

Problem Set 1

Adapted from HBS case No. 9-816-016

RAMANA NANDA

WILLIAM A. SAHLMAN

ROBERT WHITE

HUNTER ASHMORE

Problem 1 – Evaluating the Offer

ASP.com¹ was a young company providing online software-as-a-service solutions to small and medium-sized enterprises. The company sold its product on a subscription basis. The founder and majority shareholder has received an acquisition offer valuing the company at a 3x multiple of anticipated sales in FY 2015 and needs to decide if this is a reasonable offer.

ASP.com had experienced substantial growth over the past several years (see Exhibit 1 for financial data). The company was still a relatively small player in their industry, but management expected to gain market share with the upcoming release of new features. The total industry size in 2014 was \$7.1 billion, of which the online segment represented \$425 million. Analysts believed the online segment would grow to \$2.6 billion in five years.

1. Refer to the note ‘A Simple Free Cash Flow Valuation Model’ (HBS No. 814-027) and the financial data provided in Exhibit 1 to:
 - a. calculate profitability (p), asset intensity (a), and growth (g) as described in the note
 - b. build out the 3-stage Valuation Model. (you will have to develop your assumptions about the future “p”, “a” and “g” of ASP.com. Use a discount rate of 10%.)
2. Based on your answer to question 1, how should the company respond to the acquisition offer?

¹ Disguised company name

Problem 2 – Evaluating Unknown Businesses

1. Exhibit 2 provides financial statements of businesses operating in various industries. Calculate profitability, asset intensity, and growth for each, and then decide which is a manufactured products business, an airline, a biotechnology company, a software company, and a big-box retailer. Note that it may help you to separately calculate $NPPE/Sales$ and $(NOWC+NOOLTA)/Sales$, to better understand the degree to which fixed assets vs. operating working capital is driving your measure of asset intensity.
2. If you were starting a new venture in each of these industries and had a business model defined by the “p” and “a” you calculated above, how much external finance would you need to raise in order to grow your business from \$1 million to \$50 million in sales in one year?

Exhibit 1: ASP.com Financial Statements

Consolidated Financial Statements

	<u>2013</u>	<u>2014</u>	<u>2015</u> <u>(Projected)</u>
Income Statement	(In thousands)		
Revenue:			
Software, hosting and support	\$ 23,338	\$ 29,300	\$ 48,000
Professional services	3,603	6,579	12,000
Total revenue	<u>26,941</u>	<u>35,879</u>	<u>60,000</u>
Cost of revenue:			
Software, hosting and support	4,279	5,263	8,400
Professional services	2,156	3,740	5,800
Total cost of revenue	<u>6,435</u>	<u>9,003</u>	<u>14,280</u>
Gross profit	20,506	26,876	45,720
Operating expenses:			
Sales and marketing	15,939	20,809	32,000
Research and development	4,117	5,915	6,500
General and administrative	2,842	3,518	5,000
Total operating expenses	<u>22,898</u>	<u>30,242</u>	<u>43,500</u>
Income (loss) from operations	(2,392)	(3,366)	2,220
Interest and other income (expense), net	(357)	(215)	
Income (loss) before income taxes	(2,749)	(3,581)	
Provision for income taxes	-	(539)	
Net income (loss)	<u>(2,749)</u>	<u>(4,120)</u>	
Balance Sheet*	<u>2013</u>	<u>2014</u>	
Assets	(In thousands)		
Current assets:			
Cash and cash equivalents	\$ 8,038	\$ 8,360	
Accounts receivable	9,203	14,439	
Prepaid expenses	466	509	
Total current assets	<u>17,707</u>	<u>23,308</u>	
Property and equipment, net	3,318	2,942	
Term receivables, non-current	924	2,278	
Intangible assets, net	713	623	
Other assets	440	235	
Total Assets	<u>23,102</u>	<u>29,386</u>	

Exhibit 1 (cont)

Liabilities, Redeemable Convertible Preferred Stock and Stockholders' Deficit

	<u>2013</u>	<u>2014</u>
Current liabilities:	(In thousands)	
Accounts payable	\$ 405	\$ 1,025
Commissions and bonuses payable	1,076	1,636
Other accrued liabilities	1,634	2,154
Line of credit	2,000	-
Current portion of long-term debt	1,282	1,390
Current portion of deferred revenue	17,392	26,127
Total current liabilities	23,789	32,332
 Long-term debt, less current portion	 940	 484
 Deferred revenue, net of current portion	 7,291	 9,426
Total liabilities	32,020	42,242
 Redeemable convertible preferred stock:		
Series A	16,139	16,145
Series B (including warrants)	16,234	16,253
Total stockholders' deficit	(41,291)	(45,254)
 Total Liabilities, Redeemable Convertible Preferred Stock and Stockholders' Deficit	 23,102	 29,386

Estimated Market Data

Unlevered Beta	1.40
Debt Beta	0.20
Risk Free Rate	3.0%
Market Risk Premium	5.0%
Corporate Tax Rate	35.0%

* ASP.com's business model allows customers to pay on a pay-as-you-go basis and on a pre-paid basis, in some cases extending beyond the current year

Sources: IS & BS taken from SEC Filings, Estimated Market Data are casewriter estimates

Exhibit 2: Unknown Companies

Company 1			Company 2		Company 3		Company 4		Company 5	
Income Statement										
	Fiscal Period Ending: 12/31/2013	12/31/2014	2/1/2014	1/31/2015	FY2013	FY2014	12/31/2013	12/31/2014	6/30/2013	6/30/2014
Sales	37,773	40,362	40,611	40,339	77,849	86,833	18,676	20,063	82,581	83,062
Cost of Goods Sold	29,466.0	29,826.0	31,212.0	31,292.0	20,385.0	27,078.0	3,346.0	4,219.0	41,037.0	42,061.0
Selling, General & Admin Exp ¹	1,603.0	1,700.0	7,309.0	6,906.0	19,556.0	20,488.0	4,827.0	4,599.0	24,471.0	24,164.0
R & D Exp.					10,411.0	11,381.0	4,083.0	4,248.0		
Depreciation ¹	1,658.0	1,771.0	701.0	656.0	1,551.0	2,280.0	321.0	91.0	1,490.0	777.0
Other Operating Expenses	1,520.0	1,797.0						42.0		
Operating Income	3,526.0	5,268.0	1,389.0	1,485.0	25,946.0	25,606.0	6,099.0	6,864.0	15,583.0	16,060.0
Net Interest Income (Expense)	(852.0)	(650.0)	(81.0)	(76.0)	248.0	286.0	(1,022.0)	(1,071.0)	(667.0)	(709.0)
Other Non-Operating Income (Expense) ²	(147.0)	(3,546.0)	(225.0)	(22.0)	(693.0)	(352.0)	188.0	(208.0)	(224.0)	(466.0)
Pre-tax Income	2,527.0	1,072.0	1,083.0	1,387.0	25,501.0	25,540.0	5,265.0	5,585.0	14,692.0	14,885.0
Taxes	(8,013.0)	413.0	388.0	141.0	5,189.0	5,746.0	184.0	427.0	3,391.0	3,178.0
Net Income from Continuing Operations	10,540	659	695	1,246	20,312	19,794	5,081	5,158	11,301	11,707
Balance Sheet										
	Fiscal Period Ending: 12/31/2013	12/31/2014	2/1/2014	1/31/2015	FY2013	FY2014	12/31/2013	12/31/2014	6/30/2013	6/30/2014
Assets										
Cash	2,844	2,088	2,678	2,432	3,804	8,669	3,805	3,731	5,947	8,558
Marketable Securities	959	1,222	223	1,456	72,606	76,477	15,596	23,295		2,128
Accounts Receivable	1,609	2,297	1,308	1,280	17,486	19,544	2,697	2,546	6,508	6,386
Inventories	1,063	852	5,376	5,174	1,938	2,660	3,019	2,647	6,909	6,759
Deferred Tax Assets, Curr.	1,736	3,275	261	252	1,632	1,941			948	1,092
Prepaid Exp.	852	733							3,678	3,845
Other Current Assets ⁴	588	1,998	639	1,135	4,000	4,955	2,250	2,494		2,849
Total Current Assets	9,651	12,465	10,485	11,729	101,466	114,246	27,367	34,713	23,990	31,617
Gross Property, Plant & Equipment	29,265	30,652	7,575	7,660	22,504	27,804	12,291	12,256	43,012	44,427
Accumulated Depreciation	(7,792)	(9,340)	(4,977)	(5,365)	(12,513)	(14,793)	(6,942)	(7,033)	(21,346)	(22,123)
Net Property, Plant & Equipment	21,473	21,312	2,598	2,295	9,991	13,011	5,349	5,223	21,666	22,304
Goodwill ⁵	9,794	9,794	425	425	14,655	20,127	14,968	14,788	55,188	53,704
Other Intangibles ⁶	4,658	4,603	101	57	3,083	6,981	13,262	12,693	31,572	30,843
Deferred Tax Assets, LT	4,992	4,320	44	322						
Long-term Investments	109	118	9	3	10,844	14,597	395	544	1,571	1,631
Deferred Charges, LT										
Other Long-Term Assets ⁴	1,575	1,509	351	425	2,392	3,422	4,784	1,048	5,276	4,167
Total Assets	52,252	54,121	14,013	15,256	142,431	172,384	66,125	69,009	139,263	144,266
LIABILITIES										
Accounts Payable	2,300	2,622	5,122	5,030	4,828	7,432	787	1,212	8,777	8,461
Accrued Exp.	3,574	3,832	1,243	1,097	4,117	4,797	3,900	4,334	5,161	5,336
Short-term Borrowings	602	561			645	2,558			7,926	11,299
Curr. Port. of LT Debt	1,468	1,109			3,044	12	2,505	500	4,506	4,288
Curr. Port. of Cap. Leases	98	107	45	41						19
Curr. Income Taxes Payable			147	230	592	782			817	711
Unearned Revenue, Current	5,983	5,876	805	737	20,639	23,150				
Other Current Liabilities ⁴	127	2,772	74	642	3,552	6,894	755	962	2,850	3,612
Total Current Liabilities	14,152	16,879	7,436	7,777			7,947	7,008	30,037	33,726
Long-Term Debt	9,444	8,282	1,499	1,500	12,601	20,645	29,623	30,215	19,111	19,747
Capital Leases	399	291	113	80						64
Unearned Revenue, Non-Current	2,559	2,602	50	49	1,760	2,008			7,740	7,890
Pension & Other Post-Retire. Benefits	12,392	15,138							10,827	10,218
Def. Tax Liability, Non-Curr.					1,709	2,728	3,498	3,461	2,839	2,645
Other Long-Term Liabilities ⁴	1,663	2,116	905	850	10,000	11,594	2,961	2,547		
Total Liabilities	40,609	45,308	10,003	10,256	63,487	82,600	44,029	43,231	70,554	74,290
Total Equity	11,643	8,813	3,989	5,000	78,944	89,784	22,096	25,778	68,709	69,976
Total Liabilities And Equity	52,252	54,121	13,992	15,256	142,431	172,384	66,125	69,009	139,263	144,266

1 For companies that report depreciation as a part of SG&A, dep. expense has been calculated as the increase in accumulated depreciation of PP&E, deducted from SG&A, and reported separately in the income statement.

2 Other Non-operating Income (Expense) includes currency exchange gains, restructuring charges, goodwill impairment, sale of investments, and asset writedowns (as applicable)

3 Net Income from Continuing Operations does not include income (loss) from affiliates, discontinued operations and non-controlling interests.

4 "Other" assets and liabilities primarily consists of non-operating items

5 Net of goodwill impairments, as applicable.

6 Includes intangible assets such as customer relationships, trade names, and leasehold rights to strategic locations.

Source: Compiled from Capital IQ, Company SEC filings, and author's calculations.