



Singapore Exchange

Optionality Opportunities in the Asian Gateway

Mr Rick Aston, SVP

Head of Institutions

Singapore Exchange Limited

SGX Market



- **Record Volume**

- Annual record volume in 2008: 61.8 million
- Monthly record volume in Oct 2008: 6.86 million

Equity Index Futures	2008	2007	Growth
SGX NK225	26,149,701	21,937,499	19.2%
SGX MSCI Taiwan	16,913,325	13,611,314	24.3%
SGX MSCI Singapore	4,635,517	4,012,860	15.5%
SGX CNX Nifty	12,435,118	1,398,461*	7892.0%

* Adjusted for contract size changes in Nov 2007

- **Equity Index Futures & Options**

- a) SGX NK225 Futures & Options
- c) SGX MSCI Singapore Futures & Options
- e) SGX FTSE/XINHUA China A50 Futures

- b) SGX MSCI Taiwan Futures & Options
- d) SGX CNX Nifty Futures
- e) SGX MSCI APEX50 Futures

- **Interest Rate Futures & Options**

- a) SGX Euroyen Tibor Futures & Options

- b) SGX Mini 10-year JGB Futures & Options

- **Cash Market**

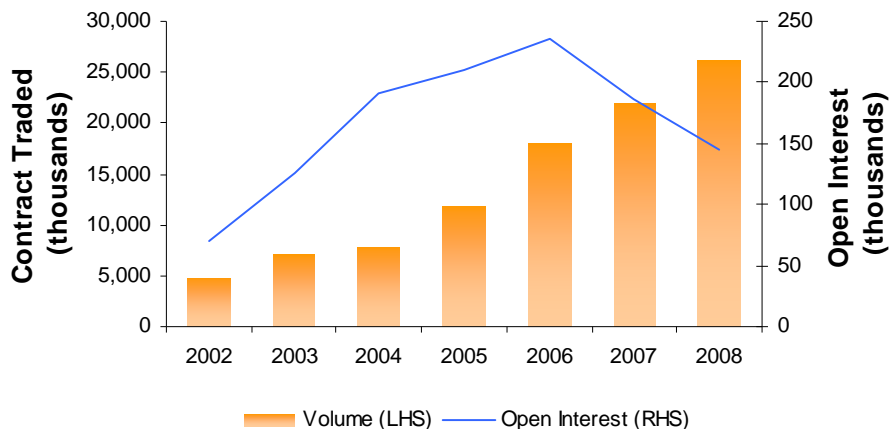
- a) Certificates
- c) Extended Settlement Contracts
- d) Stocks

- b) Exchange Traded funds
- d) Real Estate Investment Trusts
- e) Structured Warrants

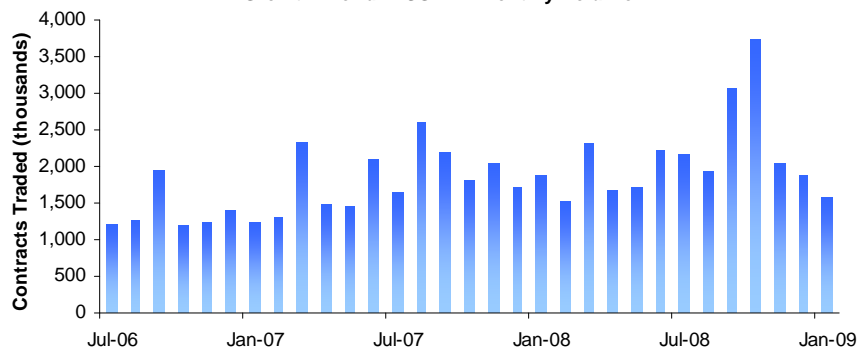
SGX Nikkei 225 Futures



Growth in SGX NK Volume & Open Interest



Growth Trend in SGX NK Monthly Volume



Key Records & Statistics*

	Record	Record Date	YTD Average
Annual Volume	26.1 MM	2008	-
Avg. Daily Vol.	169,846	Oct 08	86,751
Monthly Volume	3.74 MM	Oct 08	1.65MM
Open Interest	450,692	Sep 07	-

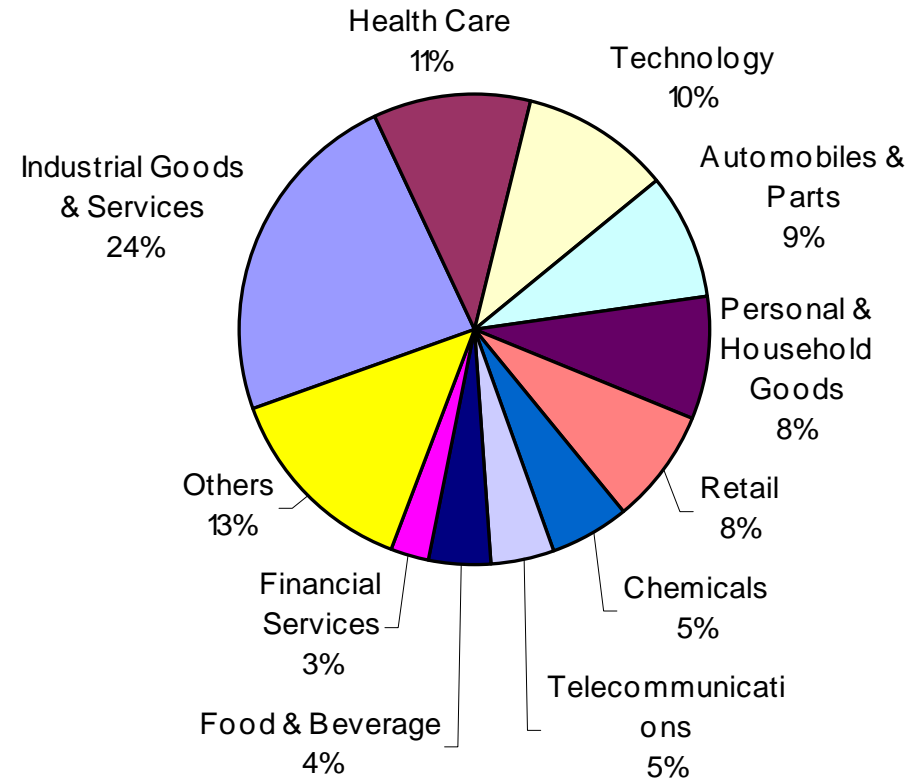
* Up till end-Feb 2009

- Based on the Nikkei-225 Stock Average, a price-weighted average of 225 top-rated Japanese companies listed in the First Section of the Tokyo Stock Exchange.
- Very liquid spread market during roll-over periods. 1-point tick for calendar spread trades
- 23-hour market through SGX Mutual Offset Arrangement with CME

For more information on this product, please visit: <http://www.sgx.com/nikkei225>

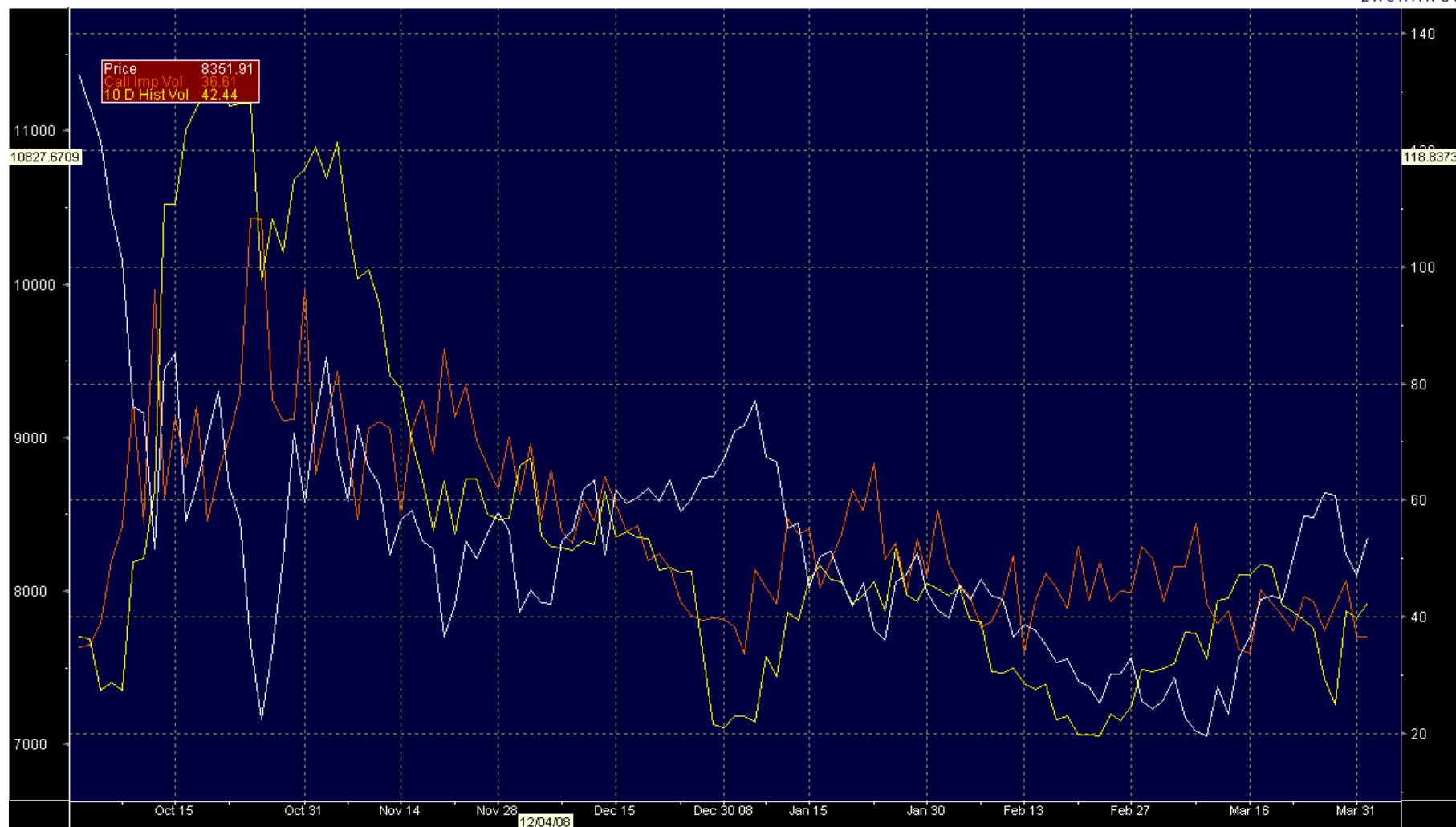
Nikkei 225 Index

Nikkei 225 Index Top 10 Constituents		
1	Fast Retailing Co Ltd	5.34%
2	Kyocera Corp	3.38%
3	Fanuc Ltd	3.30%
4	Shin-Etsu Chemical Co Ltd	2.42%
5	Honda Motor Co Ltd	2.38%
6	KDDI Corp	2.34%
7	Canon Inc	1.99%
8	TDK Corp	1.93%
9	Softbank Corp	1.92%
10	Tokyo Electron Ltd	1.87%



Source: Bloomberg, 13 March 2009

Nikkei Volatility

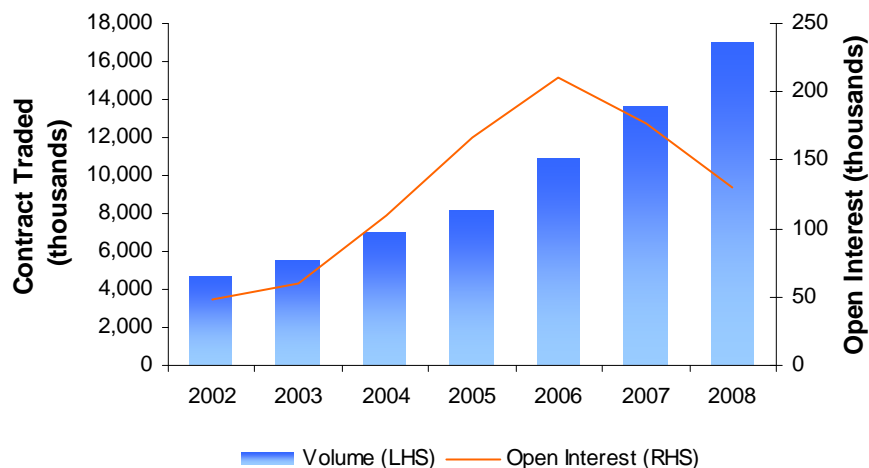


Source: Bloomberg

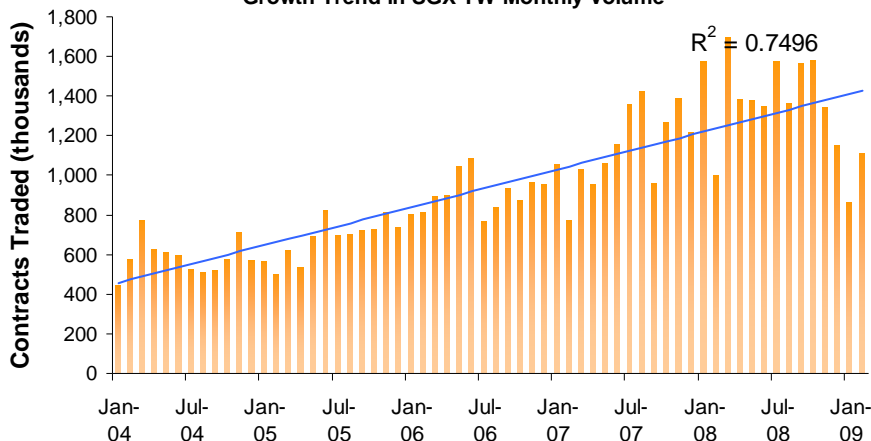
SGX MSCI Taiwan Futures



Growth in SGX TW Volume & Open Interest



Growth Trend in SGX TW Monthly Volume



Key Records & Statistics*

	Record	Record Date	YTD Average
Annual Volume	16.9 MM	2008	-
Avg. Daily Vol.	80,491	March 08	59,656
Monthly Volume	1.7 MM	March 08	0.98 MM
Open Interest	276,139	June 07	-

* Up till end-Feb 2009

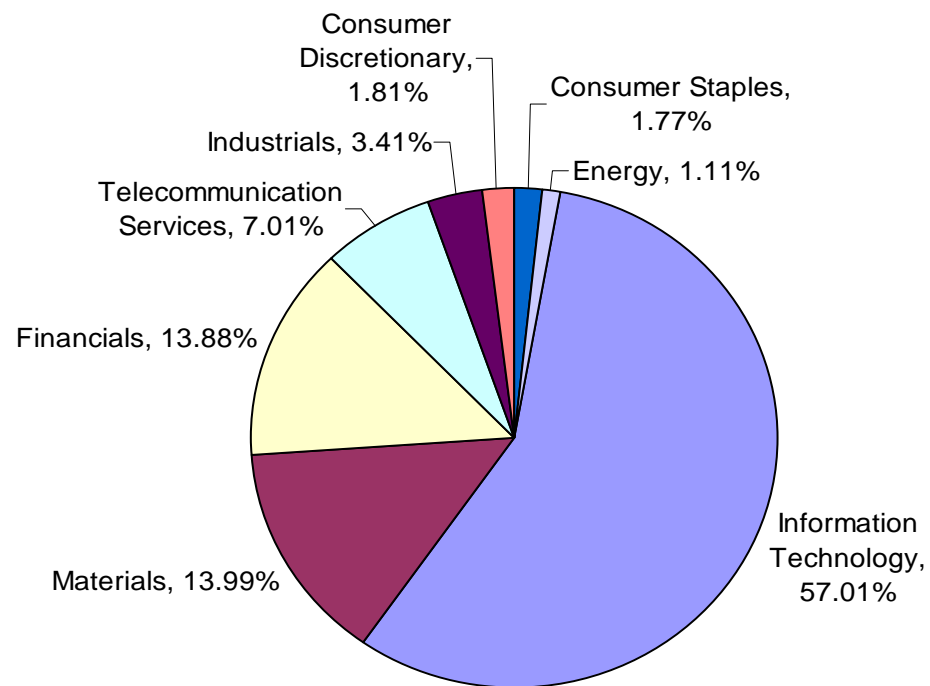
- Low market impact costs – 2.62 times lower than similar transactions in TAIFEX.
- Higher average quoted depth at best prevailing quotes compared to TAIFEX.
- Liquid roll market. Availability of block trade facility for large off-market orders (minimum 200 lots).
- Potential Trading opportunities – (i) Futures-Futures Arb between SGX TW & onshore contracts (ii) Index Arb between SGX TW & Onshore cash
- Wider price limits of up to 15% (compared to onshore limits of 7%)
- Zero transaction tax
- USD-denominated

For more information on this product, please visit: <http://www.sgx.com/mscитайwan>

MSCI Taiwan Index

MSCI Taiwan Index Top 10 Constituents

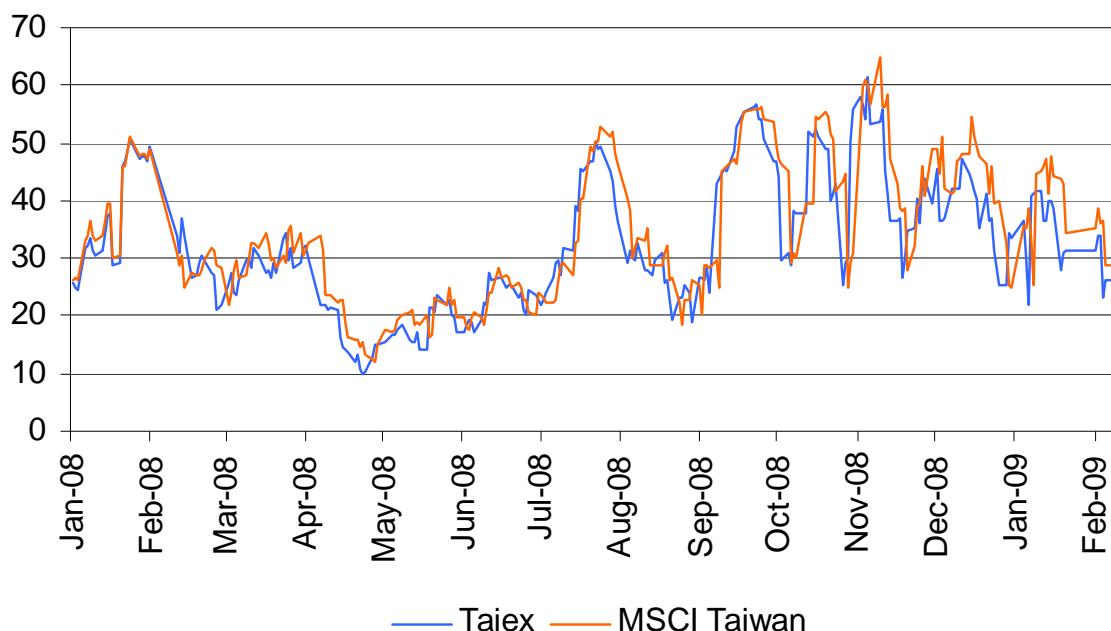
1	Taiwan Semiconductor Mfg.	15.53%
2	Hon Hai Precision Ind. Co.	6.31%
3	Chunghwa Telecom Co.	4.83%
4	Mediatek Inc.	4.29%
5	HTC Corp.	3.60%
6	Formosa Plastic Corp.	3.25%
7	China Steel Corp.	3.07%
8	Nan Ya Plastic	2.86%
9	Au Optonics Corp.	2.81%
10	Cathay Financial Holdings	2.27%



Source: MSCI, 13 March 2009

Taiwan Trading Opportunities

MSCI Taiwan Index vs TAIEX Index Historical 10-Day Volatility

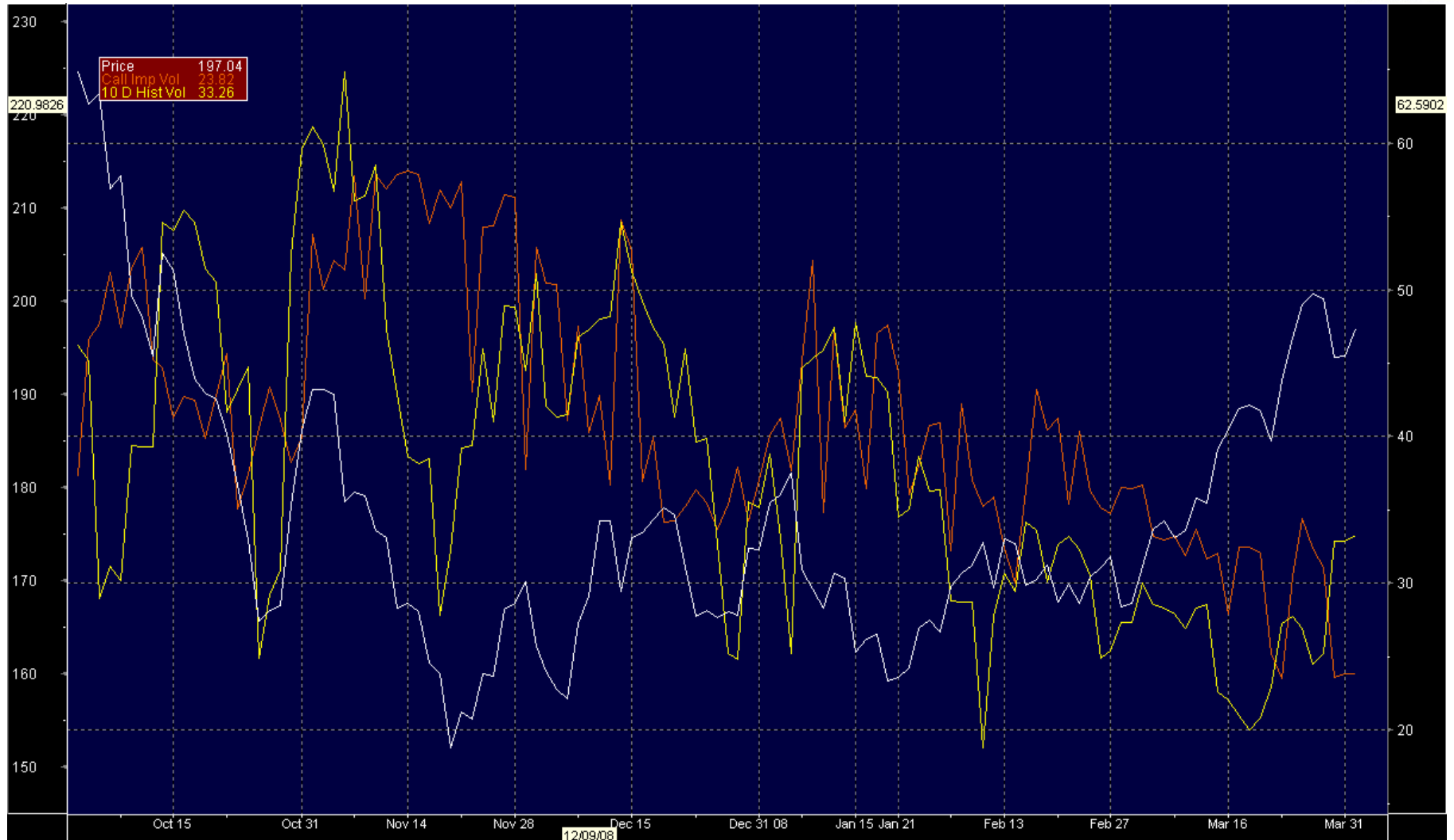


MSCI Taiwan correlations (Sep 2008 – Feb 2009)

Dow Jones	0.426
S&P 500	0.441
Nasdaq 100	0.494
Nikkei 225	0.601
Shanghai Composite	0.362
USD / TWD	(0.568)

- **Good underlying volatility**
- **Intraday arbitrage opportunities between SGX MSCI TW and TAIEX TAIEX futures**
 - Correlation between MSCI Taiwan Index and TAIEX Index converges to 99.7% at close of day
- **Correlation play between MSCI Taiwan and other equity indices up to 13 trading hours a day.**

Taiwan Volatility



Source: Bloomberg

Why Trade Asian Markets in SGX?

- Asia is first to react to weekend news
- Trading hours extending into the U.S. morning
- Expands opportunities of profitable trading
- Less efficient markets

Dow futures less Nikkei futures



Source: Bloomberg

Nasdaq 100 futures less 6x MSCI Taiwan futures



Source: Bloomberg

Trading Strategies Examples - Hedging

- Assumption – General positive correlation between equity markets
- If you have a portfolio of stocks and there are some bad corporate news overnight or over the weekend, you can hedge your portfolio in the Asian markets first (eg: buy Nikkei puts or sell Nikkei futures)
- SGX is the first major exchange to open up for trading in Asia and SGX's Nikkei market is available for trading from 7.45am Singapore time

Trading Strategies Examples - Spreading

- Assumption – General positive correlation between equity markets but events have differentiated impact on different markets
- New data may show that the electronic sector is doing better than other sectors, it is possible that the Taiwan market, which is heavily dependent on electronic, may outperform other markets (eg: buy MSCI Taiwan futures/sell Nikkei futures or buy MSCI Taiwan calls funded by selling Nikkei calls)
- As an Asian gateway, SGX offers a variety of Asian products which enjoys margin offsets against each other

Trading Strategies Examples – Speculation

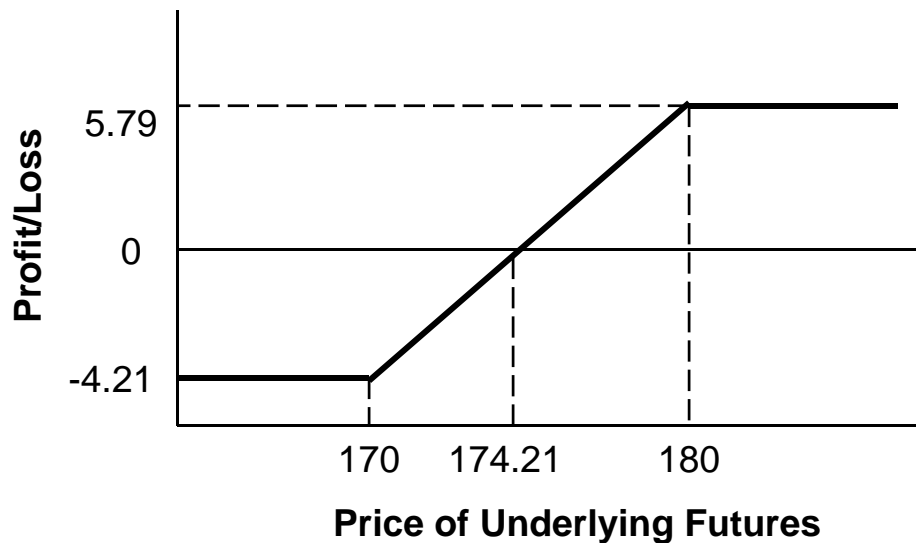


Views	Bearish	Neutral	Bullish
Volatility going down	1: Sell ATM/ITM Calls 2: Sell futures & sell OTM Puts 3: Sell OTM Call Spreads	1: Sell Straddles 2: Sell Strangles 3: Sell deep OTM Strangle Spreads	1: Sell ATM/ITM Puts 2: Buy futures & sell OTM Calls 3: Sell OTM Put Spreads
Volatility remain unchanged	1: Sell ATM/ITM Calls to fund buying OTM Puts 2: Sell futures 3: Buy Put Spreads	1: 1x2: Buy ATM Puts funded by selling 2x OTM Puts 2: Sell Horizontal Spreads 3: Sell Strangle Spreads	1: Sell ATM/ITM Puts to fund buying OTM Calls 2: Buy futures 3: Buy Call Spreads
Volatility going up	1: Buy ATM/OTM Puts funded by selling ATM/ITM Calls 2: Buy Put Spreads 3: Sell futures & buy ATM Call	1: Buy Straddles 2: Buy Strangles 3: Buy Horizontal Spreads	1: Buy ATM/OTM Calls funded by selling ATM/ITM Puts 2: Buy Call Spreads 3: Buy futures & buy ATM Put

Strategies are ordered in descending degree of risk such that 1: is the strategy with the highest risk. Strategies in red have unlimited risk.

Trading Example A – Long Bull Call Spread

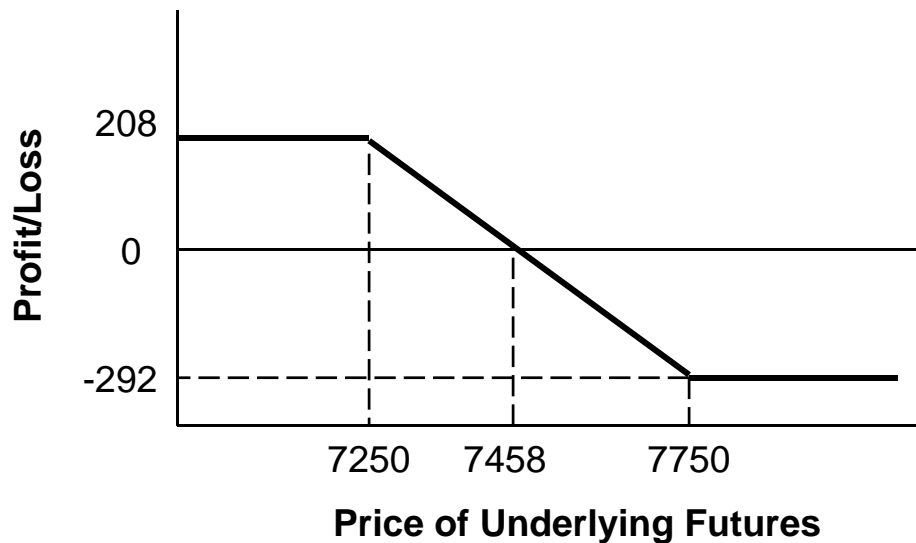
- **20 February 2009:** TW April 09: 167.5
- **BUY CALL SPREAD @ 4.21** – **Maximum loss is 4.21 points x US\$100 = US\$4,210**
- Buy one TW April 09 call option with strike price of 170 @ 9.75
- Sell one TW April 09 call option with strike price of 180 @ 5.54



- **16 March 2009:** TW April 09: 186.1
- **SELL CALL SPREAD @ 7.11**
- Sell one TW April 09 call option with strike price of 170 @ 19.62
- Buy one TW April 09 call option with strike price of 175 @ 12.51
- **PROFIT = 2.90 points x US\$100 = US\$290**

Trading Example B – Long Bear Put Spread

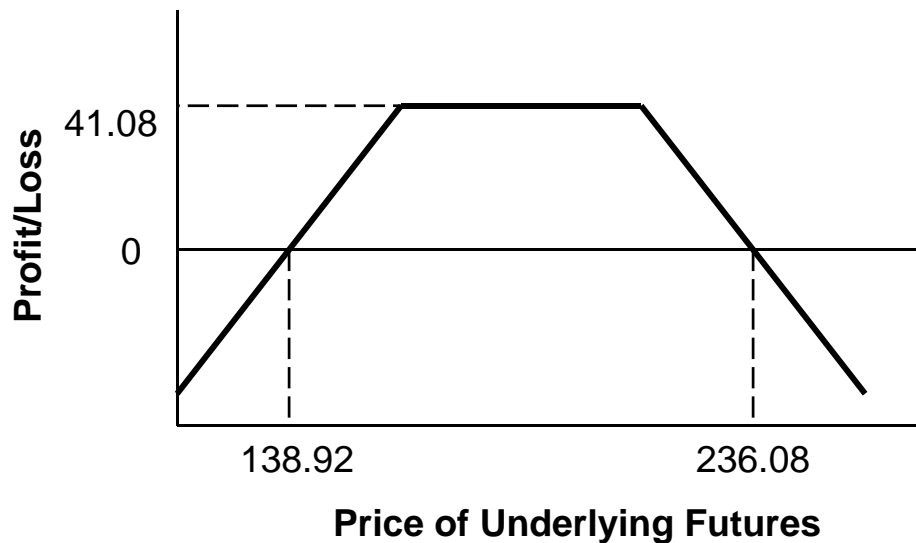
- **18 February 2009:** NK March 09: 7560
- **BUY PUT SPREAD @ 292 – Maximum loss is 292 points x Yen500 = Yen146,000**
- Buy one NK March 09 put option with strike price of 7750 @ 533
- Sell one NK March 09 put option with strike price of 7250 @ 241



- **4 March 2009:** NK March 09: 7270
- **SELL PUT SPREAD @ 330**
- Buy one NK March 09 put option with strike price of 7750 @ 526
- Sell one NK March 09 put option with strike price of 7250 @ 196
- **PROFIT = 38 points x Yen500 = Yen19,000**

Trading Example C – Short Strangle

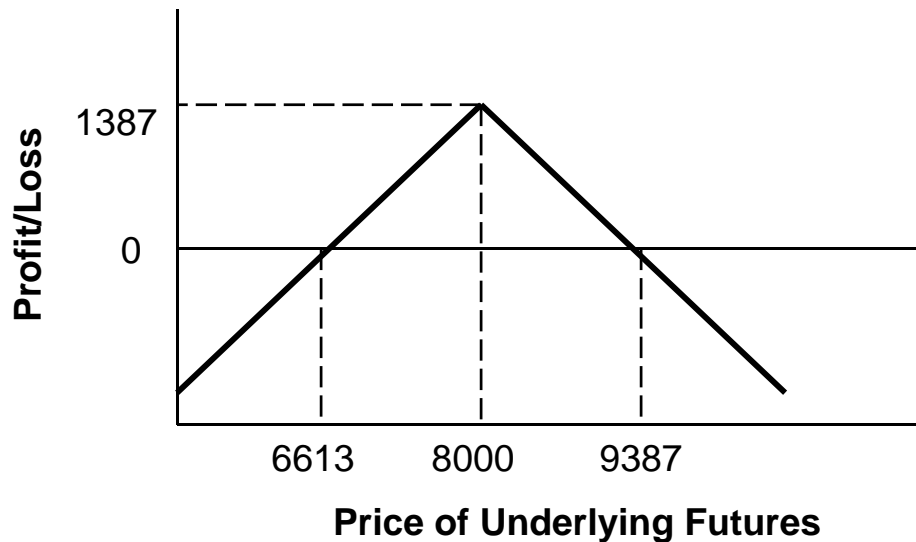
- **3 November 2008:** TW March 09: 191.7
- **SELL STRANGLE @ 41.08 – Maximum loss is unlimited**
- Sell one TW March 09 call option with strike price of 195 @ 22.98
- Sell one TW March 09 put option with strike price of 180 @ 18.10



- **16 March 2009:** TW March 09: 186.0
- **BUY STRANGLE @ 3.35**
- Buy one TW March 09 call option with strike price of 195 @ 1.13
- Buy one TW March 09 put option with strike price of 180 @ 2.22
- **PROFIT = 37.73 points x US\$100 = US\$3,773**

Trading Example D – Short Straddle

- 21 January 2009: NK March 2009: 7870
- **SELL STRADDLE @ 1387 – Maximum loss is unlimited**
- Sell one NK March 09 call option with strike price of 8000 @ 621
- Sell one NK March 09 put option with strike price of 8000 @ 766



- 11 March 2009: NK March 2009: 7365
- **BUY STRADDLE @ 643**
- Buy one NK March 09 call option with strike price of 8000 @ 2
- Buy one NK March 09 put option with strike price of 8000 @ 641
- **PROFIT = 744 points x Yen500 = Yen372,000**

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For information or enquiries, please contact:

E-mail: products@sgx.com
Telephone: 1800-CALL SGX
(2255 749)