

American Public Education, Inc. (APEI)



%old school value

December 19, 2013

Figures in Millions except per share values

Company Overview

American Public Education, Inc., together with its subsidiary, American Public University System, Inc., provides online higher education focusing on the needs of the military and public service communities. The company operates through two universities, American Military University and American Public University. Its universities share a common faculty and curriculum, which includes 92 degree programs in fields ranging from homeland security, military studies, intelligence, and criminal justice to technology, business administration, public health, and liberal arts. The company serves approximately 100,000 adult learners worldwide. American Public Education, Inc. was founded in 1991 and is headquartered in Charles Town, West Virginia.



Valuation

Current Price	\$	43.54
NCAV	\$	5.40
Total Net Reprod. Cost	\$	11.29
Earnings Power Value (EPV)	\$	31.28
Discounted Cash Flow (DCF)	\$	49.31
Katsenelson Absolute PE	\$	53.38
Ben Graham Formula	\$	55.80

Margin of Safety

Current Price	39.2%
NCAV	100.0%
Total Net Reprod. Cost	39.2%
Earnings Power Value (EPV)	1.7%
Discounted Cash Flow (DCF)	19.4%
Katsenelson Absolute PE	22.0%
Ben Graham Formula	22.0%

Key Statistics

Mkt Cap (\$M)	\$	768.83
52 Wk High	\$	46.69
52 Wk Low	\$	29.20
% off 52Wk Low		49.1%

Cash Flows

Free Cash Flow		
5 yr FCF Growth		32.5%
10 yr FCF Growth		0.0%

Effectiveness

CROIC		
Avg		194.9%
FCF/S		
Avg		16.8%
ROA		
Avg		20.6%
ROE		
Avg		30.3%

Efficiency

Receivables Turnover (TTM)		27.4
Inventory Turnover (TTM)		0.0
Days Sales Outstanding (TTM)		9.8

Company Stats

Shares Outstanding	17.7
Shares Float	16.8
Insider Ownership	2.40%
Insider Transactions	-14.7%
Institutional Owners	88.8%
Float Short	6.8%
Short Ratio	7.6
Piotroski (TTM)	7
Altman (MRQ)	8.2
Beneish (TTM)	-3.2

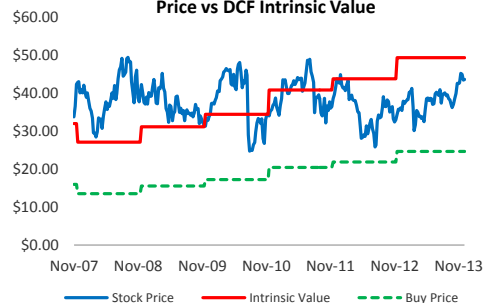
Margins & Profitability

Gross		
Gross Margin		65.9%
Operating		
Operating Margin		22.3%
Net Profit		
Net Margin		13.9%

Financial Strength (MRQ)

Current Ratio(MRQ)	2.9
Quick Ratio(MRQ)	2.9
LTD/Eq(MRQ)	0.0
Tot D/Eq(MRQ)	0.0

Price vs DCF Intrinsic Value



Fundamental Ratios

	2011	2012	TTM
P/E	19.09	16.14	16.91
P/E (cash adjusted)	16.17	13.43	13.78
EV/EBITDA	9.14	7.11	7.27
EV/Free Cash Flow	14.58	32.32	12.47
P/S	2.99	2.18	2.34
P/BV	5.81	3.99	3.87
P/Tang BV	5.81	3.99	3.87
P/CF	11.28	8.79	10.29
P/FCF	17.21	38.86	15.30
ROE	30.5%	24.7%	23.0%
ROA	20.5%	17.8%	17.3%
ROIC	175.7%	62.6%	68.1%
CROIC	194.9%	26.0%	75.0%
Current Ratio	2.45	2.56	2.92
Total Debt/Equity Ratio	0.00	0.00	0.00
Inventory Turnover	0.00	0.00	0.00

Selected Financial Statements

(In Millions, Except per Share Amounts)

	2008	2009	2010	2011	2012	TTM/Latest
Revenue	\$ 107	\$ 149	\$ 198	\$ 260	\$ 314	\$ 333
Gross Profit	\$ 64	\$ 91	\$ 123	\$ 165	\$ 203	\$ 219
Margin %	59.34%	60.82%	62.00%	63.43%	64.85%	65.90%
R&D	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Margin %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Operating Income	\$ 26	\$ 40	\$ 50	\$ 63	\$ 69	\$ 74
Margin %	23.97%	26.76%	25.24%	24.14%	21.95%	22.36%
Net Income	\$ 16	\$ 24	\$ 30	\$ 41	\$ 42	\$ 46
Margin %	15.11%	16.07%	15.07%	15.65%	13.50%	13.90%

Earnings Per Share

Basic	\$ 0.91	\$ 1.32	\$ 1.63	\$ 2.28	\$ 2.38	\$ 2.61
Diluted	\$ 0.86	\$ 1.27	\$ 1.59	\$ 2.23	\$ 2.35	\$ 2.58

Weighted Average Diluted Shares

Outstanding	18.82	18.91	18.84	18.30	18.04	17.88
Dividends Per Share	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Dividend Yield	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Net Cash From Operating Activities	\$ 30	\$ 37	\$ 47	\$ 70	\$ 53	\$ 73

(Dollars in Millions)

Net Property, Plants & Equipment	\$ 20	\$ 25	\$ 42	\$ 59	\$ 83	\$ 88
Total Assets	\$ 79	\$ 116	\$ 142	\$ 199	\$ 238	\$ 267
Long-term Debt	\$ 4	\$ 5	\$ 7	\$ 8	\$ 11	\$ 10
Stockholders' Equity	\$ 53	\$ 82	\$ 97	\$ 134	\$ 171	\$ 201

		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
Financial Statistics & Ratios												
Valuation Ratios												
P/E		0.00	0.00	266.68	243.28	62.17	43.15	29.38	24.41	19.09	16.14	16.91
P/E (cash adjusted)		0.00	0.00	261.60	236.79	59.09	40.20	26.26	21.69	16.17	13.43	13.78
EV/EBITDA		0.00	0.00	80.54	53.19	29.52	21.75	13.94	11.46	9.14	7.11	7.27
EV/Free Cash Flow		0.00	0.00	-213.41	107.06	49.99	34.52	25.18	26.94	14.58	32.32	12.47
P/S		0.00	0.00	10.27	10.92	7.87	6.52	4.72	3.68	2.99	2.18	2.34
P/BV		0.00	0.00	19.90	26.00	16.24	13.06	8.58	7.49	5.81	3.99	3.87
P/Tang BV		0.00	0.00	19.90	26.00	16.24	13.06	8.58	7.49	5.81	3.99	3.87
P/CF		0.00	0.00	52.02	31.79	35.20	25.27	18.90	14.22	11.28	8.79	10.29
P/FCF		0.00	0.00	-217.55	109.49	52.60	37.05	28.18	30.32	17.21	38.86	15.30
ROE		0.0%	0.0%	7.5%	10.7%	26.1%	30.3%	29.2%	30.7%	30.5%	24.7%	23.0%
ROA		0.0%	0.0%	4.8%	6.3%	17.9%	20.5%	20.7%	21.1%	20.5%	17.8%	17.3%
ROIC		0.0%	0.0%	12.7%	28.8%	101.5%	171.3%	200.8%	130.4%	175.7%	62.6%	68.1%
CROIC		0.0%	0.0%	-12.2%	46.9%	120.0%	199.4%	209.3%	105.0%	194.9%	26.0%	75.0%
GPA (Gross Profitability to Assets)		0.0%	0.0%	66.5%	76.8%	80.9%	80.7%	78.3%	86.6%	83.0%	85.6%	82.2%
Book to Market		0.0%	0.0%	5.0%	3.8%	6.2%	7.7%	11.7%	13.3%	17.2%	25.1%	25.9%
Solvency												
Quick Ratio		0.00	0.00	1.96	2.22	2.60	2.68	3.05	2.61	2.45	2.56	2.92
Current Ratio		0.00	0.00	1.96	2.22	2.60	2.68	3.05	2.61	2.45	2.56	2.92
Total Debt/Equity Ratio		0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Long Term Debt/Equity Ratio		0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Short Term Debt/Equity Ratio		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Efficiency Ratios												
Asset Turnover		0.00	0.00	1.26	1.39	1.41	1.36	1.29	1.40	1.31	1.32	1.25
Cash % of Revenue		0.0%	0.0%	19.6%	29.2%	39.0%	44.5%	50.2%	41.1%	45.7%	36.6%	43.2%
Receivables % of Revenue		0.0%	0.0%	19.2%	15.3%	8.7%	7.0%	6.4%	5.6%	4.3%	4.9%	2.7%
SG&A % of Revenue		0.0%	0.0%	40.5%	35.1%	32.0%	31.4%	30.5%	33.5%	35.7%	39.4%	39.7%
R&D % of Revenue		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Liquidity Ratios												
Days Sales Outstanding		0.0	0.0	70.2	55.8	31.6	25.5	23.3	20.4	15.6	17.9	9.8
Days Inventory Outstanding		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days Payable Outstanding		0.0	0.0	30.6	30.5	30.6	41.4	42.2	45.7	62.6	57.1	39.2
Cash Conversion Cycle		0.0	0.0	39.6	25.3	1.0	-15.9	-18.9	-25.3	-47.0	-39.2	-29.4
Receivables Turnover		0.00	0.00	10.40	6.94	11.41	15.90	17.51	19.26	23.51	23.68	27.40
Inventory Turnover		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Age of Inventory (Days)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Intangibles % of Book Value		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Inventory % of Revenue		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Capital Structure Ratios												
LT-Debt as % of Invested Capital		0.0%	0.0%	0.0%	22.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
ST-Debt as % of Invested Capital		0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LT-Debt as % of Total Debt		0.0%	0.0%	0.0%	98.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
ST-Debt as % of Total Debt		0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Debt % of Total Assets		0.0%	0.0%	0.0%	6.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Working Capital % of Price		0.0%	0.0%	2.0%	2.4%	3.9%	5.2%	8.4%	8.3%	10.5%	12.6%	13.6%
Quality Scores												
Piostroski F Score		1.00	1.00	8.00	7.00	8.00	7.00	7.00	8.00	6.00	8.00	7.00
Altman Z Score (Original)				23.17	23.73	21.37	18.16	14.89	12.65	9.93	8.96	8.25
Altman Z Score (Revised)				39.18	40.54	35.62	30.98	26.05	21.79	17.17	15.30	15.84
Beneish M Score (5 Variable)		-			-3.29	-2.70	-2.74	-2.61	-3.04	-3.08	1.57	-3.18
Beneish M Score (8 Variable)		-			-3.80	-2.93	-3.01	-2.63	-3.06	-3.28	0.56	-3.23

American Public Education, Inc.

(APEI)

12/19/2013

Enter Ticker

Refresh

CLEAR

Earnings Quality Check with Accrual Analysis

Earnings growth due to accrual growth is not sustainable. This is like cookie jar accounting where a company "borrows" earnings from the future to make earnings look good today.

Balance sheet accrual can indicate whether capital is being used properly. A company with high accruals can come from acquiring or merging with companies which expands the asset base. Low balance sheet accrual companies tend to shrink their balance sheet through spin offs, share repurchases or large write offs. In these situations, it is usually removing bad performing assets or returning money to shareholders which is always a good use of capital.

High accruals indicate that the company has expanded its asset base rapidly.

Companies with high balance sheet accruals tend to have higher sales growth than low balance sheet accrual companies.

High balance sheet accruals also have a higher ROE.

Remember that maintaining a high sales growth or high ROE is difficult unless you have an entrenched moat. Such companies revert to the mean and disappoint..

Companies with low balance sheet accruals tend to have below average returns on equity. Analysts expect the company to lag.

Color Coding: **Green** = safe zone, **Yellow** = ratio is getting into warning zone, **Red** = Danger zone. Ratios are too high or low. Requires check.

More reading:

<http://tinyurl.com/6p394ap>

<http://tinyurl.com/7ucpoe2>

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM/MRQ
Balance Sheet Accrual Ratio	-		200.0%	-23.7%	-8.2%	-12.9%	21.5%	76.2%	-7.3%	116.6%	2.1%
Cash Flow Accrual Ratio	-		61.5%	-27.2%	-23.3%	-43.3%	-15.8%	50.4%	-28.9%	105.5%	-1.2%
Sloan Accrual Ratio			12.4%	-7.6%	-3.3%	-3.4%	-0.9%	4.1%	-2.2%	15.8%	-0.3%
Earnings			\$ 0.13	\$ 0.15	\$ 0.64	\$ 0.86	\$ 1.27	\$ 1.59	\$ 2.23	\$ 2.35	\$ 2.58
Stock Price	\$ 35.9	\$ 35.9	\$ 35.9	\$ 35.9	\$ 40.0	\$ 37.1	\$ 37.2	\$ 38.7	\$ 42.5	\$ 37.9	\$ 43.5
Total Assets	\$ -	\$ -	\$ 22.4	\$ 28.8	\$ 49.0	\$ 78.8	\$ 115.8	\$ 141.8	\$ 198.9	\$ 237.6	\$ 266.7
Cash & Equivalent	\$ -	\$ -	\$ 5.5	\$ 11.7	\$ 27.0	\$ 47.7	\$ 74.9	\$ 81.4	\$ 119.0	\$ 114.9	\$ 143.8
Total Liabilities	\$ -	\$ -	\$ 7.9	\$ 11.9	\$ 15.5	\$ 25.3	\$ 33.7	\$ 44.5	\$ 65.1	\$ 66.5	\$ 65.5
Short Term Debt	\$ -	\$ -	\$ -	\$ 0.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Long Term Debt	\$ -	\$ -	\$ -	\$ 1.9	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Operating Assets (NOA)	\$ -	\$ -	\$ 9.0	\$ 7.1	\$ 6.6	\$ 5.8	\$ 7.2	\$ 15.9	\$ 14.8	\$ 56.3	\$ 57.5
Net Income	\$ -	\$ -	\$ 1.1	\$ 1.8	\$ 8.8	\$ 16.2	\$ 23.9	\$ 29.9	\$ 40.8	\$ 42.3	\$ 46.2
CFO	\$ -	\$ -	\$ 3.7	\$ 8.9	\$ 17.5	\$ 29.8	\$ 36.8	\$ 47.1	\$ 70.4	\$ 52.9	\$ 72.6
CFI	\$ -	\$ -	\$ (5.4)	\$ (4.9)	\$ (7.2)	\$ (10.9)	\$ (11.8)	\$ (23.0)	\$ (25.2)	\$ (48.1)	\$ (25.7)
Balance Sheet Aggregate Accrual	\$ -	\$ -	\$ 9.0	\$ (1.9)	\$ (0.6)	\$ (0.8)	\$ 1.4	\$ 8.8	\$ (1.1)	\$ 41.4	\$ 1.2
Cash Flow Aggregate Accrual	\$ -	\$ -	\$ 2.8	\$ (2.2)	\$ (1.6)	\$ (2.7)	\$ (1.0)	\$ 5.8	\$ (4.4)	\$ 37.5	\$ (0.7)

Piotroski Score

A discrete score between 0-9 which reflects nine criteria used to determine the strength of a firm's financial position. The Piotroski score is used to determine the best value stocks, nine being the best. The score was named after Chicago Accounting Professor, Joseph Piotroski who devised the scale according to specific criteria found in the financial statements. For every criteria (below) that is met the company is given one point, if it is not met, then no points are awarded. The points are then added up to determine the best value stocks.

Profitability

- * Positive return on assets in the current year **(1 point)**
- * Positive operating cash flow in the current year **(1 point)**
- * Higher return on assets (ROA) in the current period compared to the ROA in the previous year **(1 point)**
- * Cash flow from operations are greater than ROA **(1 point)**

Leverage, Liquidity and Source of Funds

- * Lower ratio of long term debt to in the current period compared value in the previous year **(1 point)**
- * Higher current ratio this year compared to the previous year **(1 point)**
- * No new shares were issued in the last year **(1 point)**

Operating Efficiency

- * A higher gross margin compared to the previous year **(1 point)**
- * A higher asset turnover ratio compared to the previous year **(1 point)**

Piotroski F Scores	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
	1	1	8	7	8	7	7	8	6	8	7
Piotroski 1: Net Income	0	0	1	1	1	1	1	1	1	1	1
Piotroski 2: Operating Cash Flow	0	0	1	1	1	1	1	1	1	1	1
Piotroski 3: Return on Assets	0	0	1	1	1	1	1	1	0	0	0
Piotroski 4: Quality of Earnings	0	0	1	1	1	1	1	1	1	1	1
Piotroski 5: LT Debt vs Assets	1	1	1	0	1	1	1	1	1	1	1
Piotroski 6: Current Ratio	0	0	1	1	1	1	1	0	0	1	1
Piotroski 7: Shares Outstanding	0	0	0	0	0	0	0	1	1	1	1
Piotroski 8: Gross Margin	0	0	1	1	1	1	1	1	1	1	1
Piotroski 9: Asset Turnover	0	0	1	1	1	0	0	1	0	1	0

Altman Z Score

The Z-score formula may be used to predict the probability that a firm will go into bankruptcy within two years.

Z-scores are used to predict corporate defaults and an easy-to-calculate control measure for the financial distress status of companies in academic studies. The Z-score uses multiple corporate income and balance sheet values to measure the financial health of a company.

The main problem with the Altman Z formula is that the formula is not suited for many industries. Industries that operate with high leverage, such as radio and utilities will show a higher risk of bankruptcy.

Also, industries with negative working capital, such as many retail and restaurant companies will also exhibit the same high level of bankruptcy.

(Wikipedia http://en.wikipedia.org/wiki/Z-Score_Financial_Analysis_Tool)

$$Z = 1.2 \cdot X1 + 1.4 \cdot X2 + 3.3 \cdot X3 + 0.6 \cdot X4 + 1.0 \cdot X5$$

There is also a revised Altman Z score which is adjusted for non manufacturing corporations. The revised formula is:

$$Z = 6.56 \cdot X1 + 3.26 \cdot X2 + 6.72 \cdot X3 + 1.05 \cdot X4$$

X1 = Working Capital/Total Assets
X2 = Retained Earnings/Total Assets
X3 = EBITDA/Total Assets
X4 = Market Value of Equity/Total Liabilities
X5 = Net Sales/Total Assets

	2003	2004	2005	2006	Annual		2007	2008	2009	2010	2011	2012	MRQ	MRQ Edit
													Q3	
Working Capital	\$ -	\$ -	\$ 5.7	\$ 10.4	\$ 21.4	\$ 36.4	\$ 59.4	\$ 60.4	\$ 82.0	\$ 86.0	\$ 105.7			
Total Assets	\$ -	\$ -	\$ 22.4	\$ 28.8	\$ 49.0	\$ 78.8	\$ 115.8	\$ 141.8	\$ 198.9	\$ 237.6	\$ 266.7			
Total Liabilities	\$ -	\$ -	\$ 7.9	\$ 11.9	\$ 15.5	\$ 25.3	\$ 33.7	\$ 44.5	\$ 65.1	\$ 66.5	\$ 65.5			
Retained Earnings	\$ -	\$ -	\$ (11.5)	\$ (9.7)	\$ (94.7)	\$ (78.5)	\$ (54.5)	\$ (24.7)	\$ (13.4)	\$ 13.5	\$ 39.2			
EBITDA	\$ -	\$ -	\$ 2.4	\$ 3.2	\$ 15.6	\$ 26.4	\$ 40.0	\$ 50.1	\$ 63.0	\$ 68.9	\$ 17.5			
Market Value of Equity	\$ -	\$ -	\$ 289.3	\$ 437.4	\$ 544.0	\$ 698.5	\$ 703.5	\$ 729.2	\$ 778.1	\$ 683.2	\$ 768.8			
Net Sales	\$ -	\$ -	\$ 28.2	\$ 40.0	\$ 69.1	\$ 107.1	\$ 149.0	\$ 198.2	\$ 260.4	\$ 313.5	\$ 81.8			
Normal Altman Z Score			23.17	23.73	21.37	18.16	14.89	12.65	9.93	8.96	8.25			
Revised Altman Z Score			39.18	40.54	35.62	30.98	26.05	21.79	17.17	15.30	15.84			

	Altman Z Score		Revised Altman Z Score	
	Annual	MRQ	Annual	MRQ
X1	0.36	0.40		
X2	0.06	0.15		
X3	0.29	0.07		
X4	10.28	11.74		
X5	1.32	0.31		
	8.96	8.25	15.30	15.84

Original Altman Z Score
When Z is 3.0 or more, the firm is most likely safe based on the financial data. However, be careful to double check as fraud, economic downturns and other factors could cause unexpected reversals.
When Z is 2.7 to 3.0, the company is probably safe from bankruptcy, but this is in the grey area and caution should be taken.
When Z is 1.8 to 2.7, the company is likely to be bankrupt within 2 years. This is the lower portion of the grey area and a dramatic turnaround of the company is needed.
When Z is below 1.8, the company is highly likely to be bankrupt. If a company is generating lower than 1.8, serious studies must be performed to ensure the company can survive.

Revised Altman Z Score
When Z is 2.6 or more, the firm is most likely safe based on the financial data. However, be careful to double check as fraud, economic downturns and other factors could cause unexpected reversals.
When Z is 1.1 to 2.6, the company is probably safe from bankruptcy, but this is in the grey area and caution should be taken.
When Z is below 1.1, the company is highly likely to be bankrupt. If a company is generating lower than 1.8, serious studies must be performed to ensure the company can survive.

The Beneish Model - M Score Variables

DSRI = Days' Sales in Receivables Index. Measured as the ratio of days' sales in receivables in year t to year t-1. A large increase in DSR could be indicative of revenue inflation.
GMI = Gross Margin Index. Measured as the ratio of gross margin in year t-1 to gross margin in year t. Gross margin has deteriorated when this index is above 1. A firm with poorer prospects is more likely to manipulate earnings.
AQI = Asset Quality Index. Asset quality is measured as the ratio of non-current assets other than plant, property and equipment to total assets.AQI is the ratio of asset quality in year t to year t-1.
SGI = Sales Growth Index. Ratio of sales in year t to sales in year t-1. Sales growth is not itself a measure of manipulation. However, growth companies are likely to find themselves under pressure to manipulate in order to keep up appearances.
DEPI = Depreciation Index. Measured as the ratio of the rate of depreciation in year t-1 to the corresponding rate in year t. DEPI greater than 1 indicates that assets are being depreciated at a slower rate. This suggests that the firm might be revising useful asset life assumptions upwards, or adopting a new method that is income friendly.
SGAI = Sales, General and Administrative expenses Index. The ratio of SGA expenses in year t relative to year t-1.
LVGI = Leverage Index. The ratio of total debt to total assets in year t relative to yeat t-1. An LVGI >1 indicates an increase in leverage
TATA - Total Accruals to Total Assets. Total accruals calculated as the change in working capital accounts other than cash less depreciation.

The Beneish M Score Formula

The eight variables are then weighted together according to the following:

$M = -4.84 + 0.92 \cdot DSRI + 0.528 \cdot GMI + 0.404 \cdot AQI + 0.892 \cdot SGI + 0.115 \cdot DEPI - 0.172 \cdot SGA I + 4.679 \cdot TATA - 0.327 \cdot LVGI$

A score greater than -2.22 indicates a strong likelihood of a firm being a manipulator. In his out of sample tests, Beneish found that he could correctly identify 76% of manipulators, whilst only incorrectly identifying 17.5% of non-manipulators.

The 5 Variable Version of the Beneish Model

The five variable version excludes SGA I, DEPI and LEVI which were not significant in the original Beneish model.

$M = -6.065 + 0.823 \cdot DSRI + 0.906 \cdot GMI + 0.593 \cdot AQI + 0.717 \cdot SGI + 0.107 \cdot DEPI$

A score greater than -2.22 indicates a strong likelihood of a firm being a manipulator.

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
M Score - 5 Variable	-			-3.29	-2.70	-2.74	-2.61	-3.04	-3.08	1.57	-3.18
M Score - 8 Variable	-			-3.80	-2.93	-3.01	-2.63	-3.06	-3.28	0.56	-3.23
DSRI	-			0.80	0.57	0.81	0.91	0.87	0.76	1.15	0.55
GMI	-			0.96	0.96	0.97	0.98	0.98	0.98	0.98	0.98
AQI	-			0.26	1.15	0.95	1.19	0.56	0.71	8.13	1.16
SGI	-			1.42	1.73	1.55	1.39	1.33	1.31	1.20	1.06
DEPI	-			0.70	0.99	0.98	1.04	1.29	0.98	1.15	0.93
SGAI	-			0.87	0.91	0.98	0.97	1.10	1.07	1.10	1.01
TATA	-		-0.10	-0.23	-0.18	-0.17	-0.11	-0.12	-0.15	-0.04	-0.10
LVGI	-			1.37	0.75	1.00	0.91	1.06	1.08	0.81	0.89

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	APEI	LOPE	BPI	STRA	COCO	CECO	APOL	DV	LINC	EDMC
Company	American Public	Grand Canyon Education, Inc.	Bridgepoint Education, Inc.	Strayer Education Inc.	Corinthian Colleges Inc.	Career Education Corp.	Apollo Group Inc.	DeVry, Inc.	Lincoln Educational	Education Management
Sector	Services	Services	Services	Services	Services	Services	Services	Services	Services	Services
Industry	Education & Training	Education & Training	Education & Training	Education & Training	Education & Training	Education & Training	Education & Training	Education & Training	Education & Training	Education & Training
Country	USA	USA	USA	USA	USA	USA	USA	USA	USA	USA
Earnings Date	5-Nov-2013	29-Oct-2013	5-Nov-2013	31-Oct-2013	5-Nov-2013	6-Nov-2013	7-Jan-2014	24-Oct-2013	5-Nov-2013	30-Oct-2013
Price	\$43.54	\$43.60	\$17.32	\$34.37	\$1.71	\$5.19	\$26.41	\$34.78	\$4.59	\$11.03
Market Cap	\$768.83	\$1,960.39	\$941.10	\$361.23	\$148.07	\$346.95	\$2,987.26	\$2,225.33	\$103.40	\$1,374.97
Change	0.11%	-1.65%	-1.37%	-0.29%	1.18%	1.76%	0.57%	-0.06%	0.00%	-2.30%
Volume	86,761	300,039	285,791	204,383	604,784	790,947	2,808,568	731,652	226,151	75,470
Change from Open	0.07%	-1.00%	-1.53%	-0.23%	1.79%	2.37%	1.03%	-0.06%	0.00%	-2.39%
Gap	0.05%	-0.65%	0.17%	-0.06%	-0.59%	-0.59%	-0.46%	0.00%	0.00%	0.09%
50-Day High	-6.75%	-13.63%	-14.81%	-31.25%	-32.68%	-20.15%	-9.15%	-10.02%	-19.61%	-34.89%
50-Day Low	26.57%	13.25%	10.74%	2.17%	104.33%	6.21%	32.98%	16.08%	5.52%	18.60%
52-Week High	-6.75%	-13.63%	-14.81%	-46.88%	-42.42%	-20.15%	-9.15%	-10.02%	-35.45%	-34.89%
52-Week Low	49.11%	96.13%	82.12%	2.17%	6.21%	155.67%	65.27%	54.47%	6.74%	253.53%
P/E	16.94	23.96	15.19	7.19	171.00	0.00	12.00	22.73	0.00	0.00
Forward P/E	16.32	20.77	26.65	15.07	8.10	0.00	15.09	13.76	0.00	28.80
PEG	1.06	1.60	0.00	0.53	10.59	0.00	0.00	5.01	0.00	0.00
P/S	2.31	3.40	1.16	0.69	0.09	0.30	0.81	1.15	0.29	0.56
P/B	3.82	6.24	1.71	6.34	0.27	0.71	2.67	1.60	0.59	5.57
P/Cash	5.35	11.51	2.02	4.24	3.98	4.17	1.96	7.14	16.41	8.42
P/Free Cash Flow	15.10	95.16	10.74	5.05	11.75	0.00	8.33	20.49	0.00	16.79
Dividend Yield	0.00%	0.00%	0.00%	11.64%	0.00%	0.00%	0.00%	0.98%	6.10%	0.00%
Payout Ratio	0.00%	0.00%	0.00%	20.90%	0.00%	0.00%	0.00%	14.60%	0.00%	0.00%
EPS (ttm)	\$2.57	\$1.82	\$1.14	\$4.78	\$0.01	(\$2.29)	\$2.20	\$1.53	(\$0.79)	(\$2.12)
EPS growth this year	5.40%	36.60%	-24.20%	-35.10%	5.00%	-238.60%	-31.10%	-23.60%	-213.70%	82.00%
EPS growth next year	11.59%	11.59%	-29.35%	-47.02%	779.17%	37.60%	-17.10%	9.63%	38.10%	57.61%
EPS growth past 5 years	29.70%	119.50%	48.20%	5.20%	-10.20%	-29.80%	-5.70%	2.00%	-32.20%	-42.70%
EPS growth next 5 years	15.96%	14.95%	0.00%	13.50%	16.15%	13.00%	-11.70%	4.53%	4.05%	15.00%
Sales growth past 5 years	35.30%	38.80%	62.40%	12.10%	10.10%	-2.10%	3.30%	12.50%	4.20%	8.20%
EPS growth quarter over quarter	1.70%	19.50%	-66.00%	-16.70%	-250.00%	-62.50%	-55.80%	-75.00%	-300.00%	27.30%
Sales growth quarter over quarter	6.10%	14.10%	-26.40%	-11.50%	-9.20%	-20.50%	-15.20%	-6.00%	-13.30%	-4.80%
Return on Assets	18.50%	15.50%	8.40%	22.70%	-1.60%	-20.50%	9.80%	7.20%	-10.20%	-10.70%
Return on Equity	25.00%	30.50%	12.10%	114.50%	-2.90%	-37.10%	23.20%	10.00%	-16.70%	-83.50%
Return on Investment	24.70%	21.00%	25.10%	42.50%	6.60%	-19.80%	14.00%	9.10%	-7.20%	-8.90%
Current Ratio	2.90	1.40	3.00	2.80	0.90	1.60	1.40	1.20	1.00	1.40
Quick Ratio	2.90	1.40	3.00	2.80	0.90	1.50	1.40	1.20	0.90	1.40
LT Debt/Equity	0.00	0.28	0.00	2.10	0.18	0.00	0.06	0.00	0.20	5.15
Total Debt/Equity	0.00	0.30	0.00	2.15	0.18	0.00	0.62	0.00	0.20	5.20
Gross Margin	65.90%	57.50%	45.30%	45.10%	42.30%	61.30%	57.10%	50.20%	50.50%	42.50%
Operating Margin	22.30%	23.50%	12.00%	17.50%	2.00%	-19.40%	16.30%	11.40%	-1.60%	8.40%
Profit Margin	13.90%	14.40%	7.80%	10.00%	-1.10%	-18.10%	6.80%	7.20%	-8.70%	-10.70%
Shares Outstanding	17.66	44.96	54.34	10.51	86.59	66.85	113.11	63.98	22.53	124.66
Shares Float	16.79	42.89	53.27	10.34	79.96	66.72	97.60	56.59	22.21	120.45
Insider Ownership	2.40%	0.40%	0.50%	0.10%	3.40%	0.10%	3.60%	2.50%	6.10%	0.90%
Insider Transactions	-14.69%	-2.70%	-7.81%	-86.44%	30.84%	-97.80%	-9.33%	9.37%	-2.48%	56.06%
Institutional Ownership	88.80%	0.00%	91.00%	98.00%	74.30%	67.70%	92.80%	96.40%	71.20%	96.00%
Institutional Transactions	-2.66%	-1.00%	-1.30%	-4.79%	-5.02%	-9.57%	-4.25%	0.86%	-1.64%	0.17%
Float Short	6.84%	5.96%	7.49%	21.06%	25.38%	6.59%	13.43%	11.89%	1.85%	2.15%
Short Ratio	7.6	6.5	9.2	11.1	16.0	3.5	5.3	12.0	4.1	18.2
Performance (Week)	-0.84%	1.23%	2.00%	1.27%	4.91%	10.90%	5.81%	1.96%	1.10%	4.95%
Performance (Month)	3.72%	-2.72%	-3.24%	-9.22%	-10.47%	15.33%	2.40%	-1.25%	-13.56%	-10.33%
Performance (Quarter)	12.97%	11.68%	-3.08%	-17.87%	-21.92%	92.22%	25.76%	13.55%	-5.36%	28.26%
Performance (Half Year)	17.58%	39.21%	43.50%	-30.38%	-20.83%	92.94%	37.27%	19.48%	-29.49%	77.33%
Performance (Year)	20.78%	80.39%	63.86%	-41.06%	-33.20%	53.55%	27.46%	42.78%	-10.18%	98.74%
Performance (Year)	20.78%	80.39%	63.86%	-41.06%	-33.20%	53.55%	27.46%	42.78%	-10.18%	98.74%
Beta	0.73	0.61	2.23	1.27	1.54	1.27	0.90	0.87	0.76	2.76
Average True Range	1.08	1.16	0.52	0.85	0.07	0.27	0.77	0.69	0.21	0.57
Volatility (Week)	2.87%	2.24%	2.76%	1.87%	3.35%	5.92%	2.37%	1.94%	4.09%	5.94%
Volatility (Month)	2.50%	2.51%	2.30%	2.32%	4.28%	6.10%	2.95%	1.89%	3.98%	5.11%
20-Day Simple Moving Average	-1.46%	-1.47%	-3.30%	-4.02%	-1.92%	8.07%	2.42%	-0.74%	-9.02%	-3.01%
50-Day Simple Moving Average	5.39%	-1.58%	-4.77%	-11.98%	-12.45%	16.47%	5.63%	-0.06%	-8.51%	-9.26%
200-Day Simple Moving Average	14.02%	25.04%	17.22%	-24.17%	-21.28%	61.00%	28.73%	10.60%	-17.39%	39.17%
Relative Strength Index (14)	54.48	47.02	42.37	31.87	41.99	62.99	61.94	49.87	34.60	44.84
Analyst Recom	2.30	1.60	2.40	3.60	3.20	3.30	2.90	2.80	3.00	2.80
Average Volume	151.11	391.56	432.72	195.74	1,272.78	1,255.96	2,469.76	559.74	100.54	142.33
Relative Volume	0.57	0.77	0.66	1.04	0.48	0.63	1.14	1.31	2.25	0.53

American Public Education, Inc. (APEI)

12/19/2013

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Shares Out.	M.O.S	Growth	Discount %	Terminal %	Select FCF	Adjust 2012 FCF
17.66	50%	13.0%	12.0%	2%	FCF	\$45.0
		13.0%				

%old school value

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Current Price	Fair Value	Buy Under	Actual M.O.S	52 Wk High	52 Wk Low
\$43.54	\$ 49.31	\$24.65	12%	\$46.69	\$29.20

Fiscal Year	Trend	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
Cash Flow Data												
Cash from Operations		\$0.0	\$0.0	\$3.7	\$8.9	\$17.5	\$29.8	\$36.8	\$47.1	\$70.4	\$52.9	\$72.6
Capex		\$0.0	\$0.0	(\$5.0)	(\$4.9)	(\$7.2)	(\$10.9)	(\$11.8)	(\$23.0)	(\$25.2)	(\$35.3)	(\$21.7)
Cash Flow				\$5.6	\$13.8	\$15.5	\$27.6	\$37.2	\$51.3	\$69.0	\$77.7	\$75.6
Free Cash Flow		\$0.0	\$0.0	(\$1.3)	\$4.0	\$10.3	\$18.9	\$25.0	\$24.1	\$45.2	\$45.0	\$50.9
YOY% Change		-	-		400.4%	158.9%	82.3%	32.4%	-3.6%	88.0%	-0.5%	13.1%

Margins												
Gross Margin		0.0%	0.0%	53.0%	55.2%	57.3%	59.3%	60.8%	62.0%	63.4%	64.9%	65.9%
Operating Margin		0.0%	0.0%	7.9%	15.2%	21.3%	24.0%	26.8%	25.2%	24.1%	21.9%	22.4%
Net Margin		0.0%	0.0%	3.9%	4.5%	12.7%	15.1%	16.1%	15.1%	15.7%	13.5%	13.9%

EPS & Tax												
Diluted EPS		#DIV/0!	#DIV/0!	\$0.13	\$0.15	\$0.64	\$0.86	\$1.27	\$1.59	\$2.23	\$2.35	\$2.58
Tax Rate				43.3%	23.9%	43.8%	38.7%	40.1%	40.4%	35.3%	38.5%	38.0%

Efficiency & Profitability												
CROIC		#DIV/0!	#DIV/0!	-12.2%	46.9%	120.0%	199.4%	209.3%	105.0%	194.9%	26.0%	75.0%
FCF/Sales				-4.7%	10.0%	15.0%	17.6%	16.8%	12.1%	17.4%	5.6%	15.3%
Inventory Turnover												
Return On Assets (ROA)		0.0%	0.0%	4.8%	6.3%	17.9%	20.5%	20.7%	21.1%	20.5%	17.8%	17.3%
Return On Equity (ROE)		0.0%	0.0%	7.5%	10.7%	26.1%	30.3%	29.2%	30.7%	30.5%	24.7%	23.0%

Debt Related												
Debt to Equity				54.4%	70.9%	46.2%	47.4%	41.1%	45.8%	48.6%	38.8%	32.5%
Capitalization Ratio				0.0%	10.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FCF to Total Debt					2.0							
FCF to Short Term Debt					137.8							
FCF to Long Term Debt					2.1							

5 Year Multi-Year Performance

	2007-2011	2008-2012	2007-2010	2008-2011	2009-2012	2007-2009	2008-2010	2009-2011	2010-2012	Median
Tang Shareholder Equity	41.4%	33.8%	42.7%	35.8%	27.8%	56.5%	34.9%	27.7%	32.6%	34.9%
Free Cash Flow	44.6%	-1.7%	32.5%	33.8%	-11.0%	55.3%	13.0%	34.6%	-14.5%	32.5%
CROIC	194.9%	194.9%	159.7%	197.2%	150.0%	199.4%	199.4%	194.9%	105.0%	194.9%
FCF/Sales	16.8%	16.8%	15.9%	17.1%	14.4%	16.8%	16.8%	16.8%	12.1%	16.8%
ROA	20.5%	20.5%	20.6%	20.6%	20.6%	20.5%	20.7%	20.7%	20.5%	20.6%
ROE	30.3%	30.3%	29.7%	30.4%	29.8%	30.3%	30.3%	30.5%	30.3%	30.3%
Gross Margin	60.8%	62.0%	60.1%	61.4%	62.7%	59.3%	60.8%	62.0%	63.4%	61.4%
Operating Margin	24.1%	24.1%	24.6%	24.7%	24.7%	24.0%	25.2%	25.2%	24.1%	24.6%
Net Margin	15.1%	15.1%	15.1%	15.4%	15.4%	15.1%	15.1%	15.7%	15.1%	15.1%
Revenue Growth	39.3%	30.8%	42.1%	34.4%	28.1%	46.8%	36.0%	32.2%	25.8%	34.4%
Earnings Growth	36.4%	28.5%	35.1%	37.3%	22.8%	40.3%	35.8%	32.6%	21.6%	35.1%
Cash from Ops Growth	41.6%	15.5%	39.0%	33.3%	12.9%	44.9%	25.8%	38.4%	6.0%	33.3%

10 Year Multi-Year Performance

	2003-2010	2004-2011	2005-2012	2003-2008	2004-2009	2005-2010	2006-2011	2007-2012	2003-2012	Median
Tang Shareholder Equity	0.0%	0.0%	42.2%	0.0%	0.0%	46.3%	51.4%	38.6%	0.0%	0.0%
Free Cash Flow	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	62.5%	11.2%	0.0%	0.0%
CROIC	0.0%	0.0%	112.5%	0.0%	0.0%	112.5%	157.4%	157.4%	0.0%	0.0%
FCF/Sales	13.6%	15.0%	13.6%	12.5%	15.0%	13.6%	15.9%	15.9%	13.6%	13.6%
ROA	12.1%	19.2%	19.2%	5.5%	12.1%	19.2%	20.5%	20.5%	17.8%	19.2%
ROE	18.4%	27.7%	27.7%	9.1%	18.4%	27.7%	29.7%	29.7%	25.4%	27.7%
Gross Margin	56.2%	58.3%	60.1%	54.1%	56.2%	58.3%	60.1%	61.4%	58.3%	58.3%
Operating Margin	18.2%	22.6%	23.0%	11.5%	18.2%	22.6%	24.1%	24.1%	21.6%	22.6%
Net Margin	8.6%	13.9%	14.3%	4.2%	8.6%	13.9%	15.1%	15.1%	13.1%	13.9%
Revenue Growth	0.0%	0.0%	41.1%	0.0%	0.0%	47.7%	45.4%	35.3%	0.0%	0.0%
Earnings Growth	#DIV/0!	#DIV/0!	50.4%	#DIV/0!	#DIV/0!	63.7%	72.1%	29.5%	#DIV/0!	0.0%
Cash from Ops Growth	0.0%	0.0%	46.5%	0.0%	0.0%	66.7%	51.1%	24.7%	0.0%	0.0%

Projection of future Free Cash Flow

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Yearly Growth Input Field										
13%	\$50.85	\$57.46	\$64.93	\$72.53	\$81.01	\$90.49	\$101.08	\$111.72	\$123.49	\$136.49
Terminal Growth										
2%	\$ 139.22	\$ 142.00	\$ 144.84	\$ 147.74	\$ 150.70	\$ 153.71	\$ 156.78	\$ 159.92	\$ 163.12	\$ 166.38

Calculation

Total Cash	\$ 143.78
MAX(0,Current Liabilities-Current A	\$ -
Excess Cash	\$ 143.78
Adding some Intangibles	\$ -
Interest Bearing Debt	\$0.00
Present Value	\$ 870.75
Shares Outstanding	17.66
Per Share Value	\$ 49.31
Desired Margin of Safety	50%
Purchase Price	\$ 24.65
Current Price	\$ 43.54
Margin of Safety	12%

Sensitivity Matrix: Growth vs Discount Rate

		Discount Rates					
		10%	11%	12%	13%	14%	
Growth Rates	9%	\$ 46.24	\$ 43.31	\$ 40.71	\$ 38.38	\$ 36.30	
	11%	\$ 51.16	\$ 47.76	\$ 44.74	\$ 42.06	\$ 39.66	
	13%	\$ 56.73	\$ 52.79	\$ 49.31	\$ 46.20	\$ 43.44	
	15%	\$ 63.03	\$ 58.49	\$ 54.46	\$ 50.88	\$ 47.69	
	17%	\$ 70.17	\$ 64.93	\$ 60.28	\$ 56.16	\$ 52.49	

Sensitivity Matrix: Margin of Safety %

		Discount Rates					
		10%	11%	12%	13%	14%	
Growth Rates	9%	5.8%	-0.5%	-7.0%	-13.4%	-19.9%	
	11%	14.9%	8.8%	2.7%	-3.5%	-9.8%	
	13%	23.2%	17.5%	11.7%	5.8%	-0.2%	
	15%	30.9%	25.6%	20.1%	14.4%	8.7%	
	17%	38.0%	32.9%	27.8%	22.5%	17.1%	

Variable Fields

Intangibles% add to DCF	0%
Decay Rate (Yr4E-Yr7E)	10%
Extra Decay (Yr8E-Yr10E)	10%

American Public Educat
(APEI)

12/19/2013

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Shares Out.	M.O.S	Growth	Projection	EPS	Corp Bond
17.66	66%	13.0%	Analyst Estimate	\$2.60	4.10
		13.0%		\$2.60	

Current Price	Intrinsic \$	Buy Under	Actual M.O.S	52 Wk High	52 Wk Low
\$43.54	\$55.80	\$18.97	22%	\$46.69	\$29.20

	2007-2011	2008-2012	2007-2010	2008-2011	2009-2012	2007-2009	2008-2010	2009-2011	2010-2012	Median
5 Yr EPS Growth	36.4%	28.5%	35.1%	37.3%	22.8%	40.3%	35.8%	32.6%	21.6%	35.1%

	2003-2010	2004-2011	2005-2012	2003-2008	2004-2009	2005-2010	2006-2011	2007-2012	Median
10 Yr EPS Growth	#DIV/0!	#DIV/0!	50.4%	#DIV/0!	#DIV/0!	63.7%	72.1%	29.5%	0.0%

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
Diltued EPS	#DIV/0!	#DIV/0!	\$ 0.13	\$ 0.15	\$ 0.64	\$ 0.86	\$ 1.27	\$ 1.59	\$ 2.23	\$ 2.35	\$ 2.58

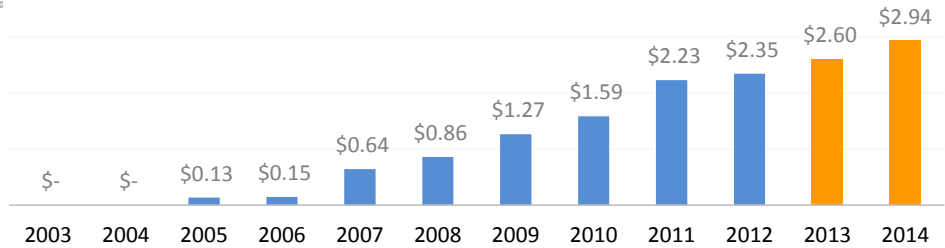
	2013E	2014E
Forecast Method	#DIV/0!	#DIV/0!
Linear Regression Method	#DIV/0!	#DIV/0!
Analyst Estimate	\$ 2.39	\$ 2.67

Graham Value Calculation

Normal Earnings	\$ 2.60
Growth Rate	13.00%
Corp Bond Rate	4.10
Per Share Value	\$ 55.80
MOS	66%
Purchase Price	\$ 18.97
Current Price	\$43.54
Actual Discount	22%

Graham's Sensitivity Matrix

Growth Sensivity Incremen	10%
EPS Sensivity Increments	10%



Growth	EPS					
	\$ 2.08	\$ 2.34	\$ 2.60	\$ 2.86	\$ 3.12	
10.4%	\$ 38.84	\$ 43.70	\$ 48.55	\$ 53.41	\$ 58.26	
11.7%	\$ 41.74	\$ 46.96	\$ 52.18	\$ 57.40	\$ 62.61	
13.0%	\$ 44.64	\$ 50.22	\$ 55.80	\$ 61.39	\$ 66.97	
14.3%	\$ 47.55	\$ 53.49	\$ 59.43	\$ 65.38	\$ 71.32	
17.2%	\$ 53.93	\$ 60.67	\$ 67.41	\$ 74.15	\$ 80.89	

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Current EPS Exp Growth	Dividend Yield	Business Safety	Financial Safety	Earnings Safety
15%	0.00%	Excellent	Excellent	Above Average
Expected PE		18 of 20 pts	20 of 20 pts	13 of 20 pts
				13

%old school value

Katsenelson Absolute PE

Current Price	Fair Value	Fair Value PE	Current PE	FV Exp Grth	M.O.S
\$43.54	\$53.38	20.73	16.94	22%	18%

Determine Business Risk

ROE	2008	2009	2010	2011	2012	TTM	AVERAGE	STDEV
ROE	30.27%	29.19%	30.70%	30.45%	24.73%	22.96%	28.1%	3.3%
Consistency/quality check		1	1	1	1	1	5	
ROA	20.54%	20.68%	21.06%	20.49%	17.81%	17.32%	19.7%	1.6%
Consistency/quality check		1	1	1	0	0	3	
CROIC	199.45%	209.33%	105.02%	194.88%	26.00%	75.02%	134.9%	77.0%
Consistency/quality check		1	1	1	1	1	5	
Intangibles % of Book Value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.0%	0.0%
Consistency/quality check		1	1	1	1	1	5	

Business Risk Factor:	18 pts out of 20	Excellent 8% Factor	18	0.0%
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Determine Financial Risk

Current Ratio	2008	2009	2010	2011	2012	TTM	AVERAGE	STDEV
Current Ratio	2.68	3.05	2.61	2.45	2.56	2.92	2.71	0.23
Consistency/quality check		1	1	1	1	1	5	
Total Debt/Equity Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consistency/quality check		1	1	1	1	1	5	
Short Term Debt/Equity Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consistency/quality check		1	1	1	1	1	5	
FCF to Total Debt							#DIV/0!	#DIV/0!
Consistency/quality check		1	1	1	1	1	5	

Financial Risk Factor:	20 pts out of 20	Excellent 10% Factor	20	0.0%
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Determine Earnings Predictability

Gross Margin	2008	2009	2010	2011	2012	TTM	AVERAGE	STDEV
Gross Margin	59.34%	60.82%	62.00%	63.43%	64.85%	65.90%	62.7%	2.5%
Consistency/quality check		1	1	1	1	1	5	
Net Margin	15.11%	16.07%	15.07%	15.65%	13.50%	13.90%	14.9%	1.0%
Consistency/quality check		1	0	1	0	1	3	
Earnings	\$0.86	\$1.27	\$1.59	\$2.23	\$2.35	\$2.58	1.81	0.68
Consistency/quality check		1	1	1	1	1	5	
Cash from Ops	\$29.76	\$36.76	\$47.08	\$70.44	\$52.92	\$72.63	\$51.60	17.42
Consistency/quality check		1	1	1	0	1	4	

Earnings Predict. Factor:	17 pts out of 20	Excellent 7% Factor	17	0.0%
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Katsenelson Absolute PE Valuation Model

Earnings Growth	15.00%	16.94
Dividend Yield	0.00%	0.00
	=	
Adjusted Base PE		16.94
	x	
Business Risk	Excellent [1 + (1 - 0.92)]	
Premium/Discount Factor:	0.92	
	x	
Financial Risk	Excellent [1 + (1 - 0.9)]	
Premium/Discount Factor:	0.90	
	x	
Earnings Predictability	Above Average [1 + (1 - 0.97)]	
Premium/Discount Factor:	0.97	
	=	
Adjusted Fair Value PE	22%	20.73

P/E	Exp EPS Grwth Rate
7.00	0%
7.65	1%
8.30	2%
8.95	3%
9.60	4%
10.25	5%
10.90	6%
11.55	7%
12.20	8%
12.85	9%
13.50	10%
14.15	11%
14.80	12%
15.45	13%
16.10	14%
16.75	15%
17.40	16%
17.90	17%
18.40	18%
18.90	19%
19.40	20%
19.90	21%
20.40	22%
20.90	23%
21.40	24%
21.90	25%

Δ0.65

Δ0.50

Dividend Yield	Add'l P/E Points
0.0%	0.0
0.1%	0.5
0.5%	0.5
1.0%	1.0
1.5%	1.5
2.0%	2.0
2.5%	2.5
3.0%	3.0
3.5%	3.5
4.0%	4.0
4.5%	4.5
5.0%	5.0
5.5%	5.5
6.0%	6.0
6.5%	6.5
10.0%	10.0

American Public Education, Inc.

(APEI)

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Figures in Millions except per share values

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Asset Valuation Section

Data: Asset Valuation

Shares Outstanding	17.7
Balance Sheet Assets	\$ 266.7
Adjusted Assets	\$ 266.7
Total Liabilities	\$ 65.5
Total Equity	\$ 201.2
Average SGA %	34.1%
Marketing/Brand Value	\$ 106.9
R&D Value	\$ -
Cash Needed for Business	\$ 3.3
Interest Bearing Debt	\$ -
Non Interest Bearing Debt	\$ 36.7
Excess Cash	\$ 137.5

Calculation: Asset Valuation

	Total	Per Share
Tangible BV	\$ 201.24	\$ 11.40
Adjusted BV	\$ 201.24	\$ 11.40
NCAV	\$ 95.32	\$ 5.40
Reprod. Cost of Assets	\$ 373.67	\$ 21.16
Reprod. Cost of Assets BV	\$ 308.17	\$ 17.45
Total Net Reprod. Cost	\$ 199.42	\$ 11.29

Quarterly numbers based on:

Adjustments:

Assets

	Book Value	Fixed BV	Multiplier	Reproduction Asset Value
Cash & Equivalents	\$ 143.8			\$ 143.8
Marketable Securities	\$ -			\$ -
Accounts Receivable	\$ 7.0			\$ 7.0
Other Receivable	\$ 1.9			\$ 1.9
Net Receivables	\$ 8.9			\$ 8.9
<i>Inventories: Raw Materials</i>	\$ -			
<i>Inventories: Work in Progress</i>	\$ -			
<i>Inventories: Purchased Components</i>	\$ -			
<i>Inventories: Finished Goods</i>	\$ -			
<i>Inventories: Other</i>	\$ -			
Inventories -- Total	\$ -			\$ -
Prepaid Expenses	\$ 4.1			\$ 4.1
Current Deferred Income Taxes	\$ 4.0			\$ 4.0
Other Current Assets	\$ -			\$ -
Total Current Assets	\$ 160.8			\$ 160.8
Goodwill, Net	\$ -			\$ -
Intangibles, Net	\$ -			\$ -
Intangibles	\$ -			\$ -
Property/Plant/Equipment - Net	\$ 88.1			\$ 88.1
Other Long Term Assets, Total	\$ 17.8			\$ 17.8
Total Assets	\$ 266.7			\$ 266.7

Shares Out.	Main. Capex	Normalized Income	Discount Rate	R&D Years	SG&A %
17.66	\$15.00	\$52.08	9%	3	25%
	\$15.00				

Current Price	EPV	Net Reproduction Value	EPV MOS	NCAV	52 Wk High	52 Wk Low
\$43.54	\$31.28	\$11.29	0.0%	\$5.40	\$46.69	\$29.20

EPV Valuation Section

Values for Normalized Income

TTM Free Cash Flow	\$ 50.9
Avg Normalized Income	\$ 48.1
Med Normalized Income	\$ 48.9
Avg Adj. Income 5 yrs	\$ 43.2
TTM Adjusted Income	\$ 69.3

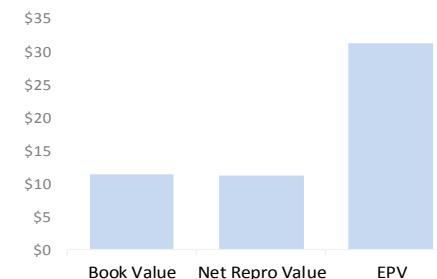
EPV > Net Repro Value = Moat exists

EPV = Net Repro Value = No Moat

EPV < Net Repro Value = Value Destroyer

Data: EPV

Cost of Capital	9.0%
Normalized Adjusted Income	\$ 52.1
Average Maintenance Capex	\$ 15.0
Interest Bearing Debt	\$ -
1% of sales	\$ 3.3
Cash & Equiv	\$ 143.8
Cash - Debt	\$ 140.5
Shares	17.66



Calculation: EPV

Cost of Capital Rates	EPV	Per Share	+ Cash - Debt	Per Share
5%	\$ 741.5	\$ 41.99	\$ 882.0	\$ 49.94
7%	\$ 529.7	\$ 29.99	\$ 670.1	\$ 37.95
9%	\$ 412.0	\$ 23.33	\$ 552.4	\$ 31.28
11%	\$ 337.1	\$ 19.09	\$ 477.5	\$ 27.04
13%	\$ 285.2	\$ 16.15	\$ 425.7	\$ 24.10

Adjustments:

Liabilities & Equity

	Book Value	Fixed BV	Multiplier	Reproduction Liability Value
Accounts Payable	\$ 12.2			\$ 12.2
Accrued Expenses	\$ -			\$ -
Accrued Liabilities	\$ 14.2			\$ 14.2
Notes Payable/Short Term Debt	\$ -			\$ -
Current Port. of LT Debt/Capital	\$ -			\$ -
Leases	\$ -			\$ -
Other Current Liabilities	\$ -			\$ -
Total Current Liabilities	\$ 26.4			\$ 26.4
Long-Term Debt	\$ -			\$ -
Capital Lease Obligations	\$ -			\$ -
Deferred Income Taxes	\$ 10.4			\$ 10.4
Total Other Liabilities	\$ -			\$ -
Total Liabilities	\$ 65.5			\$ 65.5
Common Stock Equity	\$ 201.2			\$ 201.2
Retained Earnings	\$ 39.2			\$ 39.2
Total Capitalization	\$ 201.2			\$ 201.2
Total Equity	\$ 201.2			\$ 201.2
Total Liabilities & Equity	\$ 266.7			\$ 266.7

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Current Price	NNWC	NNWC %	NCAV	NCAV %
\$43.54	\$4.81	0.0%	\$5.40	0.0%

Figures in Millions except per share values

	BV	CLEAR	BV Multiplier	Net Net Value
Cash & Equivalents	\$ 143.78		100%	\$ 143.78
Marketable Securities	\$ -			
Accounts Receivable	\$ 8.90		75%	
Other Receivable	\$ -			
Receivables	\$ 8.90			\$ 6.67
Inventories: Raw Materials	\$ -		50%	
Inventories: Work in Progress	\$ -			
Inventories: Purchased Components	\$ -			
Inventories: Finished Goods	\$ -			
Inventories: Other	\$ -			
Inventories -- Total	\$ -			\$ -
Current Assets - Total	\$ 160.82			\$ 160.82
Total Assets	\$ 266.74			\$ 266.74
Total Liabilities	\$ 65.50			\$ 65.50
Shares Outstanding	17.66			17.66

	Total (\$m)	Per Share
Total Current Assets	\$ 160.82	\$ 9.11
Market Cap & Share Price	762.8M	\$ 43.54
Book Value	\$ 201.24	\$ 11.40
Net Net Working Capital	\$ 84.95	\$ 4.81
Discount to NNWC		0%
Net Current Asset Value	\$ 95.32	\$ 5.40
Discount to NCAV		0%

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