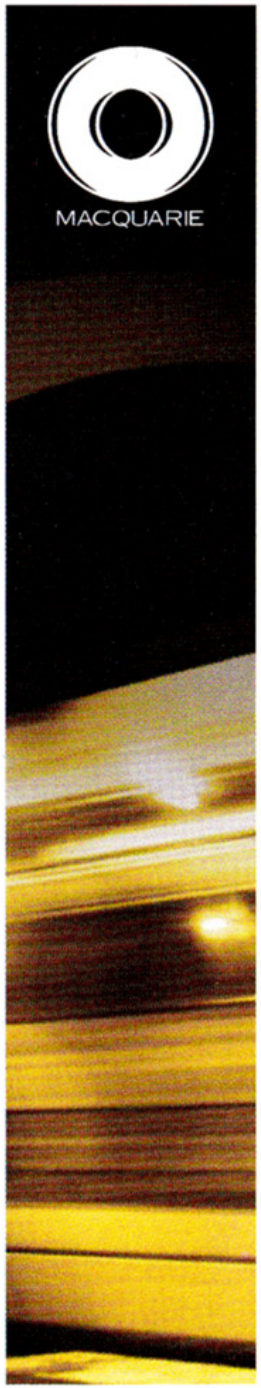
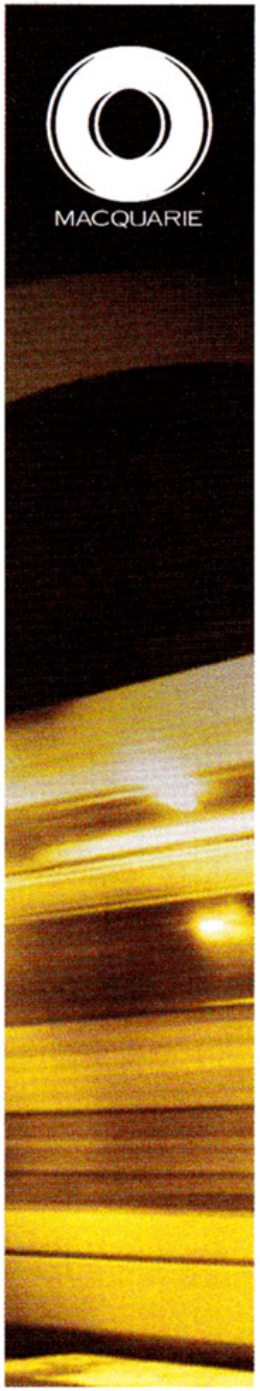


Deciphering warrant names

- STI 2800MBeCW111230@ (O4ZW)
- STI 2700MBePW111230@ (O4XW)

Feature	Term	Explanation
Underlying Index	STI	Straits Times Index
Exercise Level	2800	Exercise level for index warrants
Issuer	MB	Macquarie Bank Ltd.
Type	eCW	European style call warrant
	ePW	European style put warrant
Expiry Date	111230	YYMMDD Format; 30 December 2011
SIP Symbol	@	Specified Investment Products
Ticker	(O4ZW)	To identify warrant for trading

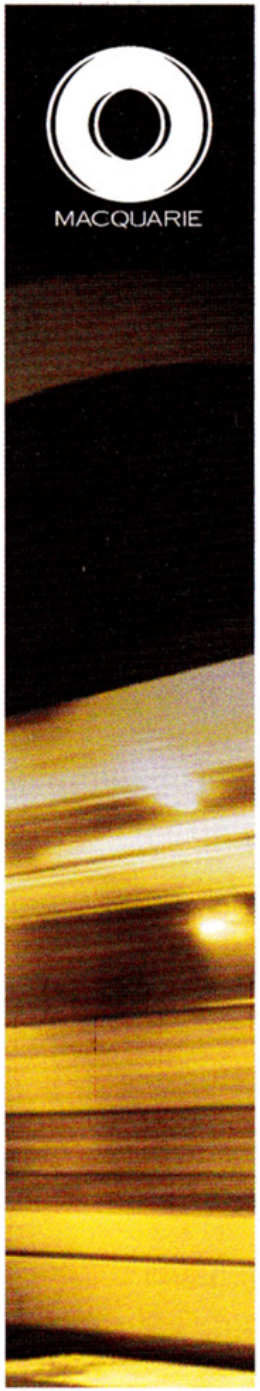


Warrant price determinants

Increase in...	Call	Put
1. Stock Price	↑	↓
2. Exercise Price	↓	↑
3. Expiry Date	↑	↑
4. Implied Volatility	↑	↑
5. Dividends	↓	↑
6. Interest Rates	↑	↓

Supply and demand forces can also strongly influence implied volatility and warrant prices

*Illustration assumes no change in other variables for each factor



Warrant price changes

Tracking daily % change

Comparing the current price with the last traded price may not be accurate – warrant may not have traded for days/weeks.

Below is a hypothetical example of a warrant that last traded on 16 Dec 11. If an investor was looking at the price on 28 Dec 11 and wants to know the % daily price change, the correct method is to compare to the closing bid price of the previous day.

Inaccurate way of calculating daily price change using last traded price:

16 Dec 11, 10:22 am: $0.065 (last traded price)

28 Dec 11, 3:36 pm: $0.050 (current price)

Published % price change in warrant = -23.1%

More accurate to look at bid/offer prices over period of comparison:

27 Dec 11, 4:59 pm: $0.042 (bid price at close of market)

28 Dec 11, 3:36 pm: $0.050 (current bid price)

Actual % price change in warrant = +19.0%

*Example is hypothetical and is used here for illustration only.

Warrant delta

Measures responsiveness of a warrant

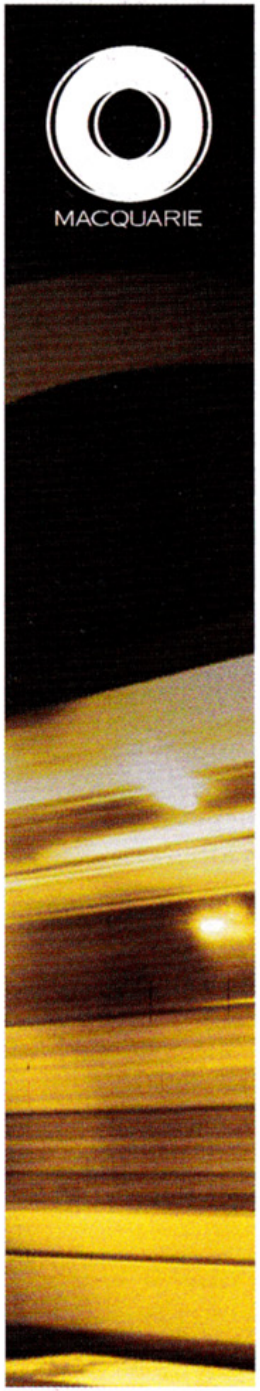
$$\text{Delta} = \frac{\text{Change in warrant price*}}{\text{Change in underlying share price}}$$

*Warrant price x warrants per share

General rule of thumb	CALL	PUT
In-the-money (max)	100%	-100%
At-the-money	50%	-50%
Out-of-the-money (min)	0%	0%

Higher delta → More responsive warrant

Note that offer spreads may be widened for warrants that are deep in or out of the money (general rule of thumb is delta <20% or >80%)



Warrant sensitivity

Single stock warrant example

Example of a call warrant

Type : Call warrant

Underlying : DBS

Expiry : 2 Nov 2011

Warrant price : $0.140

WPS : 5

Delta : 50%

Use Delta Per Warrant (DPW)

Delta per warrant = 50% ÷ 5 = 10%

How much does warrant move when DBS shares moves $0.01?

$0.01	x	10%	=	$0.001
(1 tick stock)		(DPW)		(1 tick warrant)

*Example is hypothetical and is used here for illustration only.

Warrant sensitivity

Index warrant example

Example of a HSI call warrant

Type : Call warrant

Underlying : HSI

Expiry : 29 Nov 2011

Warrant price : $0.155

WPS : 1000

Delta : 50%

Delta per warrant (DPW) = 50% ÷ 1000 = 0.05%

How much does HSI need to move for warrant to move $0.001?

$0.001 x 6.5000* ÷ 0.05% = 13

(1 warrant tick in HK dollars) (DPW) (index points)

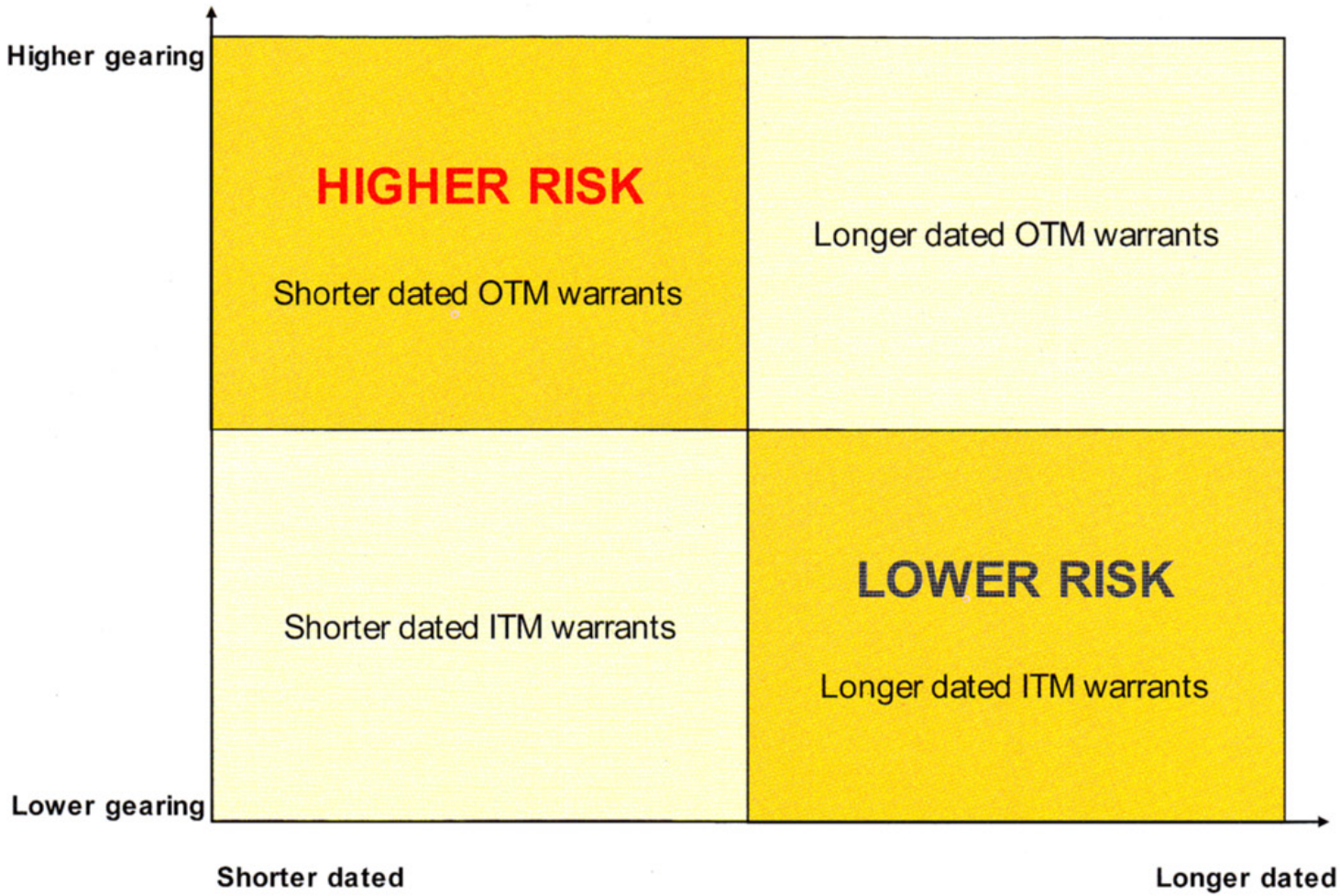
*Assuming FX rate for SGDHKD is $6.5000

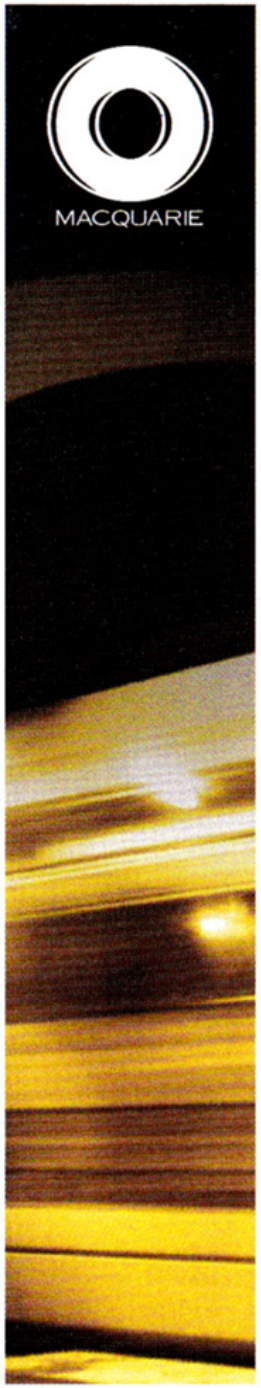
*Example is hypothetical and is used here for illustration only.

MACQUARIE

Risk matrix

Different warrants for different risk profiles





Measuring effective exposure

Using effective gearing

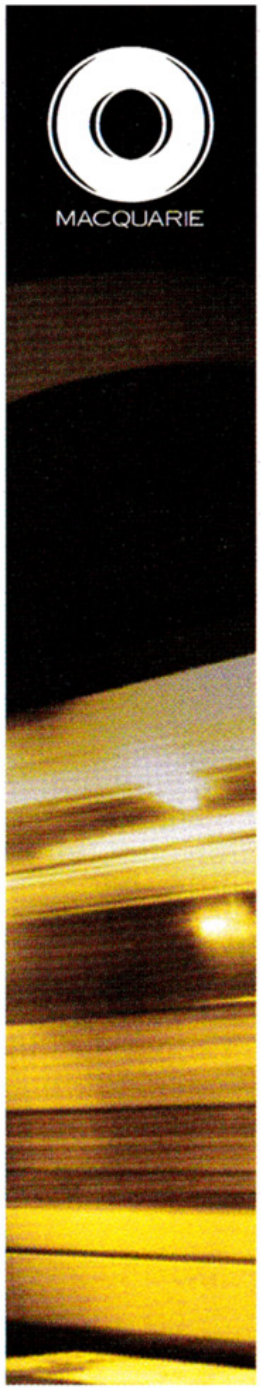
Effective gearing can help you determine your effective stock exposure

Example of a warrant with effective gearing = 5x

$10,000 Warrant investment x 5.0 = $50,000 Effective Stock Exposure*

$120,000 Effective Stock Exposure ÷ 5.0 = $24,000 Warrants Investment*

* Effective gearing provides an estimate only based on small movements in stock price
* These estimates assume no change in other factors such as volatility, dividends, etc
* Hypothetical example, for illustration only



Warrant premium

Calculating breakeven at expiry

Example of a Call warrant

Warrant price: $0.200 WPS: 5

Stock price: $13.20 Exercise price: $13.00

Cost of buying the share via the trading warrant

	$0.20 x 5	warrant price x warrants per share
+	$13.00	exercise price
=	$14.00	← Breakeven at expiry

Cost of buying the share directly

–	$13.20	share price

Difference

=	$0.80	premium	(6.1% of share price)

Settlement At Expiry

Warrants over shares

Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	2	3	4	5	6	7
	Day 1 Last day of trading	**Day 2** Warrant stops trading	**Day 3**	**Day 4**		
8	9	10	11	12	13	14
Day 5	**Expiry Date**					

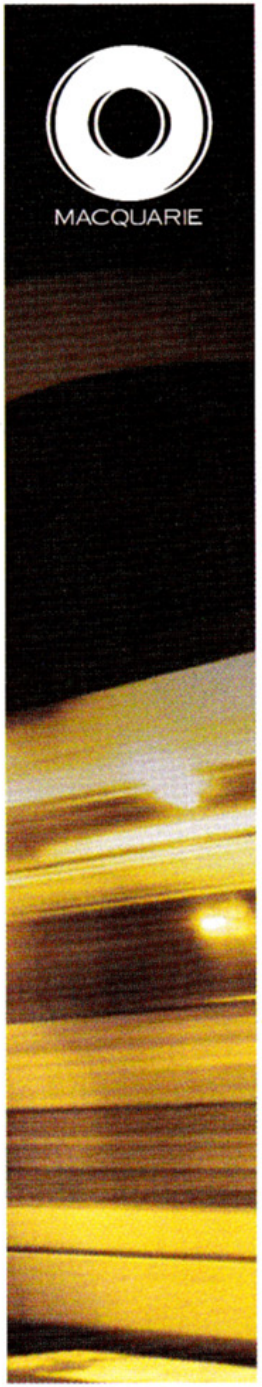
- **Call Warrants:**

  $$\text{Value at expiry} = \frac{(\text{5 Day Average Closing price} - \text{Exercise price})}{\text{Warrants per share}}$$

- **Put warrants:**

  $$\text{Value at expiry} = \frac{(\text{Exercise price} - \text{5 Day Average Closing price})}{\text{Warrants per share}}$$

- All structured warrants in Singapore are cash settled at expiry. A cheque will be sent to holder's CDP address within 10 business days after expiry for warrants that expire in the money



Settlement At Expiry

Warrants over STI/HSI

Mon	Tue	Wed	Thu	Fri	Sat	Sun
22	23	24	25	26	27	28
	Day 1 Last day of trading	**Day 2** Warrant stops trading	**Day 3**	**Day 4**		
29	30	31	32	33	34	35
Day 5	**Expiry Date**					

- **Call Warrants:**

$$\text{Value at expiry} = \frac{(\text{Settlement level of STI futures} - \text{Exercise level}) \times \text{FX rate}^*}{\text{Warrants per share}}$$

- **Put warrants:**

$$\text{Value at expiry} = \frac{(\text{Exercise level} - \text{Settlement level of STI futures}) \times \text{FX rate}^*}{\text{Warrants per share}}$$

* FX rate applies for foreign indices like HSI