



Estimate of the Fair Value of an Earnout

as of July 31, 2107

Prepared for Buyco

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by

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Draft

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Estimate of the Fair Value of an Earnout
Executive Summary

(1) **Valuation Results**

Fair Value of the Earnout	\$850,771
Fair Value of Earnout (rounded)	\$851,000

Footnote(s):

(1) Refer to Exhibits 2 to 4.

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Assignment and Methodology

Assignment

On July 31, 2017 Buyco acquired Sellco in a cash transaction for 100% of Sellco's common stock. In addition to the cash payment, Buyco agreed to pay Sellco's shareholders 40% of the difference between Sellco's realized EBITDA and forecast EBITDA for each of the next two fiscal years ending July 31, 2018 and July 31, 2019. Forecast EBITDA, as supplied by Management, is \$10.00 million for 2018 and \$12.75 million for 2019. The earnout payment for 2019 is subject to an additional requirement that realized total EBITDA for the two years exceed the forecast total EBITDA for the two years (the "clawback"). We were asked to calculate the fair value of the earnout as of the transaction date July 31, 2017.

Methodology

We used a "real options" approach to valuation as described in the attached article.¹ The essence of the idea is that the variable determining the size of the earnout payment, EBITDA, is "priced" and then treated as the underlying variable in an option valuation calculation. Priced means it is valued as if it traded as a stand alone security. This means calculating the present value of each year's EBITDA. We accomplish this by discounting EBITDA at Sellco's WACC. We calculate the WACC by examining the systematic risk and capital structures of five comparable companies. See Exhibit 4, which also reports the results of our calculation of the appropriate volatility to use in valuing the earnout.

Exhibit 3 displays the calculations. The two earnout payments based on just the realized EBITDA and not considering the clawback can be valued using a Black-Scholes-Merton formula as shown in Exhibit 3. However, the clawback creates a path-dependency that requires the application of the Monte Carlo simulation method of valuing options. We display that in Exhibit 3.



Footnote(s):

¹ Dwight Grant, "Valuing Contingent Consideration Using Option Pricing," Business Valuation Review 30 4 (2011) 121 - 131.

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Valuation

Valuation			Monte Carlo Simulation (in thousands)						
			2018		2019				
			Iteration	EBITDA	Earnout	EBITDA	Earnout*	Earnout**	
(2)	Forecast EBITDA for 2018	\$10,500	1	\$8,222	\$0	\$4,958	\$0	\$0	
(2)	Forecast EBITDA for 2019	\$12,750	2	\$9,154	\$0	\$8,571	\$0	\$0	
(3)	Risk-free rate	1.60%	3	\$11,010	\$204	\$12,991	\$96	\$96	
(4)	WACC	8.04%	4	\$9,118	\$0	\$10,062	\$0	\$0	
(4)	Annual asset volatility	35%	5	\$8,219	\$0	\$11,036	\$0	\$0	
	Percentage of EBITDA in Excess of forecast paid to earnout	40%	6	\$10,524	\$10	\$8,325	\$0	\$0	
(5)	"Price" of 2018 EBITDA	\$10,102	7	\$8,834	\$0	\$5,374	\$0	\$0	
(5)	"Price" of 2018 EBITDA	\$11,354	8	\$7,793	\$0	\$12,997	\$99	\$0	
			9	\$7,066	\$0	\$5,654	\$0	\$0	
			...	\$10,418	\$0	\$13,886	\$454	\$454	
			...	\$10,771	\$108	\$9,680	\$0	\$0	
			...	\$8,311	\$0	\$7,739	\$0	\$0	
(6)	σ	28.2% 34.4%	99996	\$10,066	\$0	\$7,015	\$0	\$0	
	T	0.50 1.5	99997	\$13,800	\$1,320	\$10,569	\$0	\$0	
	Call	\$667,446 \$1,487,081	99998	\$7,363	\$0	\$5,049	\$0	\$0	
(1)	Earnout	40% 40%	99999	\$9,094	\$0	\$15,081	\$932	\$932	
	Earnout	\$266,978 \$594,832	100000	\$9,219	\$0	\$10,834	\$0	\$0	
	Concluded Value			Expected present value	\$10,099	\$263	\$11,369	\$562	\$551
	2018	\$266,978							
	2019	\$594,832							
	Clawback	-\$11,040							
	Total	\$850,771							

* This value ignores the clawback provision.
** This value includes the clawback.

Footnote(s):

- (1) Based on the Agreement.
- (2) Source: Management.
- (3) US Constant Maturity Treasury Rates as obtained from S&P Capital IQ.
- (4) Refer to Exhibit 4.
- (5) Forecasts discounted at the WACC for 0.5 and 1.5 years respectively following the half-year convention.
- (6) A half-year volatility is approximately equal to 57% of a full year volatility, which in this case is 0.57(35%). If we divide this by the square root of T we have 28.2%.
Similarly, $34.4\% = (28.2\%^2 + 35\%^2)^{1/2}$

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WACC and Volatility

Company	Total Debt (1)	Market Cap (1)	Equity Beta (1)	Equity Volatility (1)	Asset Beta (2)	Asset Volatility (2)
Comp 1	\$22,314	\$87,569	1.24	42%	1.06	36%
Comp 2	\$14,972	\$65,986	0.97	32%	0.84	28%
Comp 3	\$0	\$45,987	1.05	31%	1.05	31%
Comp 4	\$8,976	\$54,329	1.52	39%	1.37	35%
Comp 5	\$4,876	\$35,692	1.22	37%	1.12	34%
Mean			1.20	36%	1.09	33%
Median			1.22	37%	1.06	34%
Selected					1.09	35%

(3) Sellco \$5,986 \$84,765 1.14

Financing of Sellco

	Proportion	Cost	Weighted
Debt	7%	2.40%	0.16%
Equity	93%	8.44%	<u>7.88%</u>
WACC			8.04%

Footnote(s):

- (1) Source: Most recent two years of data from S&P Capital IQ.
- (2) Based on the Hamada Model
- (3) Based on Sellco's capital structure.