Spotlight Test: Convertible Bonds
Worked Solutions

Question 1

ABC PLC has issued a convertible bond successfully. The terms of the bond are as follows.

Par value of each bond	£100
Conversion ratio	50
Conversion premium	100%

What is ABC's share price at issue?

(a) £2.
(b) £4.
(c) £0.50.
(d) £1.
(e) don't know.

Answer

The right answer is (d) £1

The conversion ratio is the number of shares into which each bond will convert. Thus £100 bond converts into 50 shares, giving a nominal £2 per share. The conversion premium is the premium that the £2 represents over the share price at issue. If the £2 at conversion is 100% over the share price at issue, then the price at issue must be £1.

Manual VIII Ch 3.

Question 2

When raising long-term capital the treasurer can select from instruments which combine the characteristics of both debt and equity. If the treasurer decides to issue a convertible, which of the following is most likely to be true?

(a) the issue is intended to be debt which is likely to be pre-paid before conversion. The conversion is incorporated in case repayment is not possible.
(b) the issue is intended to be debt. The conversion is arranged so that conversion is very unlikely.
(c) the issue is intended to be deferred equity. It is intended that conversion should take place so that the debt is seen as being temporary.
(d) the yield is the lowest available for the company at the time.
(e) don't know.

Answer

The right answer is (c) The issue is intended to be deferred equity. It is intended that conversion should take place so that the debt is seen as being temporary.

Any pre-payment before conversion, if a part of the initial agreement, would be required to compensate investors appropriately. This would clearly involve buying out the equity option inherent in the convertible or adjusting the coupon as a form of compensation. If conversion is "very unlikely" then the option value of that conversion is low hence the discount from the market debt cost will be low. This will generate limited interest from both the debt and equity investment community.

Manual VI Ch 4, Manual VIII Ch 3.

Question 3

Which of the following statements best describes the difference between a convertible bond and a bond issue with warrants?

(a) for both a convertible and a bond with warrants the debt obligation ceases to exist after conversion / exercise.
(b) the debt obligation for a convertible ceases after conversion, but remains after the exercise of warrants.
(c) the debt obligation ceases after exercise off warrants, but remains after a convertible's conversion.
(d) the conversion rights of a convertible can be traded separately from the bond but this is not possible with warrants.
(e) don't know.

Answer

The right answer is (b) the debt obligation for a convertible ceases after conversion, but remains after the exercise of warrants.

Manual VIII Ch 3.

Question 4

Using research based on the US financial markets between 1973 and 2000 convertibles were found to be between equity and debt in terms of both risk (i.e. standard deviation) and return (compound annual return). Interestingly, within that overall outcome of the research, which of the following statements is true?

(a) convertibles were closer to equity on return, but closer to debt on risk.
(b) convertibles were closer to debt on return but closer to equity on risk.
(c) convertibles were closer to debt on both risk and return.
(d) convertibles were closer to equity on both risk and return.
(e) don't know.

Answer

The right answer is (a) convertibles were closer to equity on return, but closer to debt on risk.

The Treasurer Jan/Feb 2004 The Fine Art of Issuing by Kwasi Kwarteng.

Question 5

Convertible PLC has been advised that it can issue 10-year straight debt at a yield of 6.5% (annual). Instead, the company could issue a comparable maturity convertible bond at par with a coupon of 4.5% (annual). Assuming that this advice is correct, what is the value of the conversion option implied?

(a) 2%.
(b) 14.16%.
(c) 14.27%.
(d) 14.38%.
(e) don't know.

Answer

The right answer is (d) 14.38%

If the market yield for an issue of straight debt over 10 years is 6.5%, then this is the figure against which the coupon of the convertible should be compared. Listing the cash flows of 4.5% each year plus principal repayment in year 10 and then discounting at 6.5% gives a value of 85.622. The difference between par (100) and this value is 14.378. Assuming that the advice is correct and that the issue is successful, this is the value which investors will place on the option value.
Alternatively, the 'discount' of 2% per annum could be discounted for the 10-year life to yield the same result.

Manual VIII Ch 3.

Question 6

Hedge funds are said to be a major investing force generating demand for convertible debt. If a hedge fund is seeking an investment which follows the equity price of a particular company, which of the following would be best?

(a) convertible debt with a high conversion ratio.
(b) convertible debt with a low conversion ratio.
(c) convertible debt with a high conversion premium.
(d) convertible debt with a low conversion premium.
(e) don't know.

Answer

The right answer is (d) convertible debt with a low conversion premium

The conversion ratio on its own is meaningless in this context. It specifies the number of shares into which each bond may be converted. The conversion premium specifies how close the current share price is to equating the value of the bond to the value of the converted shares. Thus, for example, if the conversion premium were zero, then the bond price movement might move in parallel with the share price movement, allowing for the value differential between the coupon and the dividend. If the share value is only half of that value, then each movement in share price is unlikely to have such a close relationship to the bond price.

Manual VIII Ch3.