
RISK FACTORS

You should consider carefully all of the information set out in this document and, in particular, should evaluate the following risks with regard to the Group.

RISK RELATING TO THE INDUSTRY

Changes in the global securities and futures industry

The exchange-based securities and futures industry in Hong Kong faces challenges resulting from the increasingly competitive environment within which the world's stock and futures exchanges operate:

- as a result of technological advances the entry barriers to establishing new trading platforms have been lowered and this has led to the emergence in recent years, particularly in the US and Europe, of alternative proprietary trading systems which are executing trades outside traditional exchanges. In particular, electronic communication networks (ECNs) have emerged and increased trading volumes are now being executed through them, particularly in the US. In the global derivatives markets, greater information dissemination, the deregulation of financial markets and increased cross-border capital flows are also enabling trading to be redirected to those markets which provide the most efficient pricing and liquidity. This has contributed to a consolidation of liquidity and trading centres, particularly for financial derivatives, which are easily de-linked from the trading centres of the underlying securities;
- institutional investors, which manage an ever-increasing volume of retail and corporate investors' savings and reserves, and the proprietary trading operations of investment banks and securities and commodities trading firms, are looking to diversify their trading through different markets and trading facilities or trading "over the counter" directly among themselves as they search for optimum combinations of transaction costs, liquidity and price discovery. This has resulted in increasing levels of cross-border trading, creating competition among existing exchanges and encouraging the growth of alternative proprietary trading systems. Similarly, retail investors are finding it easier than before to invest cross-border, thus intensifying competition for funds between exchanges; and
- more governments and regulators are opening up their markets to international participation, recognising that this makes their markets more competitive and efficient, brings in a larger and more diverse investor base and enables knowledge and skills transfer to the local market.

There is no assurance that the Group will be able to address effectively all these challenges. If it is unable to do so it may be unable to increase, or even sustain, levels of activity on the Exchanges.

RISK FACTORS

RISKS RELATING TO THE GROUP

Economic and political considerations

The fortunes of the businesses of the Exchanges are closely tied to the macro-economic fundamentals of Hong Kong. In turn, Hong Kong's fortunes are linked to the political, social and economic development of mainland China. Since 1978 the government of mainland China has been reforming mainland China's economic system. Such reforms have resulted in significant economic growth and social progress. Many of the reforms are, however, unprecedented or experimental and are expected to be refined and improved upon. Political, economic and social factors may lead to further readjustment of the reform measures. Any adverse disruption to such development could have an adverse effect on the Hong Kong economy and, in turn, the Group.

Impact of external factors on the Group's earnings

As described in the section of this document headed "Financial Information — management's discussion and analysis of financial condition and results of operations", a substantial part of the income of the Stock Exchange currently comprises transaction levy, and a substantial part of the income of HKSCC comprises clearing and settlement fees. Accordingly, the earnings of the Stock Exchange and HKSCC are highly dependent upon the level of activity on the Stock Exchange as measured by dollar volume. The level of activity on the Stock Exchange is dependent upon, among other things, the frequency with which dealings occur in the securities traded on the Stock Exchange and the value of the securities traded.

The earnings of the Futures Exchange Group are highly dependent upon the level of activity on the Futures Exchange in terms of the number of open contracts and the volatility of the futures market since, as described in the section of this document headed "Financial Information — management's discussion and analysis of financial condition and results of operations", the majority of the Futures Exchange Group's income comprises interest income on margin on open contracts and the level of margin required by the Futures Exchange Group on open contracts may be greater when volatility is higher.

The levels of activity on the Exchanges are affected by a number of factors over which the Group does not have complete, or over which it has no, control. These include:

- the relative attractiveness of trading on, and settling such trades through, the facilities of the Group in terms of fairness, openness, efficiency, cost, risk management, liquidity and transparency;
- the number of new products introduced for trading;
- the relative activity and performance of global markets;
- general market sentiment;
- the macro-economic fundamentals of Hong Kong such as GDP growth and political stability;
- economic cycles;

RISK FACTORS

- prevailing interest and exchange rates;
- the regulatory environment; and
- international political and economic conditions.

By way of example, the volatility in the level of activity on the Stock Exchange resulting from external factors can be demonstrated by the impact of the economic crisis that followed the devaluation of the Thai baht in July, 1997. As a result of the devaluation, and the consequential decline in the value of many of the Asian region's other currencies, many Asian governments and companies experienced difficulties in servicing foreign currency-denominated debt and many corporate borrowers defaulted on their payments. As the economic crisis spread across the region, governments raised interest rates to defend their weakening currencies, which adversely impacted domestic growth rates. In addition, the region's financial liquidity was substantially reduced as foreign investors curtailed investments in the region and domestic and foreign banks restricted additional lending activity. The currency fluctuations, as well as higher interest rates and other factors, materially and adversely affected the economies of many places in Asia, including Hong Kong. This led to the Hang Seng Index declining from a closing high of 16,673 on 7th August, 1997 to a closing low of 6,660 on 13th August, 1998, while trading volume on the Stock Exchange declined from a daily average of approximately HK\$31.85 billion in August, 1997 to approximately HK\$4.05 billion in July, 1998.

Accordingly, as the Group's income is liable to be adversely affected by factors over which it does not have complete, or over which it has no, control, investors should be aware that there is no assurance that the Group will increase or even maintain its historic revenue and profit levels.

Competition from other exchanges and trading systems

As described in the section of this document headed "Industry overview — global stock and futures markets", the Exchanges are facing increasing competition from exchanges in other Asian markets (including mainland China). Supported by their governments, many of the Asian region's securities and futures exchanges (particularly those in Singapore, Seoul, Kuala Lumpur and Taipei) are investing increasing amounts to take advantage of domestic growth opportunities, and are keen to capture regional business. Additionally, as financial markets become more globalised and investors more sophisticated, competition from markets outside the Asian region has also become an increasing challenge.

The Exchanges also face potential competition from other trading mechanisms. As referred to above in the Risk Factor headed "Changes in the global securities and futures industry", electronic communication networks have emerged and increased trading volumes are now being executed through them, particularly in the US. Further, institutional investors and the proprietary trading operations of investment banks and securities and commodities trading firms are looking to diversify their trading through different markets and trading facilities (which can include facilities provided at the offices of Stock Exchange Participants) or trading "over the counter" directly among themselves.

There is no assurance that the competition faced by the Group from other exchanges and trading systems will not prevent increases in, or erode, the levels of activity on the Exchanges.

RISK FACTORS

Information technology

The Group is heavily reliant on the capability and reliability of its computer systems, particularly those required for its electronic trading platforms.

Before the end of the year 2000, the Group intends to upgrade the Stock Exchange's current automatching system from AMS/2 to AMS/3. There can be no assurance though that such upgrade to the trading system can be carried out within the expected timetable and/or in a successful manner. Furthermore, there is no assurance that any future upgrades in the electronic trading platforms of the Group will be implemented or, if implemented, that they will enable the competitiveness of the Group to be maintained or enhanced.

The Group has back-up procedures to enhance the integrity of its systems and minimise the risk of systems failure. However, a significant or sustained systems failure could have an immediate detrimental effect on the Group's profitability and/or undermine confidence in the Group with longer term implications for profitability. In the longer term, continuous and rapid technological change exposes the Group to the risk that its systems are not competitive or that the development or maintenance costs of competitive systems will become prohibitive.

Furthermore, the Group has many computer and telecommunication links with external counterparties. There can be no assurance that counterparty systems will operate effectively, and the Group is exposed to the risk of system failure by external counterparties.

Impact of digital technology on the value of information

As described in the section of this document headed "Financial Information — management's discussion and analysis of financial condition and results of operations", the Group derives significant revenue from the provision of market data.

The means by which market data is provided are subject to constant technological change and market pressure. While the extent to which technological advances, in particular the Internet, could result in a deterioration in the value of information content and create difficulties in enforcing proprietary rights is not quantifiable, the relative ease of downloading and disseminating information provided by electronic means creates practical difficulties in monitoring compliance with, and enforcing, restrictions on information use designed to protect proprietary rights to information. As a result, there can be no assurance that revenue from this source will be maintained at, or enhanced from, historic levels.

Exposure to litigation for the Group's actions

As described in the section of this document headed "Business — business of the Group", to maintain market integrity the Group makes rules governing the listing of securities and trading on the Exchanges and the clearing and settlement of trades through the Clearing Houses, administers and enforces such rules and advises the SFC of trading anomalies. The Group is also required to make a range of decisions, including the admission and removal of securities to and from listing, the imposition and lifting of dealing and trading suspensions, sanctioning and penalising Exchange and Clearing Participants for conduct in breach of the trading rules of the Exchanges or clearing rules of the Clearing Houses, disciplining listed companies and their directors, and making referrals to the SFC. The Group may be subject to litigation arising from the making of such decisions.

RISK FACTORS

Integration of the businesses of the Stock Exchange Group, the Futures Exchange Group and the HKSCC Group

HKEx was established for the purpose of undertaking the merger of the Stock Exchange Group, the Futures Exchange Group and the HKSCC Group. The merger is expected to bring various benefits to the businesses of the Group and therefore increase their competitiveness as described in the section of this document headed “Business — history and development”. The management of HKEx is in the process of integrating the businesses of the Stock Exchange Group, the Futures Exchange Group and the HKSCC Group to realise these benefits as described in the sections of this document headed “Business — business operation structure” and “Directors, senior management and staff”. The process of integration will though require organisational and operational changes to be made to the businesses, and such changes may have disruptive consequences, including impacting on the Group’s ability to retain or hire key employees. There is no assurance therefore as to the extent to which the intended benefits of the merger will be capable of being realised, or the time that this will take. Significant senior management time may also need to be spent on managing the integration process, diverting it away from everyday business operations.

Regulation of fees

The Group is the sole operator of the exchange-based stock and futures markets in Hong Kong. The fees imposed by HKEx in its capacity as controller of the Exchanges and Clearing Houses, and the fees imposed by the Exchanges and Clearing Houses in their respective capacities as exchanges and clearing houses, are required under the Merger Ordinance to be set out in their rules and approved by the SFC. The making of, and changes to, the rules of HKEx, the Exchanges and the Clearing Houses require the approval of the SFC as described in the section of this document headed “Industry overview — Hong Kong’s stock and futures markets”. In deciding whether or not to approve a fee or changes to a fee the SFC is required by the Merger Ordinance to have regard to:

- the level of competition, if any, in Hong Kong for the matter for which the fee is to be imposed; and
- the level of fee, if any, imposed by similar bodies inside or outside Hong Kong for the same or a similar matter.

While this provides a safeguard against abuse of the Group’s position as the sole operator of the securities and futures exchanges in Hong Kong, there is no assurance that the results of the Group may not be adversely affected by such regulatory constraints on its fee setting ability.

The Government has publicly stated its objective to reduce transaction costs in order to enhance the competitiveness of the securities market in Hong Kong. More recently, in accordance with this initiative and with effect from 12th June, 2000, transaction levy has been

RISK FACTORS

reduced from 0.011 per cent. to 0.010 per cent. of the value of a trade and the Stock Exchange's share of the levy has been reduced from 0.007 per cent. to 0.005 per cent. of the value of a trade in conjunction with the transfer from the Exchanges to the SFC of certain regulatory functions, as described in the section of this document headed "Business — history and development". In addition, in line with the Group being a profit driven, commercial entity, the Board anticipates that the Stock Exchange will in due course cease to retain any portion of the transaction levy and will, in lieu and subject to the approval of the SFC, impose a user transaction fee (the time at which either or both of these events will occur is currently unknown).

There can be no assurance, therefore, that the revenue derived by the Group from transaction levy, or from a replacement user transaction fee, will be maintained at, or enhanced from, the historic levels for this income source.

Income earned by HKCC on margin deposits

As described in the section of this document headed "Financial information — management's discussion and analysis of financial condition and results of operations", as part of its risk management measures HKCC collects margin on open contracts. The great majority of the margin collected is in the form of cash, which is invested by the Group in money market instruments and/or placed on deposit to earn interest. A fixed percentage of the interest earned (the "retention rate") is retained by HKCC while a variable percentage determined according to the implied overnight hibid rate (for HK\$), implied overnight repo offer rate (for US\$) or deposit rate (for Yen) (the "base rate"), less the retention rate, is paid to HKCC Participants as interest. Income may also be earned by HKCC on the spread between the income earned on the margin funds and the base rate. For margin collected in the form of non-cash collateral, HKCC levies a charge equivalent to the retention rate on the value of the non-cash collateral utilised as cover for required margin. Currently, interest earned by HKCC on margin funds, net of the interest paid to HKCC Participants, represents a substantial contribution to the Group's revenue.

As part of a continuous effort of HKCC to reduce the costs of HKCC Participants and their clients, HKCC reduced the retention rate from 1.8 per cent. to its current rate of 1.2 per cent. on 1st January, 1999. It also has plans to accept a wider range of non-cash collateral as margin. On the other hand, in setting its fees in the future HKCC will need, among other things, to consider the commercial profit making objectives of the Group.

Any further reduction in the retention rate, or the acceptance of a wider range of non-cash collateral as margin, may have an adverse impact on the Group's interest income, notwithstanding that the volume of trading may increase as a result of a reduction in the costs of HKCC Participants and their clients.

Reliance on the Hang Seng Index futures product

As described in the section of this document headed "Business — business of the Group", there are currently four types of derivative products offered by the Futures Exchange, namely, equity index, equity, interest rate and foreign currency derivative products. However, the

RISK FACTORS

Futures Exchange's product mix is dominated by one product, Hang Seng Index futures contracts, which account for over 80 per cent. of total trading volume on the Futures Exchange. Any significant deterioration of interest in holding and trading such contracts may have an adverse impact on the results of the Group.

Settlement counterparty risks of the Clearing Houses

As described in the section of this document headed "Business — business of the Group", the respective clearing houses of the Group, namely, HKSCC, SEOCH and HKCC, act as the counterparties to eligible trades with their participants through the novation of the obligations of the buyers and sellers. HKSCC is also responsible for good title to the securities deposited and accepted in its central depository. The results of the Group could therefore be adversely affected by losses sustained as a result of participant defaults on settlement obligations or defects in the title of securities deposited and accepted in the central depository.

Public duties of the Group

Under the Merger Ordinance, in discharging their obligations to ensure an orderly and fair market and/or to ensure that risks are managed prudently, HKEx, the Exchanges and the Clearing Houses are required to act in the interests of the public, having particular regard to the interests of the investing public, and to ensure that where such interests conflict with any other interests that each is required to serve under any other law, the former will prevail. There is no assurance, therefore, that the results of the Group will not be adversely affected through placing the public interest ahead of other interests of the Group.