Cognizant Technology Solutions Corporation (ctsh)

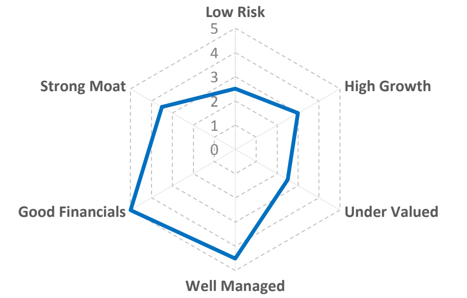
%old school value

September 5, 2013

Figures in Millions except per share values

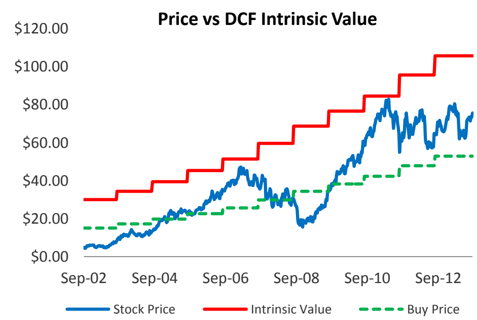
Company Overview

Cognizant Technology Solutions Corporation provides information technology (IT), consulting, and business process outsourcing services worldwide. The company operates through four segments: Financial Services; Healthcare; Manufacturing, Retail, and Logistics; and Other. It offers consulting and technology services, such as IT strategy, program management, operations improvement, strategy, and business consulting services; and application design and development, systems integration, and enterprise resource planning and customer relationship management implementation services. It also provides enterprise information management services, such strategic, advisory, and management consulting; enterprise data management; descriptive analytics/business intelligence; strategic corporate performance management; and packaged analytics services, as well as big data services that assist clients in managing and deriving actionable insights from the explosion in the volume, variety, velocity, and complexity of data. In addition, the company offers application testing services, as well as helps its clients in adapting social, mobile, analytics, and cloud-based technologies to



Valuation

			Margin of Safety
Current Price	$	75.81	
NCAV	$	11.42	-100.0%
Total Net Reprod. Cost	$	13.74	-100.0%
Earnings Power Value (EPV)	$	45.50	-66.7%
Discounted Cash Flow (DCF)	$	105.73	28.2%
Katsenelson Absolute PE	$	90.68	16.3%
Ben Graham Formula	$	115.32	34.2%



Key Statistics

Mkt Cap ($M)	$	22,836.42
52 Wk High	$	81.08
52 Wk Low	$	60.92
% off 52Wk Low		24.5%

Company Stats

Shares Outstanding	301.7
Shares Float	299.5
Insider Ownership	0.20%
Insider Transactions	8.8%
Institutional Ownersh	93.4%
Float Short	1.5%
Short Ratio	1.7
Piotroski (TTM)	8
Altman (MRQ)	10.3
Beneish (TTM)	-2.7

Cash Flows

Free Cash Flow	
5 yr FCF Growth	34.0%
10 yr FCF Growth	38.9%

Effectiveness

CROIC	
Avg	36.8%
FCF/S	
Avg	11.4%
ROA	
Avg	16.0%
ROE	
Avg	21.2%

Margins & Profitability

Gross	
Gross Margin	41.5%
Operating	
Operating Margin	19.4%
Net Profit	
Net Margin	14.2%

Fundamental Ratios

	2011	2012	TTM
P/E	23.33	21.87	20.25
P/E (cash adjusted)	20.57	19.15	17.71
EV/EBITDA	14.42	13.26	12.05
EV/Free Cash Flow	30.97	24.02	23.26
P/S	3.37	3.13	2.88
P/BV	5.21	4.74	4.34
P/Tang BV	5.78	5.16	4.82
P/CF	16.37	15.16	14.35
P/FCF	35.12	27.44	26.60
ROE	22.4%	21.7%	21.4%
ROA	16.0%	16.1%	16.3%
ROIC	47.4%	46.1%	41.4%
CROIC	31.5%	36.8%	31.5%
Current Ratio	3.38	3.50	3.78
Total Debt/Equity Ratio	0.00	0.00	0.00
Inventory Turnover	0.00	0.00	0.00

Efficiency

Receivables Turnover (TTM)	4.8
Inventory Turnover (TTM)	0.0
Days Sales Outstanding (TTM)	81.2

Financial Strength (MRQ)

Current Ratio(MRQ)	3.8
Quick Ratio(MRQ)	3.8
LTD/Eq(MRQ)	0.0
Tot D/Eq(MRQ)	0.0

Selected Financial Statements

(In Millions, Except per Share Amounts)

	2008	2009	2010	2011	2012	TTM/Latest
Revenue	$ 2,816	$ 3,279	$ 4,592	$ 6,121	$ 7,346	$ 8,022
Gross Profit	$ 1,243	$ 1,429	$ 1,938	$ 2,583	$ 3,068	$ 3,287
Margin %	*44.15%*	*43.59%*	*42.20%*	*42.19%*	*41.76%*	*40.98%*
R&D	$ -	$ -	$ -	$ -	$ -	$ -
Margin %	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Operating Income	$ 517	$ 618	$ 862	$ 1,136	$ 1,361	$ 1,504
Margin %	*18.35%*	*18.86%*	*18.77%*	*18.57%*	*18.53%*	*18.75%*
Net Income	$ 431	$ 535	$ 734	$ 884	$ 1,051	$ 1,140
Margin %	*15.30%*	*16.32%*	*15.97%*	*14.44%*	*14.31%*	*14.21%*
Earnings Per Share						
Basic	$ 1.49	$ 1.82	$ 2.44	$ 2.91	$ 3.49	$ 3.79
Diluted	$ 1.44	$ 1.78	$ 2.37	$ 2.85	$ 3.44	$ 3.74
Weighted Average Diluted Shares Outstanding	298.94	301.12	309.14	310.35	305.86	304.45
Dividends Per Share	$ -	$ -	$ -	$ -	$ -	$ -
Dividend Yield	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Net Cash From Operating Activities	$ 430	$ 672	$ 765	$ 875	$ 1,173	$ 1,186

(Dollars in Millions)

	2008	2009	2010	2011	2012	TTM/Latest
Net Property, Plants & Equipment	$ 455	$ 482	$ 570	$ 758	$ 971	$ 1,018
Total Assets	$ 2,375	$ 3,338	$ 4,583	$ 5,508	$ 6,522	$ 7,012
Long-term Debt	$ 21	$ 38	$ 68	$ 345	$ 290	$ 331
Stockholders' Equity	$ 1,966	$ 2,653	$ 3,584	$ 3,953	$ 4,854	$ 5,324

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Color Coding

9/5/2013

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Financial Statistics & Ratios

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
Valuation Ratios											
P/E	60.37	57.62	45.36	49.88	26.88	13.93	26.38	31.65	23.33	21.87	20.25
P/E (cash adjusted)	56.99	54.48	42.81	47.09	24.96	12.16	23.76	28.61	20.57	19.15	17.71
EV/EBITDA	40.03	40.74	35.76	37.40	20.07	8.86	17.96	21.59	14.42	13.26	12.05
EV/Free Cash Flow	65.55	67.63	80.89	74.00	54.01	20.13	21.34	36.24	30.97	24.02	23.26
P/S	9.41	9.85	8.51	8.15	4.41	2.13	4.30	5.05	3.37	3.13	2.88
P/BV	12.64	12.74	10.56	10.82	6.41	3.05	5.32	6.48	5.21	4.74	4.34
P/Tang BV	13.68	13.38	11.10	11.32	7.39	3.40	5.92	7.09	5.78	5.16	4.82
P/CF	34.56	35.70	28.76	32.08	16.58	8.59	19.23	22.04	16.37	15.16	14.35
P/FCF	69.44	71.53	85.71	78.38	58.15	23.06	23.69	40.08	35.12	27.44	26.60
ROE	20.9%	22.1%	23.3%	21.7%	23.8%	21.9%	20.2%	20.5%	22.4%	21.7%	21.4%
ROA	15.9%	17.5%	19.1%	17.6%	19.0%	18.1%	16.0%	16.0%	16.0%	16.1%	16.3%
ROIC	55.3%	70.1%	57.3%	54.4%	42.3%	35.2%	41.4%	51.4%	47.4%	46.1%	41.4%
CROIC	48.1%	56.5%	30.3%	34.6%	19.6%	21.3%	46.1%	40.6%	31.5%	36.8%	31.5%
GPA (Gross Profitability to Assets)	46.7%	46.6%	46.7%	48.0%	50.6%	52.4%	42.8%	42.3%	46.9%	47.0%	46.9%
Book to Market	7.9%	7.9%	9.5%	9.2%	15.6%	32.7%	18.8%	15.4%	19.2%	21.1%	23.1%
Solvency											
Quick Ratio	4.45	3.95	4.26	4.17	3.65	3.79	3.57	3.78	3.38	3.50	3.78
Current Ratio	4.45	3.95	4.26	4.17	3.65	3.79	3.57	3.78	3.38	3.50	3.78
Total 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
Long 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
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	1.02	1.02	1.02	1.07	1.16	1.19	0.98	1.00	1.11	1.13	1.14
Cash % of Revenue	52.7%	50.0%	22.2%	18.7%	15.9%	26.1%	33.6%	33.6%	21.4%	21.4%	20.9%
Receivables % of Revenue	16.8%	18.8%	19.9%	21.0%	20.4%	20.6%	21.6%	22.1%	21.5%	20.8%	22.3%
SG&A % of Revenue	22.9%	22.6%	23.4%	24.1%	23.1%	23.2%	22.0%	21.2%	21.7%	21.2%	20.2%
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	61.3	68.8	72.8	76.5	74.6	75.1	79.0	80.6	78.6	76.0	81.2
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	17.2	12.8	12.5	12.9	10.9	9.3	10.8	10.4	7.4	9.3	7.3
Cash Conversion Cycle	**44.0**	**56.0**	**60.3**	**63.6**	**63.6**	**65.8**	**68.2**	**70.2**	**71.2**	**66.7**	**74.0**
Receivables Turnover	5.96	6.81	6.17	5.99	5.81	5.54	5.09	5.33	5.25	5.16	4.84
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	7.6%	4.8%	4.8%	4.4%	13.2%	10.3%	10.1%	8.6%	9.8%	8.2%	7.1%
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%	0.0%	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%	0.0%	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%	0.0%	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%	0.0%	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%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Working Capital % of Price	6.2%	5.9%	6.7%	6.8%	9.6%	18.0%	11.8%	11.1%	14.0%	14.9%	16.4%
Quality Scores											
Piostroski F Score	6.00	6.00	6.00	5.00	5.00	7.00	4.00	6.00	5.00	8.00	8.00
Altman Z Score (Original)	27.00	32.12	32.15	30.76	18.51	12.10	15.39	17.08	11.30	11.73	10.31
Altman Z Score (Revised)	48.67	57.62	57.67	55.21	33.21	21.82	28.09	31.32	20.89	21.69	20.56
Beneish M Score (5 Variable)	-	-2.53	-2.25	-2.59	-1.58	-2.44	-2.84	-2.79	-2.61	-2.83	-2.73
Beneish M Score (8 Variable)	-	-2.20	-1.73	-2.09	-1.35	-1.98	-2.59	-2.27	-2.16	-2.42	-2.29

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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	-	66.9%	105.5%	43.8%	33.1%	8.7%	23.1%	27.3%	25.5%	21.7%	10.4%
Cash Flow Accrual Ratio	-	34.4%	62.3%	38.1%	29.3%	4.8%	18.5%	23.1%	36.7%	15.1%	11.8%
Sloan Accrual Ratio	4.2%	7.2%	24.3%	19.0%	15.4%	2.4%	7.7%	9.1%	15.6%	6.9%	5.8%
Earnings	$ 0.21	$ 0.35	$ 0.57	$ 0.77	$ 1.15	$ 1.44	$ 1.78	$ 2.37	$ 2.85	$ 3.44	$ 3.74
Stock Price	$ 12.8	$ 20.3	$ 25.7	$ 38.6	$ 31.0	$ 20.1	$ 46.9	$ 75.1	$ 66.4	$ 75.2	$ 75.8
Total Assets	$ 360.6	$ 572.7	$ 869.9	$ 1,326.0	$ 1,838.3	$ 2,374.6	$ 3,338.2	$ 4,583.1	$ 5,507.9	$ 6,521.6	$ 7,012.3
Cash & Equivalent	$ 194.2	$ 293.4	$ 196.9	$ 265.9	$ 339.8	$ 735.1	$ 1,100.9	$ 1,541.0	$ 1,310.9	$ 1,570.1	$ 1,678.2
Total Liabilities	$ 86.5	$ 119.2	$ 155.7	$ 252.5	$ 370.1	$ 409.0	$ 685.1	$ 998.6	$ 1,555.0	$ 1,667.2	$ 1,688.6
Short Term Debt	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Long Term Debt	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net Operating Assets (NOA)	$ 79.8	$ 160.1	$ 517.2	$ 807.6	$ 1,128.4	$ 1,230.5	$ 1,552.2	$ 2,043.5	$ 2,642.0	$ 3,284.3	$ 3,645.5
Net Income	$ 57.4	$ 100.2	$ 166.3	$ 232.8	$ 350.1	$ 430.8	$ 535.0	$ 733.5	$ 883.6	$ 1,051.3	$ 1,140.3
CFO	$ 79.9	$ 127.3	$ 159.8	$ 252.9	$ 344.3	$ 429.7	$ 672.3	$ 764.7	$ 875.2	$ 1,172.6	$ 1,185.7
CFI	$ (37.8)	$ (68.4)	$ (204.5)	$ (272.3)	$ (277.3)	$ (55.0)	$ (394.8)	$ (446.9)	$ (850.3)	$ (570.0)	$ (453.0)
Balance Sheet Aggregate Accrual	$ -	$ 80.2	$ 357.1	$ 290.4	$ 320.8	$ 102.1	$ 321.7	$ 491.2	$ 598.5	$ 642.3	$ 361.2
Cash Flow Aggregate Accrual	$ -	$ 41.3	$ 211.1	$ 252.3	$ 283.2	$ 56.1	$ 257.4	$ 415.8	$ 858.7	$ 448.7	$ 407.6

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)**

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

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)

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

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

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

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

	Annual										MRQ	MRQ Edit
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Q2	
Working Capital	$ 215.9	$ 338.9	$ 507.7	$ 790.9	$ 901.5	$ 1,080.5	$ 1,661.0	$ 2,587.5	$ 2,875.8	$ 3,437.0	$ 3,776.7	
Total Assets	$ 360.6	$ 572.7	$ 869.9	$ 1,326.0	$ 1,838.3	$ 2,374.6	$ 3,338.2	$ 4,583.1	$ 5,507.9	$ 6,521.6	$ 7,012.3	
Total Liabilities	$ 86.5	$ 119.2	$ 155.7	$ 252.5	$ 370.1	$ 409.0	$ 685.1	$ 998.6	$ 1,555.0	$ 1,667.2	$ 1,688.6	
Retained Earnings	$ 151.0	$ 251.2	$ 417.5	$ 650.3	$ 999.6	$ 1,430.4	$ 1,965.4	$ 2,698.9	$ 3,582.5	$ 4,633.8	$ 5,218.4	
EBITDA	$ 72.2	$ 122.1	$ 185.3	$ 277.8	$ 414.4	$ 515.2	$ 637.0	$ 878.6	$ 1,169.1	$ 1,387.6	$ 420.4	
Market Value of Equity	$ 3,463.3	$ 5,776.4	$ 7,541.6	$ 11,611.3	$ 9,411.4	$ 6,002.7	$ 14,110.2	$ 23,213.1	$ 20,610.4	$ 22,994.6	$ 22,836.4	
Net Sales	$ 368.2	$ 586.7	$ 885.8	$ 1,424.3	$ 2,135.6	$ 2,816.3	$ 3,278.7	$ 4,592.4	$ 6,121.2	$ 7,346.5	$ 2,161.2	
Normal Altman Z Score	*27.00*	*32.12*	*32.15*	*30.76*	*18.51*	*12.10*	*15.39*	*17.08*	*11.30*	*11.73*	*10.31*	
Revised Altman Z Score	*48.67*	*57.62*	*57.67*	*55.21*	*33.21*	*21.82*	*28.09*	*31.32*	*20.89*	*21.69*	*20.56*	

X1	0.53	0.54
X2	0.71	0.74
X3	0.21	0.06
X4	13.79	13.52
X5	1.13	0.31

Altman Z Score

Annual	*MRQ*
11.73	**10.31**

Revised Altman Z Score

Annual	*MRQ*
21.69	**20.56**

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*DSRI + 0.528*GMI + 0.404*AQI + 0.892*SGI + 0.115*DEPI - 0.172*SGAI + 4.679*TATA - 0.327*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 SGAI, DEPI and LEVI which were not significant in the original Beneish model.

M = -6.065 + 0.823*DSRI + 0.906*GMI + 0.593*AQI + 0.717*SGI + 0.107*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	-	**-2.53**	**-2.25**	**-2.59**	**-1.58**	**-2.44**	**-2.84**	**-2.79**	**-2.61**	**-2.83**	**-2.73**
M Score - 8 Variable	-	**-2.20**	**-1.73**	**-2.09**	**-1.35**	**-1.98**	**-2.59**	**-2.27**	**-2.16**	**-2.42**	**-2.29**
DSRI	-	1.12	1.06	1.05	0.98	1.01	1.05	1.02	0.98	0.97	1.07
GMI	-	1.01	0.99	1.03	1.03	0.99	1.01	1.03	1.00	1.01	1.02
AQI	-	0.75	1.40	0.72	2.65	1.45	0.87	0.66	1.12	0.94	1.09
SGI	-	1.59	1.51	1.61	1.50	1.32	1.16	1.40	1.33	1.20	1.09
DEPI	-	1.10	1.21	0.95	1.02	0.93	0.90	0.97	1.15	1.01	0.97
SGAI	-	0.99	1.03	1.03	0.96	1.00	0.95	0.96	1.03	0.98	0.95
TATA	-	-0.05	0.01	-0.02	0.00	0.00	-0.04	-0.01	0.00	-0.02	-0.01
LVGI	-	1.16	0.89	1.05	0.98	0.88	1.19	1.05	1.08	0.96	0.92

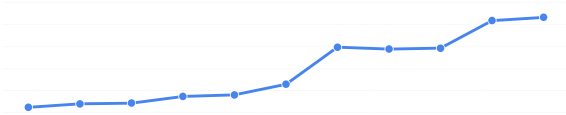
Cognizant Technology Solutions Corporation (ctsh)

9/5/2013

Enter Ticker Refresh

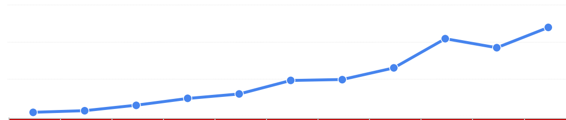
Figures in Millions except per share values

Free Cash Flow



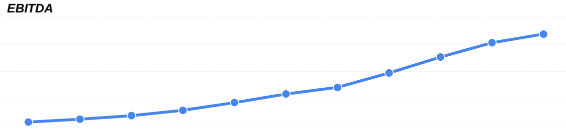
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
	$49.9	$80.8	$88.0	$148.1	$161.9	$260.3	$595.7	$579.1	$586.9	$838.1	$867.5
% Change	61.9%	9.0%	68.4%	9.3%	60.8%	128.9%	-2.8%	1.3%	42.8%	3.5%	

Owner Earnings



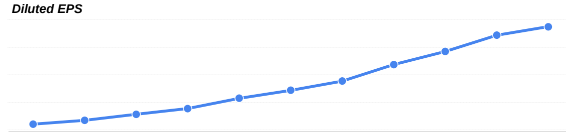
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
	$52.5	$74.5	$147.8	$241.5	$300.8	$483.1	$494.1	$652.2	$1,047.0	$923.9	$1,197.6
% Change	41.7%	98.5%	63.4%	24.5%	60.6%	2.3%	32.0%	60.5%	-11.8%	29.6%	

EBITDA



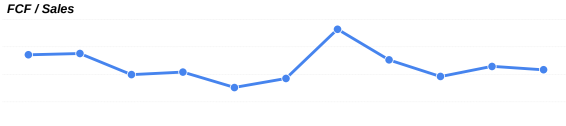
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
	$81.7	$134.1	$199.0	$293.1	$435.4	$591.5	$707.9	$972.0	$1,260.6	$1,518.1	$1,674.3
% Change	64.2%	48.4%	47.3%	48.6%	35.8%	19.7%	37.3%	29.7%	20.4%	10.3%	

Diluted EPS



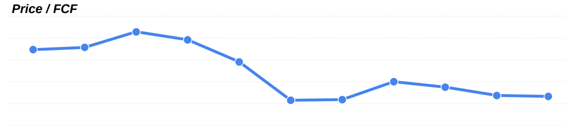
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
	$0.21	$0.35	$0.57	$0.77	$1.15	$1.44	$1.78	$2.37	$2.85	$3.44	$3.74
% Change	66.5%	61.0%	36.6%	49.2%	25.0%	23.3%	33.6%	20.0%	20.7%	8.9%	

FCF / Sales



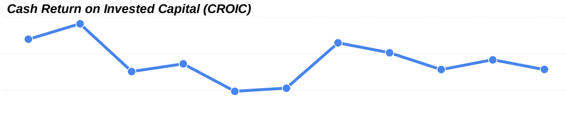
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
	13.5%	13.8%	9.9%	10.4%	7.6%	9.2%	18.2%	12.6%	9.6%	11.4%	10.8%
% Change	1.6%	-27.8%	4.7%	-27.1%	21.9%	96.6%	-30.6%	-24.0%	19.0%	-5.2%	

Price / FCF



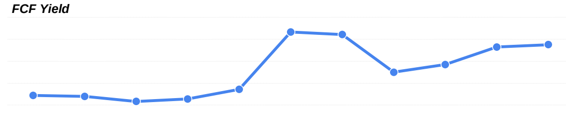
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
	69.4	71.5	85.7	78.4	58.1	23.1	23.7	40.1	35.1	27.4	26.6
% Change	3.0%	19.8%	-8.6%	-25.8%	-60.3%	2.7%	69.2%	-12.4%	-21.9%	-3.0%	

Cash Return on Invested Capital (CROIC)



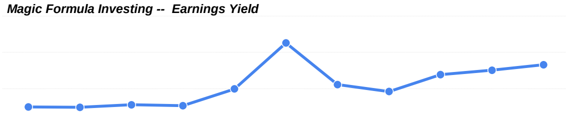
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
	48.1%	56.5%	30.3%	34.6%	19.6%	21.3%	46.1%	40.6%	31.5%	36.8%	31.5%
% Change	17.5%	-46.3%	14.0%	-43.4%	8.6%	116.8%	-11.9%	-22.6%	16.8%	-14.3%	

FCF Yield



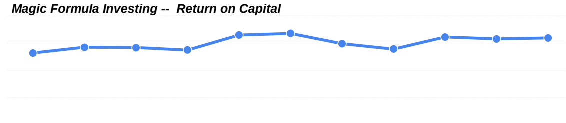
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
	1.4%	1.4%	1.2%	1.3%	1.7%	4.3%	4.2%	2.5%	2.8%	3.6%	3.8%
% Change	-2.9%	-16.5%	9.4%	34.8%	152.1%	-2.6%	-40.9%	14.1%	28.0%	3.1%	

Magic Formula Investing -- Earnings Yield



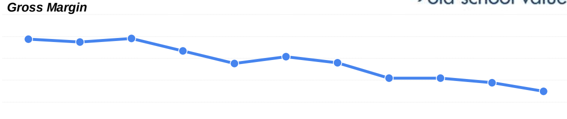
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
	2.5%	2.5%	2.8%	2.7%	5.0%	11.3%	5.6%	4.6%	6.9%	7.5%	8.3%
% Change	-1.7%	13.9%	-4.4%	86.3%	126.6%	-50.7%	-16.8%	49.7%	8.7%	10.0%	

Magic Formula Investing -- Return on Capital



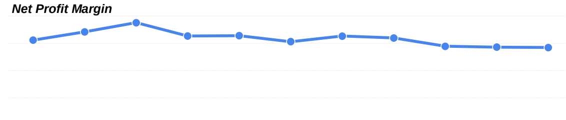
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
	26.3%	28.4%	28.3%	27.5%	32.9%	33.5%	29.7%	27.8%	32.2%	31.5%	31.9%
% Change	7.9%	-0.4%	-2.9%	19.9%	1.8%	-11.4%	-6.4%	15.6%	-2.2%	1.2%	

Gross Margin



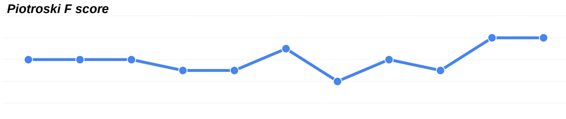
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
	45.8%	45.5%	45.8%	44.7%	43.5%	44.2%	43.6%	42.2%	42.2%	41.8%	41.0%
% Change	-0.6%	0.7%	-2.5%	-2.6%	1.4%	-1.3%	-3.2%	0.0%	-1.0%	-1.9%	

Net Profit Margin



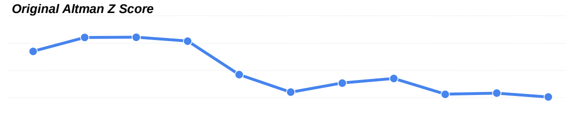
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
	15.6%	17.1%	18.8%	16.3%	16.4%	15.3%	16.3%	16.0%	14.4%	14.3%	14.2%
% Change	9.7%	9.8%	-12.9%	0.3%	-6.7%	6.7%	-2.1%	-9.6%	-0.9%	-0.7%	

Piotroski F score



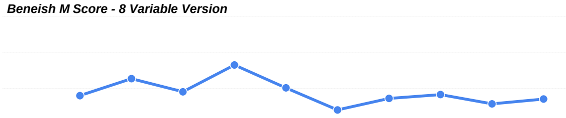
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
	6.0	6.0	6.0	5.0	5.0	7.0	4.0	6.0	5.0	8.0	8.0
% Change	0.0%	0.0%	-16.7%	0.0%	40.0%	-42.9%	50.0%	-16.7%	60.0%	0.0%	

Original Altman Z Score



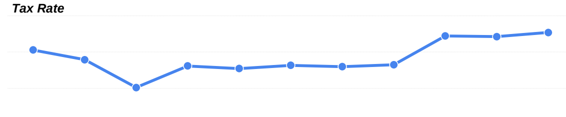
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
	27.0	32.1	32.1	30.8	18.5	12.1	15.4	17.1	11.3	11.7	10.3
% Change	19.0%	0.1%	-4.3%	-39.8%	-34.7%	27.2%	11.0%	-33.8%	3.8%	-12.1%	

Beneish M Score - 8 Variable Version



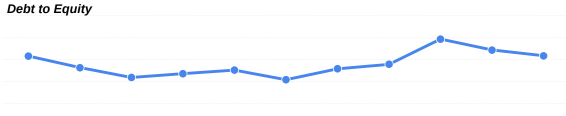
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
		-2.2	-1.7	-2.1	-1.3	-2.0	-2.6	-2.3	-2.2	-2.4	-2.3
% Change	#DIV/0!	21.4%	-21.1%	35.4%	-46.7%	-30.9%	12.4%	4.6%	-11.9%	5.6%	

Tax Rate



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
	20.6%	17.9%	10.3%	16.2%	15.5%	16.4%	16.0%	16.5%	24.4%	24.2%	25.4%
% Change	-13.0%	-42.7%	58.0%	-4.3%	5.6%	-2.2%	3.1%	47.9%	-0.8%	4.6%	

Debt to Equity



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
	31.6%	26.3%	21.8%	23.5%	25.2%	20.8%	25.8%	27.9%	39.3%	34.3%	31.7%
% Change	-16.7%	-17.0%	7.8%	7.2%	-17.5%	24.1%	7.9%	41.2%	-12.7%	-7.6%	

FCF to Total Debt

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
% Change	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	

FCF to Short Term Debt

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
% Change	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	

FCF to Long Term Debt

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
% Change	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	

Cognizant Technology Solutions Corporation (ctsh)

9/5/2013

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Enter Competitor Tickers

	ctsh	exls
Company	Cognizant Technology	Exlservice Holdings, Inc.
Sector	Technology	Services
Industry	Business Software &	Business Services
Country	USA	USA
Earnings Date	6-Aug-2013	30-Jul-2013
Price	$75.81	$27.91
Market Cap	$22,836.42	$912.24
Change	0.15%	0.29%
Volume	877,648	18,441
Change from Open	0.38%	0.40%
Gap	-0.24%	-0.11%
50-Day High	-0.63%	-9.65%
50-Day Low	23.35%	6.20%
52-Week High	-6.50%	-15.35%
52-Week Low	24.44%	8.47%
P/E	20.19	21.57
Forward P/E	16.16	14.21
PEG	1.09	1.35
P/S	2.85	1.97
P/B	4.29	2.58
P/Cash	7.87	7.59
P/Free Cash Flow	26.32	16.35
Dividend Yield	0.00%	0.00%
Payout Ratio	0.00%	0.00%
EPS (ttm)	$3.75	$1.29
EPS growth this year	20.70%	14.50%
EPS growth next year	17.72%	12.72%
EPS growth past 5 years	24.50%	16.00%
EPS growth next 5 years	18.55%	16.00%
Sales growth past 5 years	28.00%	23.80%
EPS growth quarter over quarter	20.70%	0.00%
Sales growth quarter over quarter	20.40%	7.40%
Return on Assets	17.30%	9.90%
Return on Equity	22.80%	12.30%
Return on Investment	21.10%	12.10%
Current Ratio	3.80	3.30
Quick Ratio	3.80	3.30
LT Debt/Equity	0.00	0.01
Total Debt/Equity	0.00	0.01
Gross Margin	41.50%	38.10%
Operating Margin	19.40%	12.30%
Profit Margin	14.20%	9.30%
Shares Outstanding	301.67	32.78
Shares Float	299.50	31.02
Insider Ownership	0.20%	3.10%
Insider Transactions	8.84%	-16.31%
Institutional Ownership	93.40%	89.20%
Institutional Transactions	-2.48%	-2.51%
Float Short	1.52%	1.39%
Short Ratio	1.7	2.7
Performance (Week)	4.86%	4.12%
Performance (Month)	3.12%	-2.01%
Performance (Quarter)	18.50%	-7.30%
Performance (Half Year)	-6.20%	-13.81%
Performance (Year)	18.60%	7.66%
Performance (Year)	18.60%	7.66%
Beta	1.12	1.03
Average True Range	1.43	0.57
Volatility (Week)	2.06%	1.32%
Volatility (Month)	1.92%	1.64%
20-Day Simple Moving Average	3.92%	2.31%
50-Day Simple Moving Average	6.87%	-2.60%
200-Day Simple Moving Average	6.13%	-5.42%
Relative Strength Index (14)	67.10	52.53
Analyst Recom	1.80	1.80
Average Volume	2,640.27	159.70
Relative Volume	1.01	0.35

Cognizant Technology Solutions C (ctsh)

9/5/2013

Select input with each list or enter

Shares Out.	M.O.S	Growth	Discount %	Terminal %	Select FCF	Adjust 2012 FCF
301.67	50%	21.2%	9.0%	2%	FCF	

%old school value

Enter Ticker | Refresh | CLEAR

Current Price	Fair Value	Buy Under	Actual M.O.S	52 Wk High	52 Wk Low
$75.81	$ 105.73	$52.86	28%	$81.08	$60.92

Fiscal Year	Trend	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
Cash Flow Data												
Cash from Operations		$79.9	$127.3	$159.8	$252.9	$344.3	$429.7	$672.3	$764.7	$875.2	$1,172.6	$1,185.7
Capex		($30.0)	($46.6)	($71.8)	($104.7)	($182.5)	($169.4)	($76.6)	($185.5)	($288.2)	($334.5)	($318.2)
Cash Flow		$100.2	$161.8	$262.2	$362.0	$567.7	$698.8	$733.9	$1,053.2	$1,259.3	$1,516.5	$1,608.3
Free Cash Flow		$49.9	$80.8	$88.0	$148.1	$161.9	$260.3	$595.7	$579.1	$586.9	$838.1	$867.5
		YOY% Change	61.9%	9.0%	68.4%	9.3%	60.8%	128.9%	-2.8%	1.3%	42.8%	3.5%
Margins												
Gross Margin		45.8%	45.5%	45.8%	44.7%	43.5%	44.2%	43.6%	42.2%	42.2%	41.8%	41.0%
Operating Margin		18.9%	20.0%	20.1%	18.2%	17.9%	18.3%	18.9%	18.8%	18.6%	18.5%	18.8%
Net Margin		15.6%	17.1%	18.8%	16.3%	16.4%	15.3%	16.3%	16.0%	14.4%	14.3%	14.2%
EPS & Tax												
Diluted EPS		$0.21	$0.35	$0.57	$0.77	$1.15	$1.44	$1.78	$2.37	$2.85	$3.44	$3.74
Tax Rate		20.6%	17.9%	10.3%	16.2%	15.5%	16.4%	16.0%	16.5%	24.4%	24.2%	25.4%
Efficiency & Profitability												
CROIC		48.1%	56.5%	30.3%	34.6%	19.6%	21.3%	46.1%	40.6%	31.5%	36.8%	31.5%
FCF/Sales		13.5%	13.8%	9.9%	10.4%	7.6%	9.2%	18.2%	12.6%	9.6%	11.4%	10.8%
Inventory Turnover												
Return On Assets (ROA)		15.9%	17.5%	19.1%	17.6%	19.0%	18.1%	16.0%	16.0%	16.0%	16.1%	16.3%
Retun On Equity (ROE)		20.9%	22.1%	23.3%	21.7%	23.8%	21.9%	20.2%	20.5%	22.4%	21.7%	21.4%
Debt Related												
Debt to Equity		31.6%	26.3%	21.8%	23.5%	25.2%	20.8%	25.8%	27.9%	39.3%	34.3%	31.7%
Capitalization Ratio		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FCF to Total Debt												
FCF to Short Term Debt												
FCF to Long Term Debt												

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	28.3%	25.6%	35.0%	26.2%	22.7%	34.6%	35.1%	22.3%	16.7%	26.2%
Free Cash Flow	38.0%	34.0%	53.0%	31.1%	12.1%	91.8%	49.2%	-0.7%	20.3%	**34.0%**
CROIC	31.5%	36.8%	30.9%	36.0%	38.7%	21.3%	40.6%	40.6%	36.8%	36.8%
FCF/Sales	9.6%	11.4%	10.9%	11.1%	12.0%	9.2%	12.6%	12.6%	11.4%	11.4%
ROA	16.0%	16.0%	17.1%	16.0%	16.0%	18.1%	16.0%	16.0%	16.0%	16.0%
ROE	21.9%	21.7%	21.2%	21.2%	21.1%	21.9%	20.5%	20.5%	21.7%	21.2%
Gross Margin	43.5%	42.2%	43.6%	42.9%	42.2%	43.6%	43.6%	42.2%	42.2%	42.9%
Operating Margin	18.6%	18.6%	18.6%	18.7%	18.7%	18.3%	18.8%	18.8%	18.6%	18.6%
Net Margin	16.0%	15.3%	16.1%	15.6%	15.2%	16.3%	16.0%	16.0%	14.4%	16.0%
Revenue Growth	30.1%	27.1%	29.1%	29.5%	30.9%	23.9%	27.7%	36.6%	26.5%	29.1%
Earnings Growth	25.3%	24.3%	27.2%	25.5%	24.6%	24.1%	28.3%	26.6%	20.4%	25.3%
Cash from Ops Growth	26.3%	28.5%	30.5%	26.8%	20.4%	39.7%	33.4%	14.1%	23.8%	26.8%

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	45.5%	36.7%	32.1%	49.9%	43.0%	38.8%	29.6%	27.4%	38.6%	38.6%
Free Cash Flow	41.9%	32.8%	38.0%	39.2%	49.1%	45.8%	31.7%	38.9%	36.8%	**38.9%**
CROIC	37.6%	33.0%	33.0%	32.5%	32.5%	32.5%	33.0%	34.1%	36.8%	33.0%
FCF/Sales	11.5%	10.2%	10.2%	10.2%	10.2%	10.2%	10.0%	10.5%	10.9%	10.2%
ROA	17.5%	17.5%	16.8%	17.9%	17.9%	17.9%	16.8%	16.1%	16.8%	17.5%
ROE	21.8%	22.0%	21.8%	22.0%	22.0%	21.8%	21.8%	21.8%	21.8%	21.8%
Gross Margin	44.4%	43.9%	43.6%	45.1%	44.4%	43.9%	43.6%	42.9%	43.9%	43.9%
Operating Margin	18.8%	18.7%	18.5%	18.6%	18.6%	18.6%	18.5%	18.5%	18.7%	18.6%
Net Margin	16.3%	16.3%	16.1%	16.4%	16.4%	16.3%	16.1%	15.6%	16.1%	16.3%
Revenue Growth	43.4%	39.8%	35.3%	50.2%	41.1%	39.0%	33.9%	28.0%	39.5%	39.5%
Earnings Growth	41.3%	34.8%	29.4%	46.8%	38.3%	33.2%	29.8%	24.4%	36.3%	34.8%
Cash from Ops Growth	38.1%	31.7%	32.9%	40.0%	39.5%	36.8%	28.2%	27.8%	34.8%	34.8%

Projection of future Free Cash Flow

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Yearly Growth Input Field										
21%	$1,015.73	$1,230.99	$1,491.86	$1,776.40	$2,115.21	$2,518.64	$2,999.02	$3,513.81	$4,116.98	$4,823.68
Terminal Growth	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
2%	$ 4,920.16	$ 5,018.56	$ 5,118.93	$ 5,221.31	$ 5,325.74	$ 5,432.25	$ 5,540.90	$ 5,651.71	$ 5,764.75	$ 5,880.04

Calculation

Total Cash	$	2,900.57
MAX(0,Current Liabilities-Current A	$	-
Excess Cash	$	2,900.57
Adding some Intangibles	$	-
Interest Bearing Debt		$0.00
Present Value	$	31,894.99
Shares Outstanding		301.67
Per Share Value	$	105.73
Desired Margin of Safety		50%
Purchase Price	$	52.86
Current Price	$	75.81
Margin of Safety		28%

Sensitivity Matrix: Growth vs Discount Rate

Discount Rates

		7%	8%	9%	10%	11%
Growth Rates	17%	$ 100.60	$ 92.08	$ 84.62	$ 78.05	$ 72.25
	19%	$ 112.98	$ 103.15	$ 94.53	$ 86.95	$ 80.27
	21%	$ 127.01	$ 115.66	$ 105.73	$ 97.00	$ 89.31
	23%	$ 142.87	$ 129.81	$ 118.38	$ 108.34	$ 99.51
	25%	$ 160.80	$ 145.78	$ 132.65	$ 121.13	$ 110.99

Sensitivity Matrix: Margin of Safety %

Discount Rates

		7%	8%	9%	10%	11%
Growth Rates	17%	24.6%	17.7%	10.4%	2.9%	-4.9%
	19%	32.9%	26.5%	19.8%	12.8%	5.6%
	21%	40.3%	34.5%	28.3%	21.8%	15.1%
	23%	46.9%	41.6%	36.0%	30.0%	23.8%
	25%	52.9%	48.0%	42.8%	37.4%	31.7%

Variable Fields

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

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Shares Out.	M.O.S	Growth	Projection	EPS	Corp Bond
301.67	66%	20.0%	Analyst Estimate	$3.98	4.10
		20.0%			

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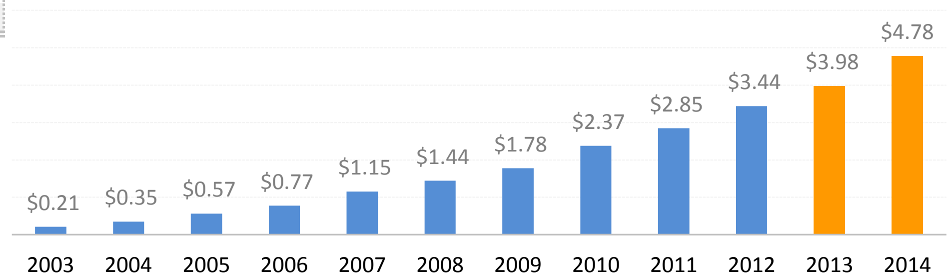
Current Price	Intrinsic $	Buy Under	Actual M.O.S	52 Wk High	52 Wk Low
$75.81	$115.32	$39.21	34%	$81.08	$60.92

	2007-2011	2008-2012	2007-2010	2008-2011	2009-2012	2007-2009	2008-2010	2009-2011	2010-2012	Median
5 Yr EPS Growth	25.3%	24.3%	27.2%	25.5%	24.6%	24.1%	28.3%	26.6%	20.4%	25.3%

	2003-2010	2004-2011	2005-2012	2003-2008	2004-2009	2005-2010	2006-2011	2007-2012	Median
10 Yr EPS Growth	41.3%	34.8%	29.4%	46.8%	38.3%	33.2%	29.8%	24.4%	34.8%

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TTM
Diltued EPS	$ 0.21	$ 0.35	$ 0.57	$ 0.77	$ 1.15	$ 1.44	$ 1.78	$ 2.37	$ 2.85	$ 3.44	$ 3.74

	2013E	*2014E*
Forecast Method	$ 3.45	$ 4.15
Linear Regression Method	$ 3.20	$ 3.84
Analyst Estimate	$ 3.98	$ 4.68



Graham Value Calculation

Normal Earnings	$ 3.98
Growth Rate	20.00%
Corp Bond Rate	4.10
Per Share Value	$ 115.32
MOS	66%
Purchase Price	$ 39.21
Current Price	$75.81
Actual Discount	34%

Graham's Sensitivity Matrix

Growth Sensitivity Incremen	10%
EPS Sensivity Increments	10%

EPS

Growth	$ 3.18	$ 3.58	$ 3.98	$ 4.38	$ 4.78
16.0%	$ 78.59	$ 88.41	$ 98.24	$ 108.06	$ 117.89
18.0%	$ 85.42	$ 96.10	$ 106.78	$ 117.46	$ 128.14
20.0%	$ 92.26	$ 103.79	$ 115.32	$ 126.86	$ 138.39
22.0%	$ 99.09	$ 111.48	$ 123.87	$ 136.25	$ 148.64
26.4%	$ 114.13	$ 128.39	$ 142.66	$ 156.92	$ 171.19

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Current EPS Exp Growth	Dividend Yield	Business Safety	Financial Safety	Earnings Safety
21%	0.00%	Excellent	Excellent	Above Average
Expected PE		18 of 20 pts	20 of 20 pts	11 of 20 pts

Katsenelson Absolute PE	Current Price	Fair Value	Fair Value PE	Current PE	FV Exp Grth	M.O.S
	$75.81	$90.68	24.23	20.19	25%	16%

Determine Business Risk	2008	2009	2010	2011	2012	TTM	AVERAGE	STDEV
ROE	21.92%	20.16%	20.46%	22.35%	21.66%	21.42%	21.3%	0.9%
Consistency/quality check		1	1	1	1	1	5	
ROA	18.14%	16.03%	16.01%	16.04%	16.12%	16.26%	16.4%	0.8%
Consistency/quality check		0	0	1	1	1	3	
CROIC	21.26%	46.10%	40.61%	31.45%	36.75%	31.50%	34.6%	8.6%
Consistency/quality check		1	1	1	1	1	5	
Intangibles % of Book Value	10.27%	10.11%	8.62%	9.77%	8.17%	7.06%	9.0%	1.3%
Consistency/quality check		1	1	1	1	1	5	
Business Risk Factor:	**18 pts out of 20**		**Excellent 8% Factor**				**18**	**0.0%**

Determine Financial Risk	2008	2009	2010	2011	2012	TTM	AVERAGE	STDEV
Current Ratio	3.79	3.57	3.78	3.38	3.50	3.78	3.63	0.18
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%**

Determine Earnings Predictab	2008	2009	2010	2011	2012	TTM	AVERAGE	STDEV
Gross Margin	44.15%	43.59%	42.20%	42.19%	41.76%	40.98%	42.5%	1.2%
Consistency/quality check		0	0	0	0	0	0	
Net Margin	15.30%	16.32%	15.97%	14.44%	14.31%	14.21%	15.1%	0.9%
Consistency/quality check		1	0	0	0	0	1	
Earnings	$1.44	$1.78	$2.37	$2.85	$3.44	$3.74	2.60	0.91
Consistency/quality check		1	1	1	1	1	5	
Cash from Ops	$429.71	$672.33	$764.65	$875.15	$1,172.58	$1,185.75	$850.03	294.25
Consistency/quality check		1	1	1	1	1	5	
Earnings Predict. Factor:	**11 pts out of 20**		**Above Average 1% Factor**				**11**	**0.0%**

Katsenelson Absolute PE Valuation Model

Earnings Growth	21.00%	20.19
Dividend Yield	0.00%	0.00
		=
Adjusted Base PE		**20.19**
		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 - 0.99)]
Premium/Discount Factor:	*0.99*	=
Adjusted Fair Value PE	**25%**	**24.23**

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

Cognizant Technology Solutions Corporation (ctsh)

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Figures in Millions except per share values

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Shares Out.	Main. Capex	Normalized Income	Discount Rate	R&D Years	SG&A %
301.67	$99.05	$1,080.46	9%	3	25%

Current Price	EPV	Net Reproduction Value	EPV MOS	NCAV	52 Wk High	52 Wk Low
$75.81	$45.50	$13.74	0.0%	$11.42	$81.08	$60.92

Asset Valuation Section

Data: Asset Valuation

Shares Outstanding		301.7
Balance Sheet Assets	$	6,846.4
Adjusted Assets	$	6,846.4
Total Liabilities	$	1,688.6
Total Equity	$	5,323.7
Average SGA %		21.8%
Marketing/Brand Value	$	1,604.9
R&D Value	$	-
Cash Needed for Business	$	80.2
Interest Bearing Debt	$	-
Non Interest Bearing Debt	$	1,553.9
Excess Cash	$	2,753.6

Calculation: Asset Valuation

	Total	Per Share
Tangible BV	$ 4,623.17	$ 15.33
Adjusted BV	$ 5,157.81	$ 17.10
NCAV	$ 3,445.39	$ 11.42
Reprod. Cost of Assets	$ 8,451.28	$ 28.01
Reprod. Cost of Assets BV	$ 6,762.71	$ 22.42
Total Net Reprod. Cost	$ 4,143.75	$ 13.74

EPV Valuation Section

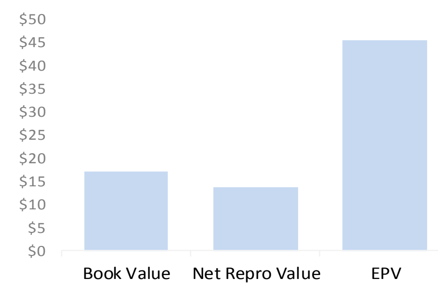
Values for Normalized Income

TTM Free Cash Flow	$	867.5
Avg Normalized Income	$	1,047.0
Med Normalized Income	$	1,054.5
Avg Adj. Income 5 yrs	$	956.4
TTM Adjusted Income	$	1,476.9

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	$	1,080.5
Average Maintenance Capex	$	99.0
Interest Bearing Debt	$	-
1% of sales	$	80.2
Cash & Equiv	$	2,900.6
Cash - Debt	$	2,820.4
Shares		301.67

Calculation: EPV

Cost of Capital Rates	EPV	Per Share	+ Cash - Debt	Per Share
5%	$ 19,628.3	$ 65.07	$ 22,448.7	$ 74.41
7%	$ 14,020.2	$ 46.48	$ 16,840.6	$ 55.82
9%	**$ 10,904.6**	**$ 36.15**	**$ 13,725.0**	**$ 45.50**
11%	$ 8,922.0	$ 29.58	$ 11,742.3	$ 38.92
13%	$ 7,549.4	$ 25.03	$ 10,369.7	$ 34.37

Quarterly numbers based on: Q2

Adjustments: Assets

	Book Value	Fixed BV	Multiplier	Reproduction Asset Value
Cash & Equivalents	$ 1,678.2			**$ 1,678.2**
Marketable Securities	$ 1,222.4			$ 1,222.4
Accounts Receivable	$ 1,560.9			$ 1,560.9
Other Receivable	$ 224.4			$ 224.4
Net Receivables	$ 1,785.2			**$ 1,785.2**
Inventories: Raw Materials	$ -			
Inventories: Work in Progress	$ -			
Inventories: Purchased Components	$ -			
Inventories: Finished Goods	$ -			
Inventories: Other	$ -			
Inventories -- Total	$ -			**$ -**
Prepaid Expenses	$ -			$ -
Current Defered Income Taxes	$ 228.1			$ 228.1
Other Current Assets	$ 220.0			$ 220.0
Total Current Assets	$ 5,134.0			**$ 5,134.0**
Goodwill, Net	$ 412.6			$ 412.6
Intangibles, Net	$ 122.0			$ 122.0
Intangibles	$ 534.6			**$ 534.6**
Property/Plant/Equipment - Net	$ 1,017.7			$ 1,017.7
Other Long Term Assets, Total	$ 160.1			$ 160.1
Total Assets	$ 6,846.4			***$ 6,846.4***

Adjustments: Liabilities & Equity

	Book Value	Fixed BV	Multiplier	Reproduction Liability Value
Accounts Payable	$ 94.1			$ 94.1
Accrued Expenses	$ -			$ -
Accrued Liabilities	$ 811.1			$ 811.1
Notes Payable/Short Term Debt	$ -			$ -
Current Port. of LT Debt/Capital Leases	$ -			$ -
Other Current Liabilities	$ 317.4			$ 317.4
Total Current Liabilities	$ 1,222.6			**$ 1,222.6**
Long-Term Debt	$ -			$ -
Capital Lease Obligations	$ -			$ -
Deferred Income Taxes	$ 14.5			$ 14.5
Total Other Liabilities	$ 316.7			$ 316.7
Total Liabilities	$ 1,688.6			**$ 1,688.6**
Common Stock Equity	$ 5,323.7			$ 5,323.7
Retained Earnings	$ 5,218.4			$ 5,218.4
Total Capitalization	$ 5,323.7			$ 5,323.7
Total Equity	$ 5,323.7			***$ 5,323.7***
Total Liabilities & Equity	$ 7,012.3			***$ 7,012.3***

Cognizant Technology Solutions Corporation (ctsh)

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Current Price	NNWC	NNWC %	NCAV	NCAV %
$75.81	$8.46	0.0%	$11.42	0.0%

Figures in Millions except per share values

	BV	CLEAR	BV Multiplier	Net Net Value
Cash & Equivalents	$ 1,678.21		100%	$ 2,900.57
Marketable Securities	$ 1,222.36			
Accounts Receivable	$ 1,785.23		75%	
Other Receivable	$ -			
Receivables	$ 1,785.23			$ 1,338.92
Inventories: Raw Materials	$ -		50%	
Inventories: Work in Progress	$ -			
Inventories: Purchased Components	$ -			
Inventories: Finished Goods	$ -			
Inventories: Other	$ -			
Inventories -- Total	$ -			$ -
Current Assets - Total	$ 5,133.96			$ 5,133.96
Total Assets	$ 7,012.32			$ 7,012.32
Total Liabilities	$ 1,688.57			$ 1,688.57
Shares Outstanding	301.67			301.67

	Total ($m)	Per Share
Total Current Assets	$ 5,133.96	$ 17.02
Market Cap & Share Price	*22.865B*	***$ 75.81***
Book Value	$ 5,323.75	$ 17.65
Net Net Working Capital	$ 2,550.92	**$ 8.46**
Discount to NNWC		**0%**
Net Current Asset Value	$ 3,445.39	**$ 11.42**
Discount to NCAV		**0%**

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