



**SECURITIES AND FUTURES COMMISSION**  
證券及期貨事務監察委員會

## **Research Paper No. 42 – Short selling in the Hong Kong Stock Market**

23 October 2008

# Short selling in the Hong Kong Stock Market

## Executive Summary

1. Recently, several overseas jurisdictions have introduced temporary measures to restrict or suspend short-selling activities. Most of these measures prohibit naked short selling and target at financial stocks.
2. Hong Kong's short-selling regulations are stricter than those which were in place in many of these overseas markets prior to their implementation of the temporary measures. In Hong Kong, only "covered" short selling in securities meeting certain eligibility requirements are permitted. In addition, short sales are subject to the tick rule. Hong Kong's short-selling disclosure regime also requires full audit trails and short-selling turnover is published twice daily.
3. Although market volatility has increased following the bankruptcy of Lehman Brothers Holdings in mid-September, short-selling activity in Hong Kong remains at levels consistent with those prior to the current financial turmoil.
4. In the past years, short-selling activity in Hong Kong has been growing significantly. Amongst other factors, the growth is underpinned by market making activity and the listing of Mainland stocks in Hong Kong. There is no concentration of short-selling activities in any particular stock and broker.
5. A few overseas markets require brokers to disclose short positions data to the market for greater transparency. In Hong Kong, market participants are not obliged to report the short-selling positions. Based on our estimation, the aggregate short position in the Hong Kong market was some HK\$160 bn as at end-August 2008, i.e., about 1% (or less than 1%) of the total market capitalization. This percentage is well below that of New York (4.7% of market capitalization) and about the same level as Australia (1.0% of market capitalization). Market participants and academics concurred that short-selling exposure in Hong Kong might share a small portion of market capitalization and such ratio is at the lower end among that of major markets, given that short selling seems less active in Hong Kong.
6. While the proportion of short exposure in the Hong Kong market seems to be small, the short-selling activity may grow over time alongside the development of the stock and derivative markets. The SFC will continue to keep a vigilant eye on global developments related to short selling but will also remain attuned to the specific needs of the Hong Kong market when considering any changes to short-selling regulations. However, the SFC is prepared to implement aggressive measures in the event that any abusive short selling is identified in our market.

## Background

7. Short selling refers to the selling of a security that the seller does not own. While short selling is a necessary trading tool for the efficient functioning of the financial market, it was also blamed for exacerbating the recent financial market turmoil. To stabilize the stock markets, some overseas regulators have adopted temporary measures to tighten regulations on short selling.
8. The objectives of this paper are:
  - To describe the recent developments in overseas short-selling regulations and compare these with the Hong Kong regime;
  - To analyse whether there is any change in the short-selling pattern amidst the recent downturn in the Hong Kong market;



- To describe the trend and scale of short-selling activity in Hong Kong based on turnover data over the past years; and
- To estimate the latest short positions in Hong Kong.

## Recent Developments in Overseas Short-Selling Regulations

### Temporary restrictions on naked short selling and short selling of financial stocks

9. Recently, some overseas jurisdictions have introduced temporary measures to restrict or suspend short-selling activities. Most of these measures prohibit naked short selling<sup>1</sup> (examples include France and Netherlands). Also, for a majority of these markets (for example, the US, UK and EU countries), the prohibitions are on financial stocks. In the US, all short sales (including naked and covered short sales) were temporarily prohibited for about 1,000 companies which are financial companies. The UK FSA banned investors from creating new or increasing existing short positions in financial companies. The German financial regulator temporarily suspended naked short selling of shares in 11 financial companies. In Asia, some regulators have also introduced short-selling measures of different degrees.

#### Recent overseas temporary measures restricting short selling

Australia	Banned all short selling temporarily with certain exemptions
Canada	Prohibited short selling of all TSX-US interlisted (with one exception) stocks (a)
France	Prohibited naked short sales of 15 credit institutions and insurance companies
Germany	Prohibited naked short sales of 11 financial sector companies
Netherlands	Prohibited naked short sales of 8 financial companies
UK	Prohibit creating new or increasing existing short positions in financial companies.
US	Short selling for over 1,000 financial companies traded on a US exchange was temporarily halted. (a)

Sources: Various exchanges, SFC Research

Remark: (a) The prohibition orders expired on 8 October 2008.

### Hong Kong's short-selling regime is stricter than many overseas markets

10. Hong Kong's short-selling regulations, which were enhanced after the Asian financial crisis in 1998, are stricter than those that were in place in many of these overseas markets prior to their recent temporary measures to restrict short selling. Prior to their recent measures, short selling was lightly regulated in many major overseas markets. For example in the UK, Australia and Singapore, naked short selling was permitted for all stocks without any price restrictions or disclosure requirements. Compared to these markets, Hong Kong has a stringent regime - only "covered" short selling is permitted for securities which have met certain eligibility requirements. Furthermore, short sales must be executed at or above the best current asking price (the so-called "tick rule") on the SEHK's trading system.

<sup>1</sup> Covered short sale requires the seller to have borrowed the stock or to have obtained a confirmation that the lender has the stock available to lend out at the time of sale. In contrast, naked short selling involves selling of securities without borrowing the stock or without having obtained the abovementioned confirmation.



## Short-Selling Regulations in Major Markets (Prior to the Recent Introduction of Restrictive Measures on Banning Short Selling)

Issue	Hong Kong	US	UK	Australia	Singapore
Prohibition of naked short selling?	Yes	Yes	No	No (a)	No
Eligibility list for short selling?	Yes	No	No	No	No
Tick rule?	Yes	No	No	Yes	No
Disclosure of aggregate open short positions per stock?	No	Yes	No	Yes (b)	No

Source: Riskmetrics, IOSCO, and various stock exchanges

Remarks

(a) Naked short selling permissible in Australia subject to stock eligibility rules

(b) Aggregate net open position

11. The Hong Kong rules require a full audit trail to be kept for covered short sales, meaning, for instance, that when clients place short selling orders, they must provide documentary confirmation to their brokers or agents that the sale is shorted and it is covered. There are similar requirements in the US but not in most other overseas markets.
12. Although we do not currently require the disclosure of aggregate short positions<sup>2</sup>, short selling transactions are required to be reported to the SEHK and the SEHK publishes the short selling turnover of individual listed securities twice per day.
13. Breaches of most of the Hong Kong short-selling rules may result in criminal prosecution. This has a strong deterrent effect on non-compliance with the rules.

## Recent short-selling pattern in Hong Kong

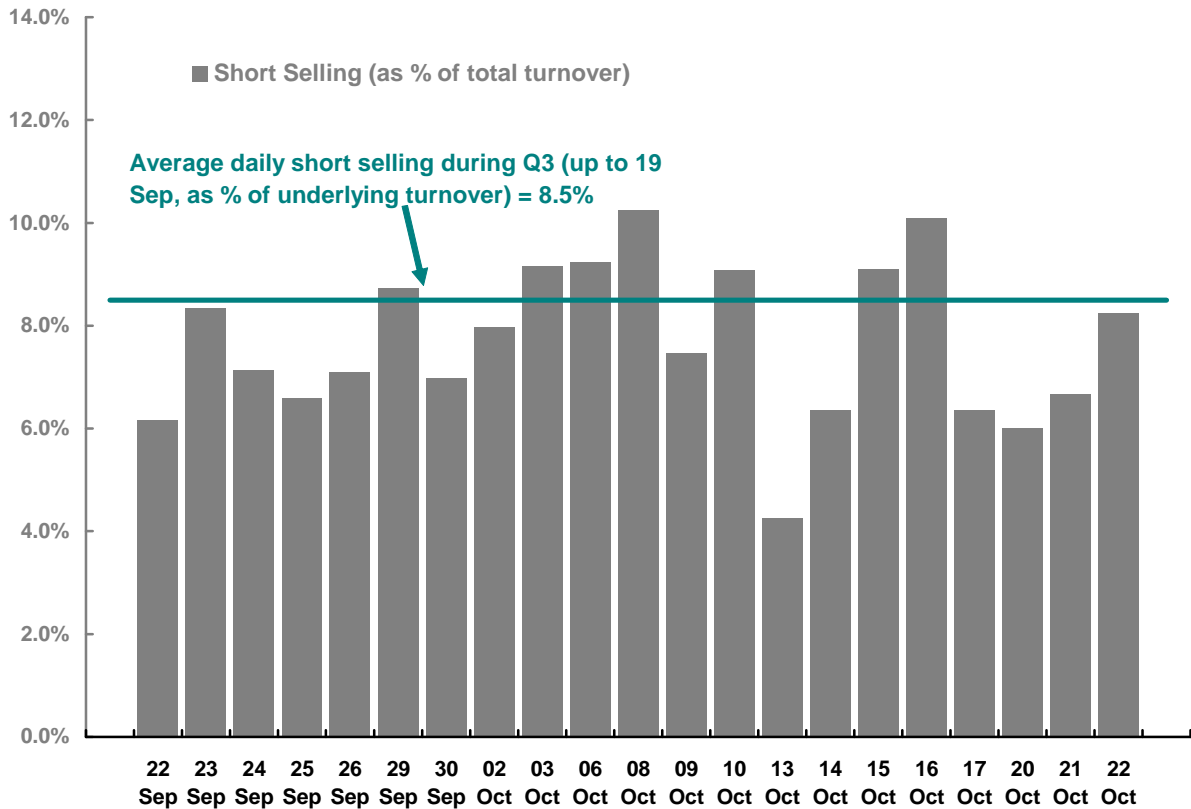
### Short-selling activity remains at levels consistent with those prior to the current financial turmoil

14. Although market volatility has increased following the bankruptcy of Lehman Brothers Holdings in mid-September, short-selling activity remains at levels consistent with those prior to the current financial turmoil. As some major markets restricted or prohibited short-selling activity since 22 September, there are concerns that the Hong Kong market might be targeted for short selling. An analysis has been conducted to examine whether there is any significant change in the pattern of short selling. Between 22 September-22 October, the Hong Kong market's short-selling turnover was similar to levels recorded earlier in the third quarter and in the whole of the second quarter:
  - (a) The average daily short-selling turnover amounted to HK\$4.8 bn on 22 September-22 October (7.6% of the total market turnover), compared to HK\$5.7 bn (or 7.4% of total market turnover) for the second quarter and HK\$5.4 bn (or 8.5%) for the third quarter up to 19 September.
  - (b) For HSI constituent stocks, the average daily short-selling turnover was HK\$3.6 bn (10.4% of their underlying turnover), compared to HK\$3.7 bn (11%) for the second quarter and HK\$3.8 bn (12%) for the third quarter up to 19 September.

<sup>2</sup> There will be further discussion on short position in the last section of the paper.



- (c) For the top 10 stocks short sold during 22 September to 22 October, the average daily short selling turnover was HK\$2.2 bn (10.5% of their underlying turnover). The corresponding figures for the second quarter was HK\$2.0 bn (or 10.9%) and HK\$2.2 bn (or 11.7%) for the third quarter to 19 September.

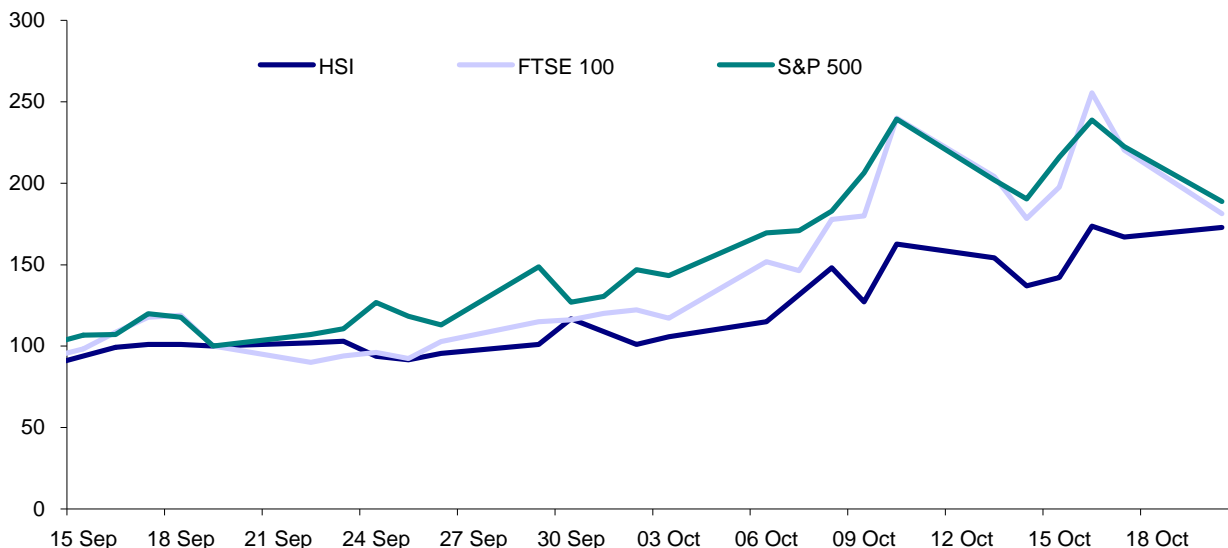


**Short-Selling Turnover  
(as percentage of total turnover)**

Source: SFC Research

Remark: Some major overseas markets have prohibited/restricted short selling since 22 September.

15. Although the US and the UK markets tightened short-selling regulations since 22 September, their market volatilities continued to rise. The implied volatility of the Hong Kong stock market seemed to have increased less significantly. It seems that there is no clear relationship between short-selling activities and market volatilities.



### Implied volatilities of US, UK and Hong Kong markets

Source: SFC Research

Remarks:

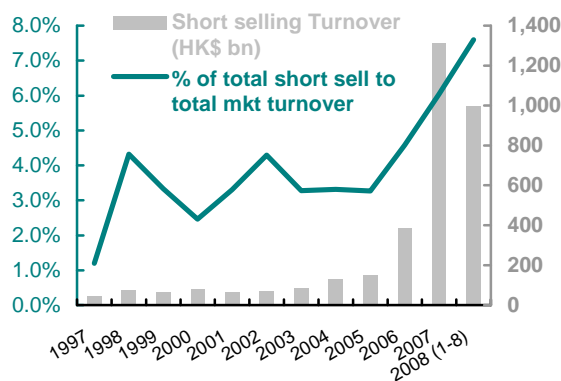
(a) Average volatilities on 15-19 September are normalized to 100.

(b) Remark: Some major overseas markets have prohibited/restricted short selling since 22 September.

## Short-selling trend in recent years

### Growth of short selling largely underpinned by market making activity and short selling of Mainland stocks

16. Short-selling activity in Hong Kong has been growing significantly over the past years. In 2007, short-selling turnover reached HK\$1.3 trn, ten times that of 2004 and its share in market turnover rose to over 6%, doubled that of 2004. Amongst other factors, the growth of short-selling activity was largely boosted by increase in market making activity and the listing and associated short selling of H-shares. In 2004-2007, 57 H-shares were newly listed in Hong Kong. As a share of the market's short selling, short selling of those 57 stocks increased from 1.6% in 2004 to 24.4% in 2007. As percentage of the underlying stocks, short-selling turnover of such stocks was 8.2% in 2007, compared to 3.4% in 2004.



### Short-Selling in Hong Kong

Source: SFC Research



## Market making activity accounted for a larger portion of short selling

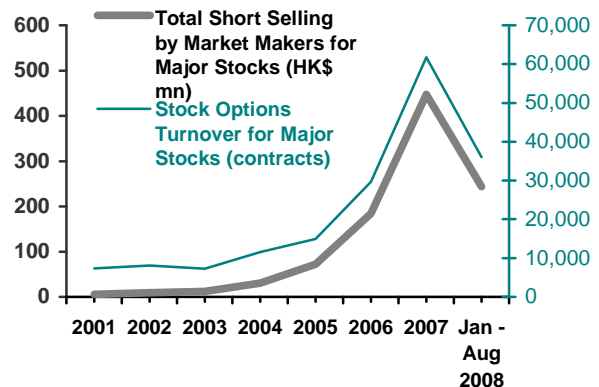
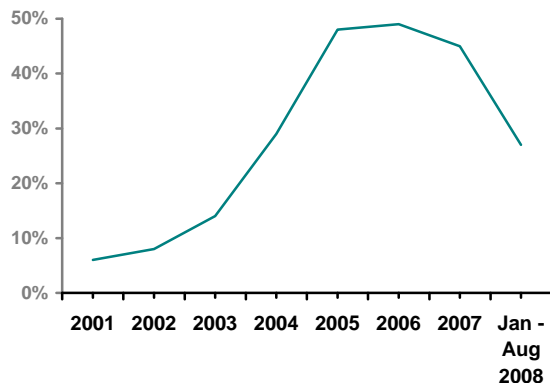
17. Market makers in the stock options and stock futures market may need to use the underlying stocks of options and futures to hedge their market making positions. As a result, they may short sell the underlying stocks. Market makers' share of short-selling turnover for all stocks has increased from 4% in 2002 to 23% in 2007. (During this period, average daily turnover of stock options have grown to 186,923 contracts from 15,131 contracts.)



**Share of Market Makers' Short - Selling Turnover**

Source: SFC Research

18. Market makers' share of short-selling turnover has been higher for major stocks, that is, China Mobile, HSBC and Hutchison. Such share increased from some 5% in 2001 to over 40% in 2005-2007. During the first eight months of 2008, market makers' short-selling turnover decreased 46% as the stock options turnover of those stocks fell 12%.



**Share of Market Makers' Short-Selling Turnover of Major Stocks**

**Average Daily Short-Selling Turnover and Average Daily Stock Options Turnover of Major Stocks**

Sources: SFC Research and HKEx

Remark: Major stocks refer to China Mobile, HSBC and Hutchison

## Short-selling activity was not concentrated on individual stock or broker

19. Short-selling activity was not concentrated. The 5 most actively short-sold stocks (HSBC, China Mobile, HKEx, China Life and CCB) in January to August 2008 accounted for 25% of total short-selling turnover (32% in 2007). The top 5 short-selling brokers accounted for 45% of the market short-selling turnover in January to August 2008 (53% in 2007).

## Hong Kong has lower short selling/turnover ratio than New York and London

20. Short-selling volume makes up around 6% of market turnover in Hong Kong in 2007 and 7.6% in the first eight months of 2008. It was reported that the corresponding ratios were



25 to 30% in New York and London in 2007. Analysts commented that short selling in Asia is far less prevalent than in the US, partly because the comparatively lower liquidity makes it difficult for short selling to pick up. The stringent short-selling regulations may also have inhibited short-selling activities.

### **Short positions may be held for longer periods than overseas as index arbitrage is not common in Hong Kong**

21. We believe and market participants and academics concur that short positions may be held for longer periods in Hong Kong than in other markets. This is consistent with the above analysis that the share of short selling to total market turnover in Hong Kong is smaller than in overseas markets. Index arbitrage<sup>3</sup>, which generally involves short positions, is less common in Hong Kong as compared to the US and UK markets. This is possibly because stamp duty on stock transactions reduces arbitrage opportunities and the tick rule affects the timely execution. Position limits imposed on the futures market might also restrain index arbitrage in Hong Kong.

### **Estimation of Short Positions**

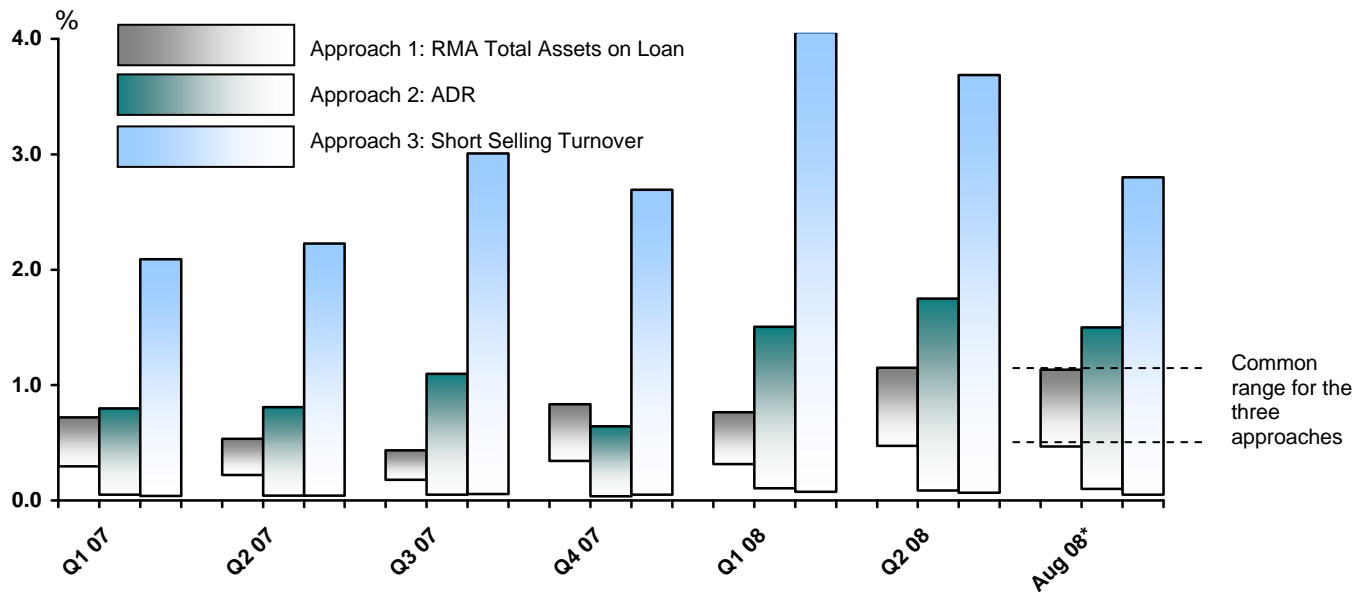
22. Short position represents the number of shares sold short that remains outstanding. A few markets such as Australia and the US require brokers to disclose their short positions to the market for greater transparency. In Hong Kong, market participants are not obliged to report their short positions and the dollar value of the short positions (short exposures). The lack of such information may result in limitations for our analysis about short-selling activity in Hong Kong as compared to other markets such as the US, where the stock exchanges publicize short positions. As such, we try to estimate the short positions based on:
  - (a) Approach 1: stock lending data from Risk Management Association (RMA);
  - (b) Approach 2: short positions of major American Depository Receipts (ADRs) on Hong Kong-listed stocks; and
  - (c) Approach 3: short-selling turnover.

---

<sup>3</sup>

Some market participants may conduct short sales as part of their index arbitrage transactions. Arbitrage is an activity which attempts to buy an undervalued product in one market and simultaneously sell an overvalued product in a related market. The buying and selling activity may bring the prices of two similar products into alignment. For example, in the case where the Hang Seng Index Futures (HSIF) is traded at a discount to the cash market, arbitrageurs may short sell HSI constituent stocks and buy HSIF.





### Estimation of Short Exposure to Market Capitalisation Ratio

Sources: RMA, Bloomberg, SFC Research

Remark: \* Estimation based on RMA total assets on loan in Q2 2008

23. The three approaches come up with a common range that the aggregate short-selling exposure is about or below 1% of the total market capitalization or some HK\$160 bn as at end-August 2008.<sup>4</sup> This ratio is well below that of New York (4.7% of market capitalization) and about the same level as Australia (1.0% of market capitalization). The ratio remained low in previous quarters. Market participants and academics concur that the methodology for estimation is appropriate and short-selling exposure in Hong Kong might account for a small portion of market capitalization. Compared with overseas markets, the proportion of short-selling exposure in the Hong Kong market is low.
24. However, it should be noted that these are essentially rough estimates, based on various assumptions and past trends, and are therefore subject to limitations. The approaches are explained in the Appendix.

### Conclusion

25. Short selling has been blamed to be one of the reasons for the increase in global market volatility recently. As such, overseas regulators have temporarily tightened short-selling restrictions, focusing mainly on naked short selling and financial stocks. It should be noted that Hong Kong's short-selling regime is stricter than many overseas markets prior to their recent measures.
26. It appears that, so far, short-selling activity in Hong Kong has remained at levels consistent with those prior to the current financial turmoil. We have observed no irregularities in short-selling activity, despite the high volatility of the market and the recent changes in overseas short-selling regulations.
27. In the past years, short-selling activity in Hong Kong has been growing significantly. Amongst other factors, the growth is underpinned by market making activity and the listing

<sup>4</sup> We estimate that short selling exposure ranges between 0.1% and 2.8% of total market capitalisation. Even comparing the top of the range with other major markets, Hong Kong seems to be in line with those of other markets. In fact, to be more precise, the three approaches come up with a common range of only around or below 1%, well below those of other major markets. The ratio remained low in previous quarters.



of Mainland stocks in Hong Kong. There is no concentration of short-selling activities in any particular stock and broker.

28. SFC continuously monitors short-selling activity and watches for unusual activity. Our estimation reflects that latest short positions are likely to be small compared to Hong Kong market capitalization and at the lower end of that of overseas markets. Over time, short-selling activity may grow alongside the development of the stock and derivative markets. The SFC will continue to keep a vigilant eye on global developments related to short selling but will also remain attuned to the specific needs of the Hong Kong market when considering any changes to short-selling regulations. However, the SFC is prepared to implement aggressive measures in the event that any abusive short selling is identified in our market.



## Estimation of short-selling positions

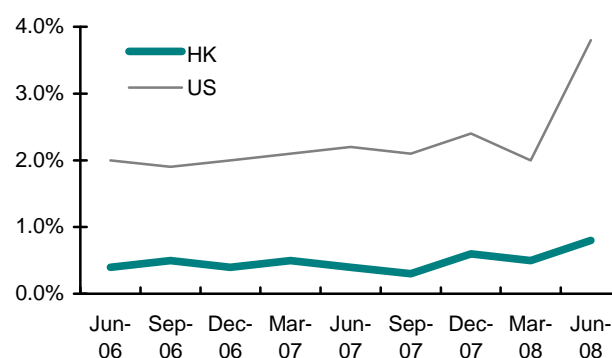
### Approach 1: Quarterly stock lending data from the RMA

1. The Risk Management Association (RMA), an international professional organization with 3,000 institutional members including banks and other financial institutions, conducts regular survey with stock lenders regarding the assets on loan for major markets around the globe. It publishes the stock lending data on a quarterly basis.
2. The total assets on loan provide approximation of the actual short exposures. In the US, the total assets on loan to market capitalisation ratios (3.8% in Q2 2008 and 2.4% in Q4 2007) are roughly in line with the actual short positions to outstanding shares ratio (4.7% in Q2 2008 and 3.4% in Q4 2007), according to the New York Stock Exchange.
3. The RMA survey therefore appears to be a useful source of information to indicate the trend and size of the overall short exposures on the Hong Kong equities market. Total assets on loan in Q2 2008 amounted to HK\$133 bn (US\$17 bn). This was around 0.8% of market capitalization of Hong Kong. The ratio for Hong Kong is one of the lowest amongst major markets, and is consistently much lower than in the US over the past quarters.

**Ratios of total assets on loan to market capitalization**

Markets	Q2 2008	Q4 2007
US	3.8%	2.4%
Germany	3.6%	0.9%
Australia	2.8%	2.2%
UK	1.3%	1.6%
Japan	1.0%	0.7%
Canada	0.9%	0.4%
HK	0.8%	0.6%

Source: Risk Management Association



**Hong Kong: Ratio of Total Assets on Loan to Market Capitalization**

Source: Risk Management Association

### Approach 2: Major ADRs on Hong Kong-listed stocks

4. Short positions of the Hong Kong market are estimated based on short positions of major ADRs of Hong Kong-listed stocks. The New York Stock Exchange publishes short positions of individual stocks, including those of ADRs, on a bi-weekly basis.
5. The ratios of short position to outstanding units of major ADRs of Hong Kong listed stocks ranged from 0.1-1.5% as of end August. There seems to be no concentration of short-selling positions on particular stock. We will apply the range in the estimation of short-selling positions in Hong Kong.



### Approach 3: Short-selling turnover

6. The SFC recently conducted an internal desktop survey on short exposure<sup>5</sup> of 30 Exchange Participants (EPs) during April 2006 and October 2006. The EPs accounted for 99% of short-selling turnover in Hong Kong. The survey revealed that there was no concentration of short-selling positions on any particular stock and the ratios of monthly short-selling turnover to short exposures for individual EPs ranged from 0.2 to 11 times. Based on these ratios, it is estimated that the total short position falls within the range of HK\$8.4 - 462.8 bn in August 2008, 0.05-2.8% of the total market capitalisation.

---

<sup>5</sup> Short exposure is dollar value of short position times its share price as of a particular day.