

# **Estimate of the Fair Value of a Convertible Note**

# as of July 17, 2017 Prepared for Buyco

August 15, 2017

by

# **DwightGrantConsulting**

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## Draft

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### Buyco

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#### Buyco Estimate of the Fair Value of a Convertible Note Executive Summary

#### (1) Valuation Results for Conversion Price of \$26.85

Fair Value of Convertible Notes	\$98,263,026
Fair Value of Convertible Notes (rounded)	\$98,263,000
Valuation Results for Conversion Price of \$24.17	
Fair Value of Convertible Notes for conversion price of	\$103.274.493

Fair Value of Convertible Notes for conversion price of\$103,274,493Fair Value of Convertible Notes (rounded)\$103,274,000

#### Footnote(s):

(1) See Exhibits 2 to 7.

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#### Buyco Estimate of the Fair Value of a Convertible Note Terms

USD

Terms	
(1) Issuance Date	4/24/2014
(1) Maturity Date	April 24, 2021
(1) Interest Payment Date	April 23, and October 23 of each year
(1) Interest Rate	4.625%
(1) Conversion Price	\$26.85
(1) Conversion Price	\$24.17
(1) Redemption	The Convertible Note is callable after April 24, 2019 at 105% of face value after is the stock price exceeds 130% of the conversion price.

### Footnote(s):

(1) Based on the agreement.

#### Buyco Estimate of the Fair Value of a Convertible Note Methodology

USD

Assignment	On July 17, 2017 Buyco acquired Sellco in an exchange of shares. As part of the transaction Convertible Notes issued by Sellco became Convertible into Buyco common stock. The face value of the Convertible Notes is \$87,452,000. Before the acquisition each \$1,000 Convertible Note could be exchanged for 74.488 shares of Sellco. Buyco acquired each share of Sellco by exchanging 0.5 shares of common stock of Buyco for each share of common stock of Sellco. Instead of setting the conversion rate at 37.244 shares of Buyco Common stock per \$1,000 note, the conversion rate was set at 41.382. We were asked to value the Convertible Note for both conversion ratios 37.244 and 41.382.
Methodology	We valued the Convertible Note using a widely accepted methodology developed by Tsiveriotis, K. and C. Fernandesa*. This method uses three This method uses three lattices to track 1) the common stock price, 2) the value of the debt component of the Convertible Note and 3) the value of the equity component of the Convertible Note. The latter two are required because the debt payments are discounted by the credit adjusted discount rate while the value received in conversion is discounted by the risk-free rate, consistent with the evolution of the common stock price lattice on which they are based. At each date and stock price, the value of the Convertible Note is the sum of the values in the debt and conversion lattices.
	This is a short summary with an example that is taken from an article I published in the Business Valaution Review on the pricing of convertible debt.**



\*Tsiveriotis, K. and C. Fernandes (1998): "Valuing Convertible Bonds with Credit Risk," Journal of Fixed Income, Vol 8, 95-102. \*\*Dwight Grant, "Comparing Three Convertible Debt Valuation Models", Forthcoming in the Business Valuation Review, Spring 2017.

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#### Buyco Estimate of the Fair Value of a Convertible Note **Valuation Inputs**

USD

Inputs	
(1) Issuer	Buyco
(1) Outstanding notional	\$87,452,000
(1) Maturity date	April 24, 2021
(1) Coupon	4.625%
(1) Conversion price (a)	\$26.85
(1) Conversion ratio (a)	37.244
(1) Conversion price (b)	\$24.17
(1) Conversion ratio (b)	41.382
(2) Common stock price	\$21.42
(2) Dividend yield	0%
(3) Volatility	35%
(4) Credit spread	5.00%
(5) Risk-free rate	1.66%

Footnote(s):

(1) Based on the Agreement.

(2) S&P Capital IQ(3) Refer to Exhibit 5.

(4) Refer to Exhibit 6.

(5) Interpolation of US Constant Maturity Treasury Rates taken from https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yield

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Buyco Estimate of the Fair Value of a Convertible Note Volatility

We calculated the annualized volatilty of Buco's common stock for the previous 3 years, 3.77 years and 4 years using weekly price data. The results were 38%, 36% and 33% respectively. Therea re no traded options on Buyco's common stock.

Selected Equity Volatility

35%

Buyco Estimate of the Fair Value of a Convertible Note Credit Spread

Buyco has non-callable traded debt with maturities of 4.2, 5.1 and 7.3 years that yield 5.05%, 5.17% and 5.27% respectively. We selected a yield of 5.00% for the Convertible Note.

#### Buyco Estimate of the Fair Value of a Convertible Note Sample Lattices

USD

Stock Price Lattice							Conversion Value Lattice (per \$100 note; conversion price = \$26.85)								
Row/Step	0	1	2	3		59	60		0	1	2	3		59	60
1	\$21.42	\$23.38	\$25.53	\$27.87		\$3,790.27	\$4,137.80		\$47.32	\$56.45	\$66.73	\$78.18		\$14,116.45	\$15,410.79
2		\$19.62	\$21.42	\$23.38		\$3,180.33	\$3,471.93			\$38.86	\$46.92	\$56.13		\$11,844.79	\$12,930.83
3			\$17.97	\$19.62		\$2,668.54	\$2,913.21				\$31.37	\$38.37		\$9,938.69	\$10,849.96
4				\$16.46		\$2,239.11	\$2,444.41					\$24.87		\$8,339.32	\$9,103.95
29						\$27.87	\$30.42							\$54.78	\$113.31
30						\$23.38	\$25.53							\$0.00	\$0.00
31						\$19.62	\$21.42							\$0.00	\$0.00
59						\$0.12	\$0.13							\$0.00	\$0.00
60							\$0.11								\$0.00

B	ond Value	Lattice (pe	er \$100 not	e)		
Row/Step	0	1	2	3	 59	60
1	\$65.04	\$60.37	\$54.96	\$49.21	 \$0.29	\$0.29
2		\$69.94	\$65.35	\$60.24	 \$0.29	\$0.29
3			\$74.24	\$70.11	 \$0.29	\$0.29
4				\$78.15	 \$0.29	\$0.29
29					\$51.96	\$0.29
30					\$100.16	\$100.29
31					\$100.16	\$100.29
59					\$100.16	\$100.29
60						\$100.29

0	1	2	3	 59	60
\$112.36	\$116.82	\$121.70	\$127.39	\$14,116.74	\$15,411.0
	\$108.80	\$112.27	\$116.37	\$11,845.08	\$12,931.12
		\$105.62	\$108.48	\$9,938.97	\$10,850.2
			\$103.02	\$8,339.61	\$9,104.2
				\$106.75	\$113.60
				\$100.16	\$100.2
				\$100.16	\$100.2
				\$100.16	\$100.2
					\$100.2