

## The Retail Structured Notes Market in Hong Kong amid a Rate Hike Cycle

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### Summary

1. *During the 12 months ended June 2006, a total of 147 retail structured notes, with an aggregate issue size of HK\$9,755 mn, were issued. This represented a 53% increase by number, but a 52% decrease by issue size from a year ago.*
2. *Retail structured notes are complex financial instruments but a common key attraction is yield enhancement. Their attractiveness is likely to fade with rising interest rates. The decrease in issue size therefore might be attributable to the interest rate hike cycle which began in late March 2005.*
3. *Equity linked notes, the dominant type of retail structured notes, tend to lower market volatility. Some equity linked notes are structured so that, upon maturity, investors receive either a predetermined amount in cash or a predetermined number of the underlying stock if the price of that stock falls below a predetermined level. Therefore, the likelihood of having to deliver stocks on maturity decreases in a rising market. As a result, the issuers are likely to sell more shares of the underlying stocks, thus helping to cool down the market. Conversely, in a falling market, issuers are more likely to have to deliver the underlying stocks to investors upon maturity. As a result, they need to hedge their risk by buying more shares, thus helping the market to pick up.*
4. *Meanwhile, it is observed that volatilities of the HSI and major HSI stocks have rebounded since mid 2005. Among other factors, this might be due to the rising interest rate environment which reduced the relative attractiveness of equity linked notes. Nevertheless, a growing equity linked notes market, albeit at a slower pace, did provide a market force in lowering market volatility.*

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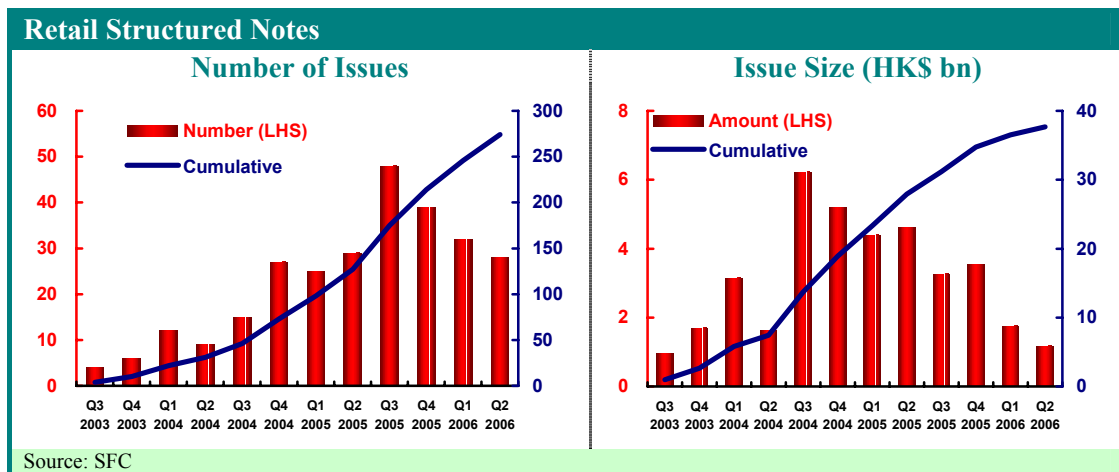
<sup>1</sup> The paper is for research purposes. The views expressed in this research paper do not necessarily reflect those of the Commission.

## Background and Objective

- In Autumn 2005, the Research Department of the SFC issued the first survey report on the retail structured notes market in Hong Kong. Further to that report, this paper provides an update to the latest developments of the market.

## Profile of the Retail Structured Notes Market

- The retail structured notes market refers to the retail market for structured notes such as equity linked notes<sup>2</sup>, credit linked notes<sup>3</sup>, hybrid securities<sup>4</sup>, index linked notes<sup>5</sup>, and the like.



- The retail structured notes market in Hong Kong remained active during the 12 months ended June 2006 with a total of 147 issues issued during this period. This represented a 53% increase from the 12 months ended June 2005, but this growth rate was much lower than the 210% increase a year ago.
- By issue size, however, the market had shrunk since our last survey. During the 12 months ended June 2006, the aggregate issue size was HK\$9,755 mn. This represented a 52% decrease from the 12 months ended June 2005, and contrasted strongly to the 175% increase a year ago.

<sup>2</sup> An equity linked note is a debt instrument where the return and redemption are linked to the performance of either a single equity security or a basket of equity securities.

<sup>3</sup> A credit linked note is a debt instrument where the return and redemption are linked to the credit risk of either a single reference entity or a basket of reference entities.

<sup>4</sup> A hybrid security is a debt instrument where the return and redemption are linked to the performance of different asset classes (e.g. equity, credit, index and/or commodity).

<sup>5</sup> An index linked note is a debt instrument where the return and redemption are linked to the performance of either a single index or a basket of indices.

It is also worth noting that the average size of the retail structured notes has been falling over the period.

<b>Number of Issues and Issue Size of Retail Structured Notes</b>							
<b>12 Months Ended</b>	<b>Number</b>	<b>Issues</b>		<b>Aggregate Issue Size</b>		<b>Average Issue Size</b>	
		<b>YoY Change</b>	<b>HK\$ mn</b>	<b>YoY Change</b>	<b>HK\$ mn</b>	<b>YoY Change</b>	
June 2004	31	NA	7,456	NA	240.5	NA	
June 2005	96	210%	20,470	175%	213.2	-11%	
June 2006	147	53%	9,755	-52%	66.4	-69%	
<b>Total</b>	<b>274</b>	<b>NA</b>	<b>37,681</b>	<b>NA</b>	<b>137.5</b>	<b>NA</b>	

Source: SFC

### By Type

9. During the 12 months ended June 2006, no new product type had been issued in the retail structured notes market. Moreover, equity linked notes and credit linked notes continued to dominate the market, whilst hybrid securities and index linked notes remained less common. In addition, the number of issues and issue size of credit linked notes were comparable to those of equity linked notes. This was in contrast to the observation in our last survey which showed equity linked notes to be more than twice the credit linked notes in number and almost twice in issue size.

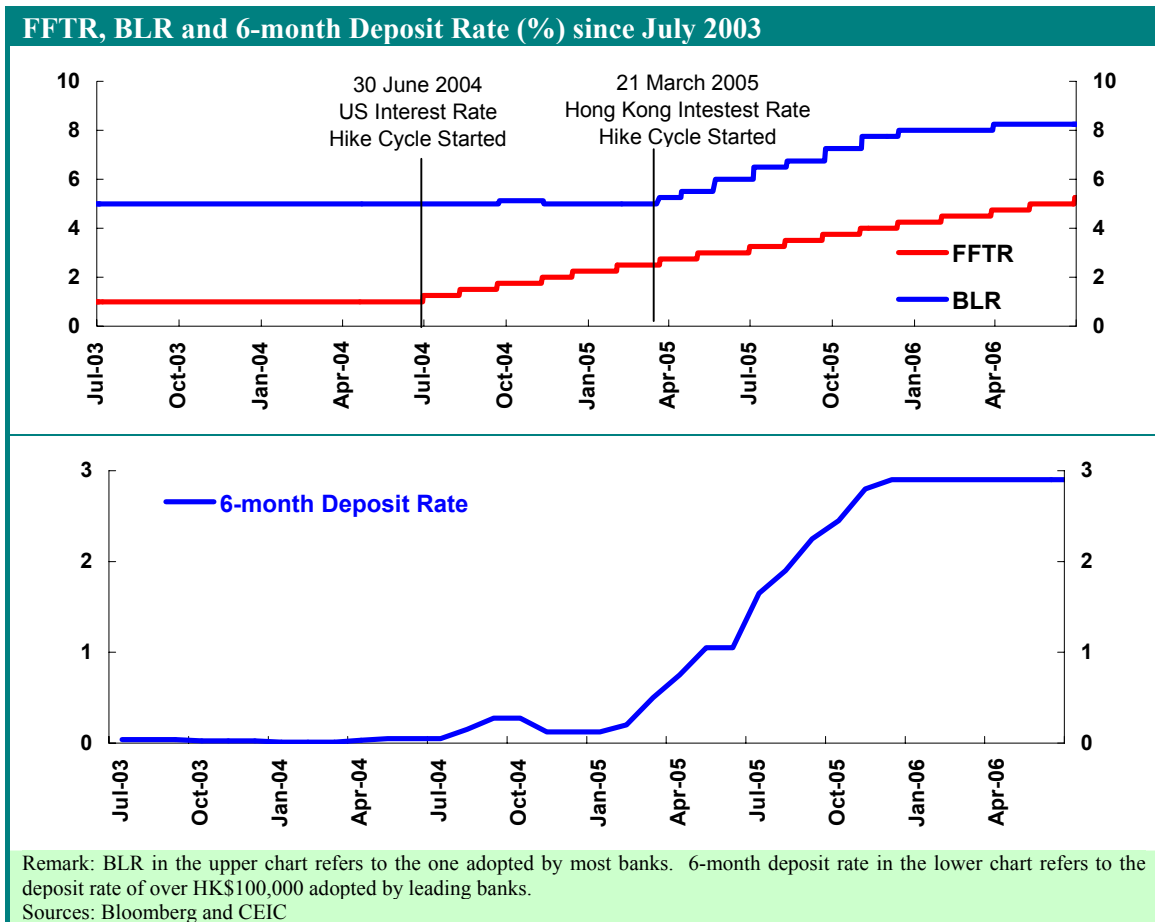
<b>Growth of Retail Structured Notes by Type</b>							
<b>12 Months Ended</b>	<b>Number</b>	<b>Issues</b>		<b>Aggregate Issue Size</b>		<b>Average Issue Size</b>	
		<b>YoY Change</b>	<b>HK\$ mn</b>	<b>YoY Change</b>	<b>HK\$ mn</b>	<b>YoY Change</b>	
<b>Equity Linked Notes</b>							
June 2004	19	NA	3,221	NA	169.5	NA	
June 2005	63	232%	13,897	331%	220.6	30%	
June 2006	78	24%	4,886	-65%	62.6	-72%	
<i>Type Total</i>	<i>160</i>	<i>NA</i>	<i>22,004</i>	<i>NA</i>	<i>137.5</i>	<i>NA</i>	
<b>Credit Linked Notes</b>							
June 2004	10	NA	3,846	NA	384.6	NA	
June 2005	29	190%	6,110	59%	210.7	-45%	
June 2006	62	114%	4,311	-29%	69.5	-67%	
<i>Type Total</i>	<i>101</i>	<i>NA</i>	<i>14,267</i>	<i>NA</i>	<i>141.3</i>	<i>NA</i>	
<b>Hybrid Security</b>							
June 2004	2	NA	389	NA	194.5	NA	
June 2005	3	50%	350	-10%	116.6	-40%	
June 2006	4	33%	427	22%	106.9	-8%	
<i>Type Total</i>	<i>9</i>	<i>NA</i>	<i>1,166</i>	<i>NA</i>	<i>129.6</i>	<i>NA</i>	
<b>Index Linked Notes</b>							
June 2004	0	NA	0	NA	NA	NA	
June 2005	1	NA	113	NA	112.7	NA	
June 2006	3	200%	131	17%	43.8	-61%	
<i>Type Total</i>	<i>4</i>	<i>NA</i>	<i>244</i>	<i>NA</i>	<i>61.0</i>	<i>NA</i>	

Source: SFC

10. Structured notes are complex financial instruments. Their key attraction is yield enhancement. In a low interest rate environment, structured notes may be attractive to investors. However, their attractiveness can fade with rising interest rates. Among other factors, the decrease in issue size

of equity linked notes during the 12 months ended June 2006 could be attributable to the interest rate hike cycle in Hong Kong which started in late March 2005.

11. Under the Linked Exchange Rate System, interest rates in Hong Kong, by and large, move in tandem with those in the US. However, other market forces may sometimes come into play, which have a different impact on their movement. For example, significant increases in capital flow into Hong Kong may tend to lower local interest rates even when rates in the US are rising. During 25 June 2003 – 29 June 2004, the US Fed Funds Target Rate (FFTR) was at a historical low of 1%, while Hong Kong’s Best Lending Rate (BLR) was 5%. Since 30 June 2004, the Fed has raised the FFTR 17 times to 5.25%. However, banks in Hong Kong kept their BLR largely unchanged until early 2005 due to an abundant capital inflow brought about by speculation over a possible revaluation of the RMB. The rate hike cycle in Hong Kong thus actually started only in late March 2005. Tracking the BLR, term deposit rates have also started to rise since late March 2005. Consequently, the retail structured notes market had continued to grow strongly during the 12 months ended June 2005. However, its growth has started to decline since then.



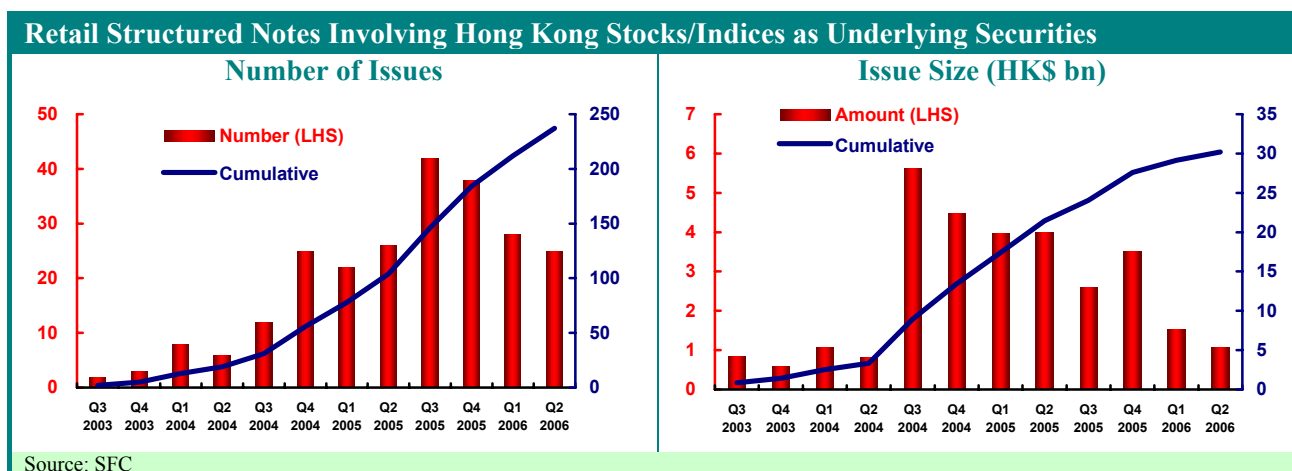
By Type and By Issuer

12. The 147 retail structured notes issued in the 12 months ended June 2006 were issued by 25 issuers, but the market was dominated by a few issuers. The most active issuer issued a total of 24 notes (16% of total) with an aggregate issue size of HK\$2,021 mn (21% of total). The ten most active issuers issued 115 notes (78% of total) with an aggregate issue size of HK\$8,601 mn (88% of total).
13. Different issuers appeared to be focusing on issuing different types of retail structured notes.
  - Major issuers of credit linked notes were not active in issuing equity linked notes or other types of notes.
  - Similarly, major issuers of equity linked notes were not active in issuing credit linked notes or other types of notes.

Retail Structured Notes of the Top 10 Issuers by Type					
Issuer	Equity Linked Note	Credit Linked Note	Hybrid Security	Index Linked Note	Total
Issuer A	0 <i>0</i>	24 <i>2,021</i>	0 <i>0</i>	0 <i>0</i>	24 <i>2,021</i>
Issuer B	0 <i>0</i>	21 <i>1,372</i>	0 <i>0</i>	0 <i>0</i>	21 <i>1,372</i>
Issuer C	6 <i>767</i>	2 <i>66</i>	3 <i>427</i>	1 <i>39</i>	12 <i>1,299</i>
Issuer D	4 <i>800</i>	0 <i>0</i>	1 <i>0.3</i>	0 <i>0</i>	5 <i>800</i>
Issuer E	8 <i>634</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	8 <i>634</i>
Issuer F	0 <i>0</i>	12 <i>612</i>	0 <i>0</i>	0 <i>0</i>	12 <i>612</i>
Issuer G	20 <i>536</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	20 <i>536</i>
Issuer H	1 <i>500</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	1 <i>500</i>
Issuer I	7 <i>470</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	7 <i>470</i>
Issuer J	5 <i>358</i>	0 <i>0</i>	0 <i>0</i>	0 <i>0</i>	5 <i>358</i>
Top 10 Sub-total	51 <i>4,064</i>	59 <i>4,070</i>	4 <i>427</i>	1 <i>39</i>	115 <i>8,601</i>
<b>Total</b>	<b>78</b> <i>4,886</i>	<b>62</b> <i>4,311</i>	<b>4</b> <i>427</i>	<b>3</b> <i>131</i>	<b>147</b> <i>9,755</i>

Remark: Figures on the top represent the number of issues. The figures below (in italics) represent the issue size or aggregate issue size of such notes, measured in HK\$ mn.  
Source: SFC

## Profile of Retail Structured Notes Involving Hong Kong Stocks/Indices as Underlying Securities



14. During the 12 months ended June 2006, a total of 133 retail structured notes involving Hong Kong stocks and/or indices were issued. This represented a 56% increase from the 12 months ended June 2005, much lower than the 347% surge from a year earlier.
15. By aggregate issue size, the retail structured notes involving Hong Kong stocks and/or indices was HK\$8,769 mn during the 12 months ended June 2006. This represented a 52% decrease from the 12 months ended June 2005, which increased 442% from a year earlier.

Number of Issues and Issue Size of Retail Structured Notes Involving Hong Kong Stocks/Indices						
12 Months Ended	Issues		Aggregate Issue Size		Average Issue Size	
	Number	YoY Change	HK\$ mn	YoY Change	HK\$ mn	YoY Change
June 2004	19	NA	3,338	NA	175.67	NA
June 2005	85	347%	18,098	442%	212.92	21%
June 2006	133	56%	8,769	-52%	65.94	-69%
<b>Total</b>	<b>237</b>	<b>NA</b>	<b>30,205</b>	<b>NA</b>	<b>127.45</b>	<b>NA</b>

Source: SFC

### By Term

16. The term of retail structured notes involving Hong Kong stocks and/or indices issued during the 12 months ended June 2006 ranged from 6 months to 5.5 years.
  - 32 issues (24.1%) had a term of 5.5 years;
  - 19 issues (14.3%) had a term of 5 years;
  - 20 issues (15.0%) had a term of 2 – 5 years;
  - 44 issues (33.1%) had a term of 2 years; and

- 18 issues (13.5%) had a term of less than 2 years.

### Outstanding Retail Structured Notes

17. During 1 July 2003 – 30 June 2006, a total of 274 retail structured notes were issued. Of these, 237 involved Hong Kong stocks and/or indices. As 12 such notes already expired as of the end of June 2006, 225 remained outstanding<sup>6</sup>. These 225 notes had an aggregate issue size of HK\$28,304 mn. Most of them were equity linked notes (143 or 63.6% of total). Most of these equity linked notes were issued on a basket of stocks, whilst those issued on a single stock were less common.

**Number and Issue Size of Retail Structured Notes Involving Hong Kong Stocks/Indices as Underlying and Outstanding as at 30 June 2006 (classified by the Number of Stocks/Indices in the Note)**

	Number of stocks/indices in the note				Total
	1	2-5	6-10	>10	
Equity linked note	12 <i>1,740</i>	77 <i>6,741</i>	40 <i>8,186</i>	14 <i>2,347</i>	143 <i>19,015</i>
Credit linked note	2 <i>237</i>	14 <i>2,053</i>	54 <i>6,124</i>	5 <i>305</i>	75 <i>8,719</i>
Hybrid security	0 <i>0</i>	4 <i>401</i>	0 <i>0</i>	1 <i>27</i>	5 <i>428</i>
Index linked note	1 <i>113</i>	1 <i>30</i>	0 <i>0</i>	0 <i>0</i>	2 <i>142</i>
<b>Total</b>	<b>15</b> <b><i>2,091</i></b>	<b>96</b> <b><i>9,224</i></b>	<b>94</b> <b><i>14,310</i></b>	<b>20</b> <b><i>2,680</i></b>	<b>225</b> <b><i>28,304</i></b>

Remark: Figures on the top represent the number of issues. The figures below (in italics) represent the issue size or aggregate issue size of such notes, measured in HK\$ mn.

Source: SFC

### The Equity Linked Notes Market Tends to Lower Market Volatility

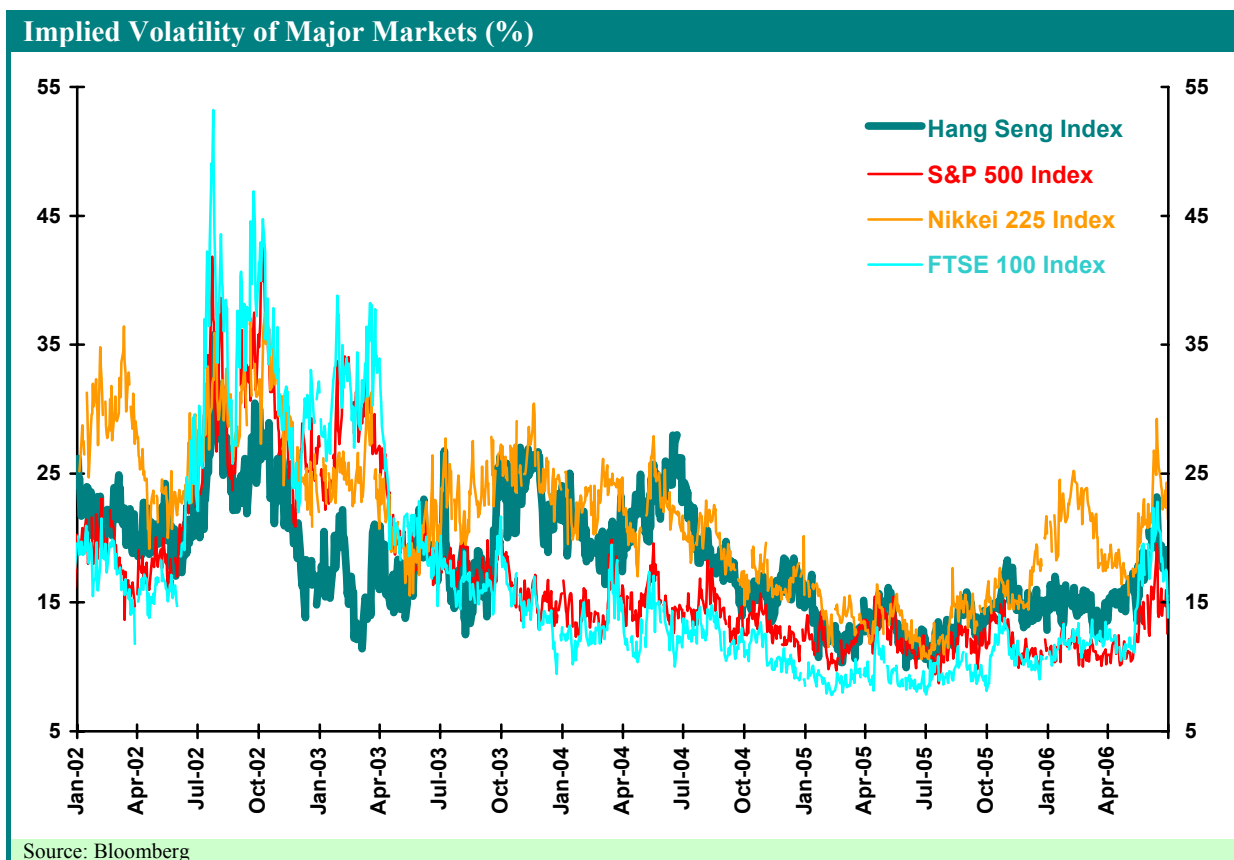
18. As equity linked notes have a closer relationship with the underlying stock market, this section focuses on equity linked notes. Of the 143 outstanding equity linked notes, 134 (94%) were issued on at least one of the following five stocks:

- HSBC
- Hutchison
- Cheung Kong
- SHK Properties
- PetroChina

These stocks were among the top 20 large cap stocks and/or the top 20 actively traded stocks. They were also constituents of benchmark indices.

<sup>6</sup> Since information on pre-mature redemption of notes is not readily available, this section assumes that all notes were or will be redeemed at maturity.

19. Equity linked notes tend to lower market volatility. Some equity linked notes are structured so that, upon maturity, investors receive either a predetermined amount in cash or a predetermined number of the underlying stock if the price of that stock falls below a predetermined level. From the perspective of issuers therefore, the likelihood of having to deliver stocks on maturity decreases in a rising market. As a result, they are likely to sell more shares of the underlying stocks, thus helping to cool down the market. Conversely, in a falling market, issuers are more likely to have to deliver the underlying stocks to investors upon maturity. As a result, they need to hedge their risk by buying more shares, thus helping the market to pick up. With a growing equity linked notes market during 1 July 2003 – 30 June 2005, the overall market volatility in Hong Kong has been by and large declining.
  
20. Volatilities of the HSI and major HSI stocks have rebounded since mid 2005. Among other factors, this might be due to a rising interest rate environment which reduced the relative attractiveness of the equity linked notes. A rising interest rate environment also affects investor sentiment and companies performance. Nevertheless, a growing equity linked notes market, albeit at a slower pace, did provide a market force in lowering market volatility.





### Implied Volatility of Major HSI Constituents (%)

