



The ASX Equity Exchange Traded Options Market

- **Settlement Methodology
in Takeover Situations, and**
- **Number of Shares per Contract**

**ASX Consultation Paper
October 2008**

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EXECUTIVE SUMMARY

1. ASX has conducted a review of the Equity Exchange Traded Options (ETOs) market and will be phasing in a range of changes designed to improve the standard and quality of market making and make product and other market adjustments that will provide a better environment for growth in the ETO market in Australia.
2. This consultation paper seeks to gather market views on two matters germane to improved market making in ETOs: The ASX Settlement methodology in the event of takeovers - sometimes called "Fair Value" Settlement methodology; and the number of shares per standard contract.
3. The first proposition concerns whether ASX should adopt the ETO Fair Value Settlement methodology that has been successfully introduced by other markets including Euronext & Eurex.
4. The second proposition concerns whether the standard ASX ETO contract size; currently set at 1000 shares per contract should be reduced to 100 shares per contract.
5. ASX welcomes comment in response to this Consultation Paper. ASX would expect Market Makers, brokers and institutional users to suggest, in detail, reasoned arguments in favour, or against the proposals.
6. If ASX decides to pursue these initiatives the likely timeframe for a go-live is in calendar year 2009.

How to Respond to This Discussion Paper

7. Written responses should be addressed to ASX no later than 12 December 2008.
8. The identity of written responses will be kept confidential by ASX.
9. Written comments may be sent:
 - By mail to: David Stocken
Australian Securities Exchange
20 Bridge Street
Sydney 2000
 - By email to: david.stocken@asx.com.au
10. David Stocken is also available for face to face discussions with Sydney ETO stakeholders. Please call David on (02) 9227 0934.

CHAPTER 1 - INTRODUCTION

Background and Purpose of this Paper

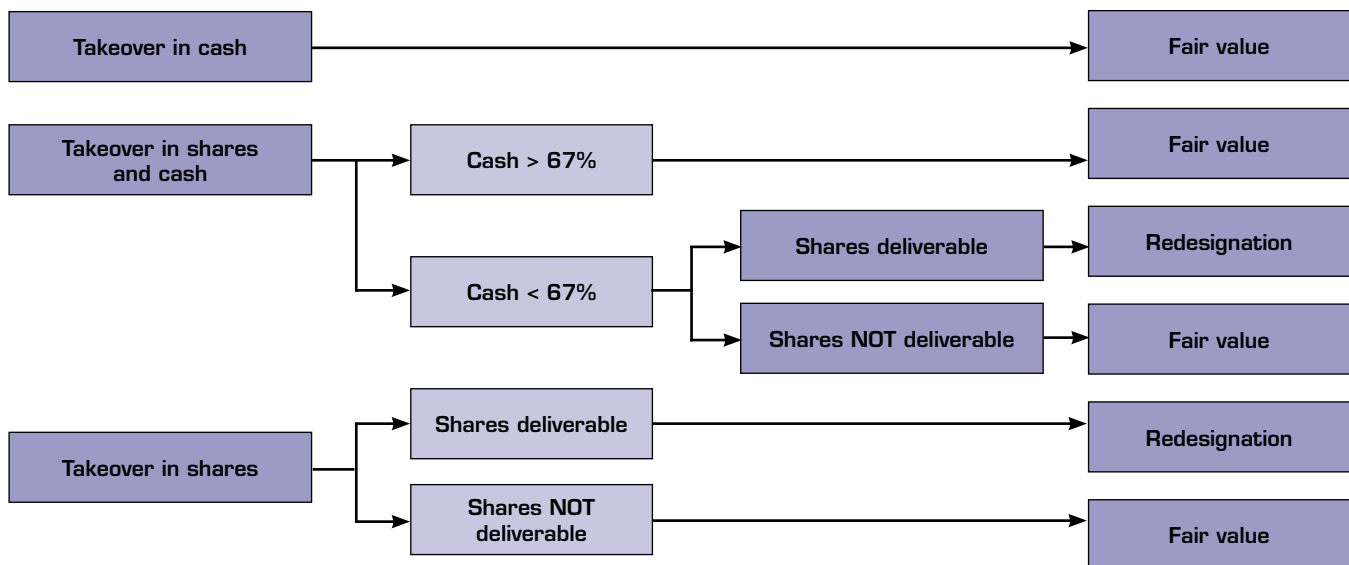
11. Volumes on the ASX ETO market have been stagnant for the last three years. This has occurred while other ETO markets are experiencing significant volume appreciation.
12. ASX has examined the market structure of other ETO markets looking to identify possible structural changes that may promote better quality markets and volume growth.
13. ASX has consulted with ETO stakeholders who have suggested that the European Fair Value Settlement Methodology and a change to the ETO contract size are two key structural changes that may help achieve desired volume growth and market improvement.

The Approach of this Paper

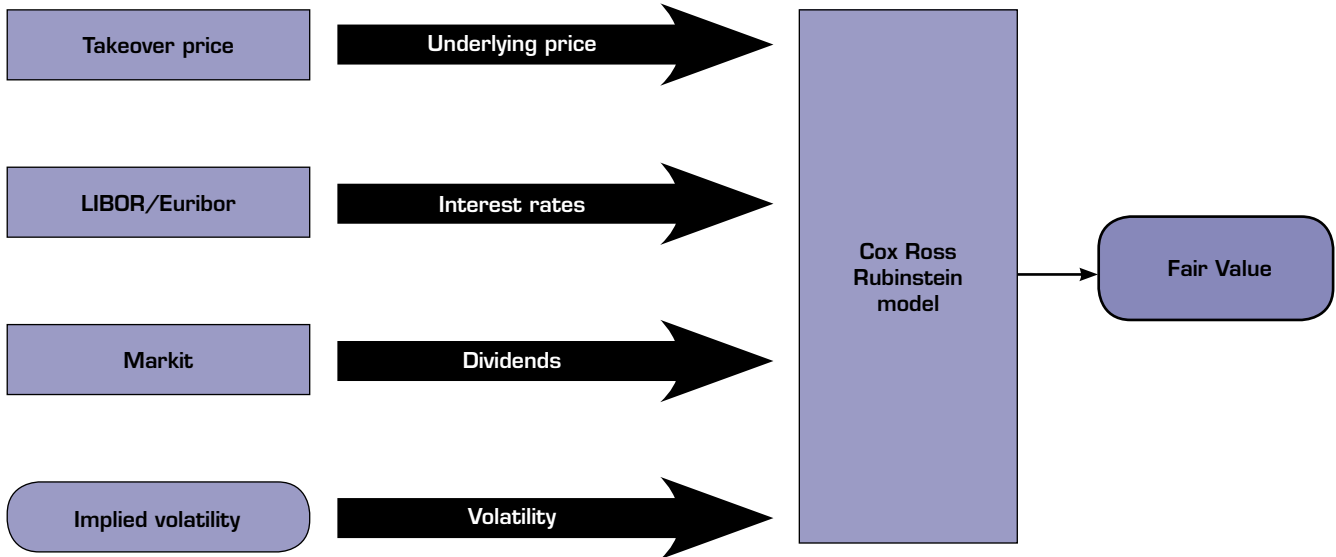
14. Chapter 2 of this paper explains the Fair Value Settlement Methodology. Diagrams cited are from the NYSE Euronext website; <http://www.euronext.com/fic/000/028/082/280822.pdf>
15. Chapter 3 examines how the Fair Value Settlement Methodology would have worked in a live situation. For this purpose we have chosen the 2008 takeover of Jubilee Mining (JBM).
16. Chapter 4 discusses the arguments for and against introducing the Fair Value Settlement Methodology.
17. Chapter 5 discusses implementation issues if ASX is to introduce the Fair Value Settlement Methodology.
18. Chapter 6 discusses the argument for changing the ETO contract size from 1000 to 100.
19. Chapter 7 discusses implementation issues if ASX is to change the contract size.

CHAPTER 2 - THE EUROPEAN FAIR VALUE METHOD EXPLAINED

20. Options cannot continue to exist when shares are taken over for cash. At present ASX uses the Intrinsic Value Settlement Methodology for ETOs in a cash takeover situation. This means that when the takeover is successful the expiry date for all ETOs is brought forward. All ETOs are then settled at intrinsic value. i.e., the difference between the strike price and the successful bid price.
21. For illustrative purposes this paper will use the Eurex and Euronext Fair Value Settlement Methodology which works in the following way:
22. When the offering company declares its bid unconditional, the ETOs over the target shares are delisted. The option is then settled in cash, using the fair value method. This method not only takes into account the intrinsic value of the ETO, it also preserves the remaining time value of the ETO.
23. Fair values are calculated for each ETO series and take into account strike price, remaining time to expiry and option style (European or American) and type (call or put).
24. Both Eurex and Euronext adopt the Fair Value Settlement Methodology when the cash component of an offer represents more than 67% of the total consideration and when the takeover bid is in shares which are not deliverable in the domestic market.

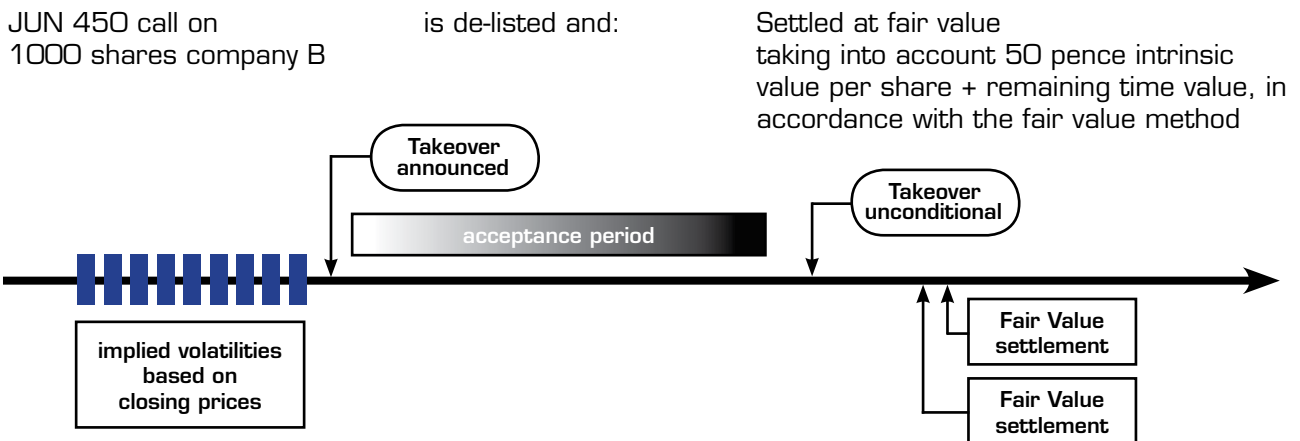


25. Fair values are calculated using the 'Cox Ross Rubenstein' option valuation model. The necessary inputs to calculate fair values using this model are;
- The price of the takeover bid.
 - The interest rate to be applied for the remaining life of the option.
 - Stock dividends as forecast by an independent provider.
 - Implied volatilities for each option series, which is calculated on the basis of the daily closing prices of these series 10 business days prior to the announcement of the bid.



26. Simple Fair Value example using Euronext methodology.

When company A takes over company B, whereby shareholders receive 500 pence for each share in company B, the option will be de-listed and settled at fair value, using the implied volatilities that are based on the closing prices prior to the bid.



CHAPTER 3 – Case Study-Jubilee Mining (JBM)

27. The Australian share market has historically experienced a high rate of takeovers relative to some other equity markets.
28. Since 2005, 28 stocks with ETOs have been subject to takeover activity.
29. In 2005, there were five cases (FOA, MAY, SMS, WMR & SRP) the last two of which were 100% cash.
30. In 2006, there were eight cases (AGL, RCD, SFE, PRK, MIG, BPC, DVC & HDR) the last three of which were 100% cash.
31. In 2007, there were 11 cases (PMN, TOL, ALN, PBL, ADB, CGL, MBL, OST, MYP RIN & SY1) of which the last three are 100% cash.
32. So far in 2008, there have been five cases (DXL, ZFX, JBM, SYB & MCQ) in which the last three were 100% cash.
33. On October 28, 2007 Jubilee Mining was the subject of a takeover. At this time the last traded price for JBM was \$17.10.
34. On January 31, 2008 the takeover offer for JBM went unconditional at \$23.00 per share.
35. The following tables highlight what would have occurred to the ETOs over JBM under a fair value settlement methodology; versus what actually occurred using the intrinsic value methodology.
36. These tables outline the differences in settlement prices for calls and puts across the April 2008, September 2008 and March 2009 expiries.
37. The different methods can result in very different settlement prices.

JBM Calls

| Expiry Month & Strike | Days to expiry | Implied Vol | Fair Value Price | Intrinsic Value Price | Difference |
|-----------------------|----------------|-------------|------------------|-----------------------|------------|
| Apr 08 \$1100 | 83 | 0.11% | \$12.00 | \$12.00 | |
| Sep 08 \$1100 | 238 | 45.91% | \$12.21 | \$12.00 | \$0.21 |
| Mar 09 \$1100 | 420 | 47.01% | \$12.38 | \$12.00 | \$0.38 |
| Apr 08 \$1300 | 83 | 34.60% | \$10.21 | \$10.00 | \$0.21 |
| Sep 08 \$1300 | 238 | 41.62% | \$10.33 | \$10.00 | \$0.33 |
| Mar 09 \$1300 | 420 | 46.89% | \$10.75 | \$10.00 | \$0.75 |
| Apr 08 \$1500 | 83 | 37.50% | \$8.25 | \$8.00 | \$0.25 |
| Sep 08 \$1500 | 238 | 40.99% | \$8.54 | \$8.00 | \$0.54 |
| Mar 09 \$1500 | 420 | 46.96% | \$9.27 | \$8.00 | \$1.27 |
| Apr 08 \$1700 | 83 | 36.93% | \$6.33 | \$6.00 | \$0.33 |
| Sep 08 \$1700 | 238 | 40.89% | \$6.90 | \$6.00 | \$0.90 |
| Mar 09 \$1700 | 420 | 47.25% | \$7.95 | \$6.00 | \$1.95 |
| Apr 08 \$1900 | 83 | 37.13% | \$4.53 | \$4.00 | \$0.53 |
| Sep 08 \$1900 | 238 | 40.84% | \$5.45 | \$4.00 | \$1.45 |
| Mar 09 \$1900 | 420 | 39.60% | \$6.25 | \$4.00 | \$2.25 |

JBM Puts

| Expiry Month & Strike | Days to expiry | Implied Vol | Fair Value Price | Intrinsic Value Price | Difference |
|-----------------------|----------------|-------------|------------------|-----------------------|------------|
| Apr 08 \$1100 | 83 | 47.30% | \$0.00 | \$0.00 | \$0.00 |
| Sep 08 \$1100 | 238 | 41.28% | \$0.02 | \$0.00 | \$0.02 |
| Mar 09 \$1100 | 420 | 58.73% | \$0.47 | \$0.00 | \$0.47 |
| Apr 08 \$1300 | 83 | 47.40% | \$0.01 | \$0.00 | \$0.01 |
| Sep 08 \$1300 | 238 | 41.38% | \$0.09 | \$0.00 | \$0.09 |
| Mar 09 \$1300 | 420 | 59.45% | \$0.90 | \$0.00 | \$0.90 |
| Apr 08 \$1500 | 83 | 46.00% | \$0.03 | \$0.00 | \$0.03 |
| Sep 08 \$1500 | 238 | 41.42% | \$0.25 | \$0.00 | \$0.25 |
| Mar 09 \$1500 | 420 | 59.45% | \$1.47 | \$0.00 | \$1.47 |
| Apr 08 \$1700 | 83 | 45.19% | \$0.13 | \$0.00 | \$0.13 |
| Sep 08 \$1700 | 238 | 41.58% | \$0.58 | \$0.00 | \$0.58 |
| Mar 09 \$1700 | 420 | 59.87% | \$2.18 | \$0.00 | \$2.18 |
| Apr 08 \$1900 | 83 | 44.02% | \$0.21 | \$0.00 | \$0.21 |
| Sep 08 \$1900 | 238 | 45.80% | \$0.25 | \$0.00 | \$0.25 |
| Mar 09 \$1900 | 420 | 41.58% | \$3.02 | \$0.00 | \$3.02 |

Fair Value Adjustments to all JBM series with Open Positions at the time of the bid JBM Calls

| Expiry Month & Strike | Days | Implied Vol | Fair Value Price | Intrinsic Value Price | Difference | Contracts Open |
|-----------------------|------|-------------|------------------|-----------------------|------------|----------------|
| Apr 08 \$1350 | 83 | 35.94% | \$9.72 | \$9.50 | \$0.22 | 3 |
| Apr 08 \$1450 | 83 | 37.13% | \$8.74 | \$8.50 | \$0.24 | 2 |
| Apr 08 \$1500 | 83 | 37.50% | \$8.25 | \$8.00 | \$0.25 | 26 |
| Apr 08 \$1600 | 83 | 37.00% | \$7.28 | \$7.00 | \$0.28 | 20 |
| Apr 08 \$1650 | 83 | 37.26% | \$6.80 | \$6.50 | \$0.30 | 4 |
| Apr 08 \$1700 | 83 | 36.93% | \$6.33 | \$6.00 | \$0.33 | 4 |
| Apr 08 \$1800 | 83 | 36.77% | \$5.40 | \$5.00 | \$0.40 | 8 |
| Sep 08 \$1300 | 238 | 41.62% | \$10.33 | \$10.00 | \$0.33 | 2 |
| Sep 08 \$1450 | 238 | 42.73% | \$9.00 | \$8.50 | \$0.50 | 3 |
| Jun 09 \$1000 | 511 | 43.60% | \$13.24 | \$13.00 | \$0.24 | 8 |
| Jun 09 \$1100 | 511 | 36.54% | \$12.28 | \$12.00 | \$0.28 | 1 |

Fair Value Adjustments to all JBM series with Open Positions at the time of the bid JBM Puts

| Expiry Month & Strike | Days | Implied Vol | Fair Value Price | Intrinsic Value Price | Difference | Contracts Open |
|----------------------------------|-------------|--------------------|-------------------------|------------------------------|-------------------|-----------------------|
| Apr 08 \$1000 | 83 | 48.71% | \$0.00 | \$0.00 | \$0.00 | 26 |
| Apr 08 \$1300 | 83 | 47.40% | \$0.01 | \$0.00 | \$0.01 | 45 |
| Apr 08 \$1350 | 83 | 47.16% | \$0.01 | \$0.00 | \$0.01 | 10 |
| Apr 08 \$1400 | 83 | 46.71% | \$0.01 | \$0.00 | \$0.01 | 10 |
| Apr 08 \$1450 | 83 | 45.78% | \$0.02 | \$0.00 | \$0.02 | 25 |
| Apr 08 \$1500 | 83 | 46.00% | \$0.03 | \$0.00 | \$0.03 | 40 |
| Apr 08 \$1550 | 83 | 45.24% | \$0.04 | \$0.00 | \$0.04 | 340 |
| Apr 08 \$1600 | 83 | 45.52% | \$0.07 | \$0.00 | \$0.07 | 28 |
| Apr 08 \$1650 | 83 | 45.20% | \$0.09 | \$0.00 | \$0.09 | 209 |
| Apr 08 \$1700 | 83 | 45.19% | \$0.13 | \$0.00 | \$0.13 | 141 |
| Apr 08 \$1750 | 83 | 45.71% | \$0.19 | \$0.00 | \$0.19 | 2 |
| Apr 08 \$2000 | 83 | 45.99% | \$0.66 | \$0.00 | \$0.66 | 500 |
| Jun 09 \$1100 | 511 | 44.70% | \$0.22 | \$0.00 | \$0.22 | 10 |
| Dec 10 \$1400 | 1057 | 43.94% | \$1.32 | \$0.00 | \$1.32 | 8 |

38. The method used for the above results was:

- a. For the 10 business days leading up to the takeover offer (from 15-26 October, 2007) settlement prices were obtained from the ACH on all JBM ETOs. Likewise the closing price of JBM was also obtained to gain the basis price for the ETOs.
- b. The rates used in the calculations were obtained from the BBA (British Bankers Association) for up to 1 year expiry – AUD Libor rate. For time periods greater than 1 year the COB AFMA Swap Rate (Mid-Point) has been used. Hence, rates for each day from 15-26 October 2007 were obtained from these sources going out three years.
- c. The relevant yield curves were then built using a linear interpolation method.
- d. The forecasted future dividends for JBM were obtained from Bloomberg going out until the furthest expiry date-which were:

| EX. DATE | AMOUNT |
|------------------|---------------|
| 03-Mar-08 | 0.3 |
| 03-Sep-08 | 0.37 |
| 03-Mar-09 | 0.31 |
| 03-Sep-09 | 0.38 |
| 03-Mar-10 | 0.32 |
| 03-Sep-10 | 0.39 |

- e. This information was then put into the 'Cox Ross Rubenstein' option valuation model using 500 binomial steps.

- f. Implied volatilities were then calculated for the 10 business days leading up until the takeover announcement. The highest and lowest results are discarded and the remaining eight volatilities are used to gain an average implied volatility for that particular ETO. If an ETO only has nine days of data due to its listing near the announcement, then the largest outlier, with respect to the average of the nine volatilities, is discarded to give the eight days. If the option only has eight or fewer days then a straight averaging of those days is used.
- g. The average implied volatility of each ETO series is put back into the option pricing model to gain an option price as at the COB on the day the takeover goes unconditional (31 January 2008). Interest rates used are also obtained for that day from the BBA and AFMA sources as described above. The same dividend assumptions that were used to calculate the original implied volatility are used to create the new ETO value.

CHAPTER 4 –Arguments for and against the Fair Value Settlement Methodology

39. The World Federation of Exchanges Corporate Actions Group meeting convened during IOMA Annual Conference, Mexico City 2007, noted; “The CAG recommends that exchanges conduct further consultations with market users on the question of fair value, and in particular the use of thresholds” (Executive Summary Point 3).
40. Furthermore, the CAG “renewed its recommendation that fair value would replace intrinsic value, although it noted only a few exchanges had implemented these changes”
41. The International Swaps and Derivatives Association (ISDA) supports the World Federation of Exchange’s attempt to harmonize corporate action adjustments and opines that “the preservation of economic value associated with exchange-traded derivative adjustments lends itself to transparency, orderly markets and fairness” (June 2006, ISDA Letter to World Federation of Exchanges).
42. Market Makers active in the ASX ETO market have asked ASX to change from the Intrinsic Value to the Fair Value settlement methodology.
43. These Market Makers argue there is a significantly higher inherent risk in making markets in long-dated ETOs under the Intrinsic Value regime.
44. Furthermore, they argue the Vega exposure on long-dated options under an Intrinsic expiry regime is extreme.
45. These Market Makers would therefore further argue that the Vega risk inherent in longer-dated ETOs under the Intrinsic Value settlement regime is the primary reason behind very thinly quoted and traded longer-dated ETOs.
46. In lay-terms, the Intrinsic method makes Market Making a high-risk activity, particularly for longer-dated ETOs. The quality of ETO price discovery is directly proportional to the prices that market makers are willing to provide. Therefore, the Intrinsic method is inherently worse than the European method for the quality of price discovery of the ASX ETO market.
47. Recommended trading strategies (adopted by any market users) designed to generate positive returns when stocks go up (such as buying upside call options and selling the required amount of stock as a delta hedge) can in fact generate negative returns in the event of a successful takeover bid using the Intrinsic Value method.
48. Consider the following example; On the 26/10/2007 an investor bought 200 March 2009 1900 calls at \$2.70 (ASX settlement price) and sold 100,000 JBM as a delta hedge at \$17.10 (stock’s closing price).
49. Under the Intrinsic Value settlement methodology the March 1900 calls would be settled at \$4 but under the Fair value settlement methodology the March 1900 calls would be settled at \$6.25.

| | Intrinsic Value Settle stock at \$23 Settle calls at \$4 | Fair Value Settle stock at \$23 Settle calls at \$6.25 |
|--------------------------------------|---|---|
| Sell 100,000 JBM at \$17.10 | -\$590,000 | -\$590,000 |
| Buy 200 JBM Mar 1900 calls at \$2.70 | +\$260,000 | +\$710,000 |
| Total P & L | -\$330,000 | +\$120,000 |

50. The biggest advantage in adopting the Fair Value settlement methodology is the retainment of time value for the holder of an ETO.
51. Consider the following buy-write example; on the 26/10/2007 an investor buys 100,000 JBM at \$17.10 and sells 100 JBM March 2009 \$17.00 calls at \$3.995 (ASX settlement price).
52. Under the Intrinsic Value settlement methodology the calls are settled at \$6 but under the Fair value settlement methodology the calls are settled at \$7.95.

| Intrinsic Value | Fair Value Settle stock at \$23 Settle calls at \$6 | Settle stock at \$23 Settle calls at \$7.95 |
|--|---|--|
| Buy 100,000 JBM at \$17.10 | +\$590,000 | +\$590,000 |
| Sell 100 JBM Mar 1700 calls at \$3.995 | -\$200,500 | -\$395,500 |
| Total P & L | +\$389,500 | +\$194,500 |

53. The 'sell stock/buy upside calls' and the 'buy/write' examples cited are simplistic in nature and exclude broker commissions and exchange fees etc. However they demonstrate the point regarding the relative unfairness in the Intrinsic Value method.
54. A disadvantage some users may suggest in adopting the Fair Value settlement methodology is the removal of a possible windfall arising from the evaporation of time value to the party that is short an ETO.
55. Other users in the market may believe they have the skills and resources to better assess likely future takeover targets and therefore be in a better position to take advantage of the Intrinsic method by 'buy-writing' into longer-dated ETOs.
56. ASX is not convinced by either of these arguments to retain the Intrinsic method. The ETO market is both a retail and an institutional market that needs high quality pricing. The better argument from the ASX perspective is that the inherently fairer nature of the Fair Value methodology is in the best interest of the majority of stakeholders in the ASX ETO market.
57. Under the current Intrinsic Value settlement regime, when stocks receive bids or there is supposition in the marketplace that stocks are likely to receive bids, market makers do not provide any quotes in longer-dated options.
58. Whilst there is no guarantee of ETO volume increases if the ASX moves to Fair Value Settlement, if market making obligations are also raised in the long-dated months there will be more prices on screens which should lead to more liquidity in longer-dated ETOs.
59. ASX would increase Market Maker quoting obligations in ETOs in conjunction with the possible introduction of the Fair Value Settlement methodology.

CHAPTER 5 – Implementation issues

Timing

- 60. If Fair Value settlement methodology is adopted, an appropriate time period will be set notifying the market of when the new regime will be introduced.
- 61. ASX notes that Eurex announced on October 9 2006 the introduction of the Fair Value settlement methodology effective January 1 2007.
- 62. If ASX is to introduce the Fair Value settlement methodology, then ASX proposes that a 6 month notice period to the market would be appropriate.

Pricing Inputs

- 63. In the worked example of the JBM takeover the Interest Rates used were the published BBA AUD Libor and AFMA 4.30 p.m. daily swaps rate. ASX would propose using these rates as the default for any Fair Value settlement determination.
- 64. In the worked example of the JBM takeover the dividend assumptions going forward were the published Bloomberg dividend assumptions. ASX would propose using dividend assumptions from a professional dividend estimation provider as the default for any Fair Value settlement determination.
- 65. Eurex and Euronext both use a cash takeover bid component threshold of 67% or higher to implement Fair value settlement. If the cash component of the bid is less than 67% the Fair Value settlement methodology is not used. ASX would propose using the 67% cash component threshold for any Fair Value settlement determination.
- 66. ASX notes that Eurex and Euronext both utilise a market maker allocation system to ensure complete market maker coverage into all ETO classes.
- 67. This allocation system of market makers ensures that quoting activity is present into relevant ETO series to ensure meaningful settlement prices are always generated in the event that Fair Value settlement needs to be determined.
- 68. With regards to the JBM example it should be noted that there were some aberrant settlement prices generated in series with no open positions.
- 69. In some far dated months such as June 2009 daily settlement prices were generated by ASX which were lower than those daily settlement prices for corresponding strikes listed in March 2009.
- 70. Consider the following table which shows Fair Value calculations for JBM \$1500 calls with expiry months between April 2008 and June 2009.

| Settle stock at \$23 | Settle stock at \$23 Settle calls at \$6 | Settle calls at \$7.95 |
|--|---|------------------------|
| Buy 100,000 JBM at \$17.10 | +\$590,000 | +\$590,000 |
| Sell 100 JBM Mar 1700 calls at \$3.995 | -\$200,500 | -\$395,500 |
| Total P & L | +\$389,500 | +\$194,500 |

| Expiry & Strike | Fair Value | Intrinsic Value | Difference | Implied Vol |
|-----------------|------------|-----------------|------------|-------------|
| Apr 08 \$1500 | \$8.25 | \$8.00 | \$0.25 | 37.50% |
| Sep 08 \$1500 | \$8.54 | \$8.00 | \$0.54 | 40.99% |
| Mar 09 \$1500 | \$9.27 | \$8.00 | \$1.27 | 46.96% |
| Jun 09 \$1500 | \$9.12 | \$8.00 | \$1.12 | 38.47% |

- 71. In this example we have a June 2009 \$1500 call with a Fair value settlement of \$9.12 which is less than the March 2009 \$1500 call with a Fair value settlement of \$9.27.
- 72. This is an illogical pricing proposition that came about as the result of a paucity of pricing data from the market in the longer dated March 2009 and June 2009 series. When open positions are low or non-existent pricing data from the market can often be limited or non-existent.

73. However, generally speaking, Market Makers themselves are reasonably pro-active in generating pricing data into long dated series in which they have established open positions. Market Makers do this to ensure that daily settlement prices are in line and therefore their margin obligations are also in line.
74. The successful introduction of the Fair Value settlement methodology is also dependant upon the provision of rational daily settlement prices by the ASX.
75. As a prerequisite to introducing the Fair Value settlement methodology ASX would introduce more stringent market maker obligations covering a quote response obligation across all listed months.
76. As another prerequisite to introducing the Fair Value settlement methodology ASX would need to introduce a market maker allocation system for Category 1 and Category 2 option classes.
77. ASX proposes that if Fair Value settlement methodology was to be introduced it would be for all ETO classes. This would mean that initially all Flex ETO classes would either be upgraded into Category 2 and included in the market maker allocation system – or else be delisted.
78. Flex classes that had been upgraded to Category 2 class but continue to record poor trading and open position metrics will be de-listed over time.

79. CHAPTER 6 – The argument for changing the contract size.

80. ASX currently has a standard contract size of 1,000 shares per contract for regular ETO classes (e.g., BHP, NAB, TLS etc.).
81. All new single stock ETOs listed are listed with 1,000 shares per contract.
82. The only situation where regular ETOs will have a different contract size will be those ETOs that have had their contract size adjusted because of a Corporate Action.
83. Most other exchanges list their single stock ETOs with a contract size of 100 shares.
84. The ASX ETO market began in 1976 when, on average, stock prices were rarely in excess of \$10.
85. However, after 30 years, the ASX now has many stocks (with listed ETOs) with stock prices well in excess of \$10 (e.g., BHP, NAB, CSL, WPL, RIO etc).
86. Therefore it is appropriate to review the contract size.
87. The primary reason motivating a possible change in the regular ETO contract size is to facilitate more involvement from retail clients.
88. Currently with BHP at \$38.00 a retail client must have access to \$38,000 worth of BHP shares to conduct a buy/write over 1 BHP ETO contract.
89. By lowering the contract size to the international standard of 100 shares per contract a retail client would only need to have access to \$3,800 worth of BHP shares to conduct a buy/write over 1 BHP ETO contract.
90. Likewise, by dropping the contract size, institutional investors would be able to deal in more precise dollar hedging against their overall portfolio.
91. By facilitating this extra opportunity for both retail and institutional investors, ASX can develop volume growth and enhanced market efficiency in the ETO market.

92. CHAPTER 7 – Implementation issues.

93. The primary issue with introducing a 100 share contract size is the timing of listing the new ETOs.
94. There are three timing options regarding delivery of 100 share ETO contracts;
95. Option 1-List new 100 share contracts after the furthest listed contract. The ASX ETO market currently has options listed as far out as the December 2013 expiry.
96. Option 2-Employ a forced migration where-by all contracts are adjusted to 100 shares per contract.
97. Option 3- Introduce new 100 share contracts into each specific ETO class each time a new expiry month is listed on that ETO class.
98. Each of the three options have their own pros and cons.
99. Option 1 is the cleanest way to deliver 100 share contracts but would not deliver benefits to the market until 2014.
100. Option 2 delivers the benefits to the market in a timely fashion but would involve adjustments for every currently listed ETO. Some of these adjustments would be complex and involve cash adjustments.

101. Option 3 delivers the benefits to the market in a phased fashion but involves having a multi-listed environment which may cause some confusion in the marketplace.
102. For example, regarding Option 3, at the moment, ASX does not currently have BHP options listed with a November 2009 expiry.
103. Therefore when ASX does list BHP November 2009 options they would come on with a 100 share contract multiplier.
104. This would mean that for a number of years, the ASX ETO market would have differing contract multipliers within an ETO class.
105. For example, in BHP a June 2009 option may have a contract size of 1000 shares, a November 2009 option may have a contract size of 100 shares and a June 2010 option may have a contract size of 1000 shares.
106. Ultimately, after previously listed ETOs had expired, ASX would eventually have an ETO market with a standard contract size of 100 shares (unless adjusted for Corporate Actions) per contract.
107. During the multi-listed (1000 or 100 share contract multiplier period), this will create some difficulty for ETO users wishing to transact Tailor Made Combinations (TMCs).
108. This is because TMCs allow a maximum of a 4 to 1 ratio. TMCs between ETOs with a 1000 share contract size and a 100 share contract size will not be able to be transacted due to the 4 to 1 ratio limit.
109. However, ETO users would be able to transact between 1000 share contracts and 100 share contracts by using the ITS Bulletin Board.

Questions arising from this paper

Stakeholders wishing to draft a written reply to this proposal paper may like to consider the following questions.

1. Should ASX introduce the European "Fair Value" Settlement methodology? Why?
2. If ASX is to introduce "Fair Value" Settlement methodology would a notice period of six months be appropriate? Why?
3. If ASX is to introduce the Fair Value settlement methodology should the BBA AUD Libor and daily AFMA 4.30 p.m. swaps rate be used as the interest rate? Why?
4. If ASX is to introduce the Fair Value settlement methodology should a 67% threshold to be used to determine whether or not to proceed to Fair Value settlement? Why?
5. If ASX is to introduce the Fair Value settlement methodology should it be implemented when the bidder has declared the offer unconditional (as per Eurex and Euronext) or should it be implemented after compulsory acquisition has occurred? Why?
6. Should ASX change the regular ETO contract size from 1000 shares to 100 shares per contract? Why?
7. If the contract size is to be 100 shares which of the 3 transitioning options should ASX employ? Why?