proper setting up or enhancement of on-line trading facilities and the financial technology architecture (both in trading and back office systems) to facilitate the on-line trading of transactions across the financial markets (including the stock, futures, and options markets) as well as other financial products.

The Working Group will:

- (a) identify and examine the key issues involved in on-line trading. This will include:
 - (i) the review of the issues, trends and the impact of developments in technology in on-line trading on the securities and futures industry in Hong Kong and abroad.
 - (ii) considering the regulatory, risk management and investor protection issues of on-line trading and investing at the investor, firm and at a market wide level.
 - (iii) the identification of the risks of denial of service, infiltration by unauthorised users (hackers) or other security issues and considering contingency measures for Hong Kong's on-line trading providers.
 - (iv) the examination of the impact of on-line trading (in terms of volume, connectivity etc.) on the existing trading, clearing, settlement and custody systems.
 - (v) the study and understanding of the relationships between on-line brokerages and Internet financial portals as well as the use of on-line discussion forums which are incidental to on-line brokerages.
 - (vi) the identification of investor education opportunities as well as considering investors' needs and protection.

- (b) examine how the issues, strategies and recommendations are in line with the SCEFI report and are in line with best international practice.
- (c) propose recommendations on how to deal with the identified issues, risks or trends.
- (d) prepare a summary of the findings and recommendations, which will be presented to the applicable parties including the Commission, the HKEx, the Government and the market.

Members of On-Line Trading Working Group

Chairman

Securities & Futures Commission
Mr. Mark Dickens

Executive Director
Supervision of Markets

Deputy Chairman

Securities & Futures Commission
Ms. Angelina Kwan

Director
Supervision of Markets

Members

Hong Kong Monetary Authority
Mr. Nelson Man

Division Head
Banking Supervision

The Stock Exchange of Hong Kong Limited
Mr. Roger Lee

Director
Trading & Information Services

Hong Kong Futures Exchange Limited
Mr. Frederick Grede

Chief Executive

Hong Kong Securities Clearing Company Limited
Mr. Stewart Shing

Chief Executive

Charles Schwab Hong Kong Limited
Ms. Christina Hui

Regional General Manager – Asia

Donaldson, Lufkin & Jenrette Asia Limited
Mr. Jonathan Malamud

Senior Vice President
Head of Legal & Compliance

DLJ Hutchison direct Limited
Mr. Andrew Yu

Director

Goldman Sachs (Asia) LLC Mr. Paul Russo	Managing Director
Morgan Stanley Dean Witter Asia Limited Mr. Simon Hogan	Executive Director Institutional Equity Division
TD Waterhouse Ms. Karen Buck	Managing Director
Tai Fook Securities Group Limited Mr. Peter Wong	Group Managing Director
CLSA Limited Mr. Richard Witts	Director – Equity Sales
<i>Secretary</i>	
Securities & Futures Commission Mr. Samuel Wong	Senior Manager Supervision of Markets
Ms. Lene Hansen	Manager Supervision of Markets