Ashwin Abraham, Class of 2008
ashwin.abraham@yale.edu

Sheetal Chanderkar, Class of 2008
sheetal.chanderkar@yale.edu

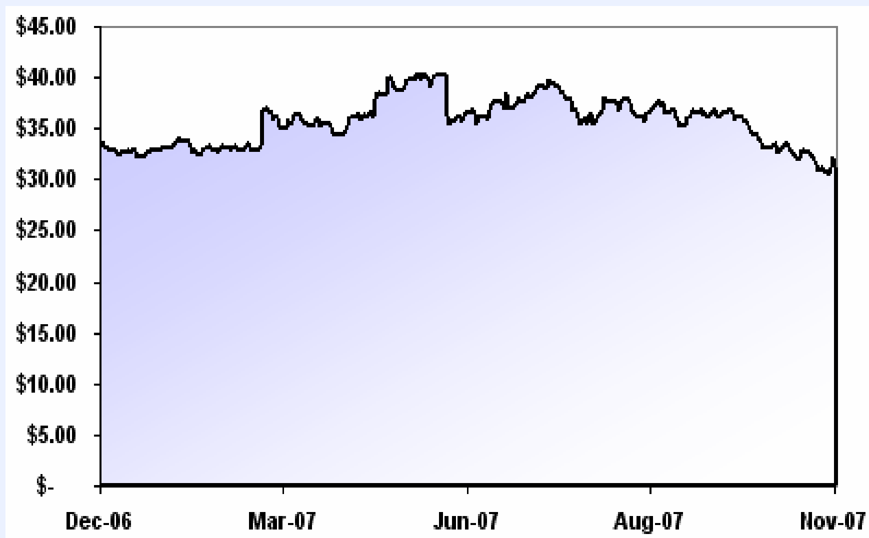
Analog Devices (ADI): Wii is happy with ADI and so are we!
December 14, 2007

Recommendation: BUY
Time Horizon : 12 months

Target price 10% lower than current price: ***SELL***
Target price 10% greater than current price: ***BUY***
Target price within ± 10% of current price: ***HOLD***

Target Price Range	**$35-$43**
Share price as of 11/30/07	$30.78
Market Cap as of 11/30/07	$9.41B
52-week range	$30.19 - $41.10
52-week change	(5.64%)
Shares outstanding	305.8M
Price/Sales (TTM)	3.82
Sales growth (5-yr)	8.32%
EPS growth (5-yr)	40.40%
Current ratio (MRQ)	6.1
Leverage ratio (D/E)	0
Short ratio as of 10/26/07	2

Source: Reuters, our calculations



Source: Reuters (as of 11/30/07)

- **Sharpened focus on core product portfolio:** Post-divestitures of wireless chipset business and CPU power management, ADI has renewed its focus on high-margin high-performance analog products such as data converters and amplifiers where ADI leads the market. We think that this bodes well for ADI's long-term profitability.

- **New growth opportunities:** New analog products for motion-sensing (Nintendo Wii) have opened up growth opportunities for ADI in the fast-growing consumer and automotive end-markets.

- **Effective inventory management:** Solid demand and lean inventories reduce downside to the stock in the near term.

- Under-valued but solid business fundamentals and a consistent cash management strategy (including buybacks and cash dividends) drive our "BUY" recommendation.

Please see the disclaimer at the back of this report for important information

Investment Thesis

Factor	Future impact on ADI's performance	Description
Revenue growth	+	Growth will be driven by ADI's new product offerings geared towards the growing consumer end-market. We expect that significant product performance differentiation will protect ADI's premium price advantage.
Profit Margin	+	ADI's gross margins are in the 58-59% range which is characteristic of analog companies. Moreover, ADI is pruning its portfolio to get rid of product lines that are a drag on gross margin.
Liquidity	+	ADI has a cash-rich, debt-free balance sheet which coupled with its steady positive free cash flows create a very healthy financial picture
Technology Roadmap	+	ADI is planning to capitalize on its hugely successful motion-sensing technology (currently used in Nintendo Wii) to uncover opportunities in both the consumer and automotive markets.

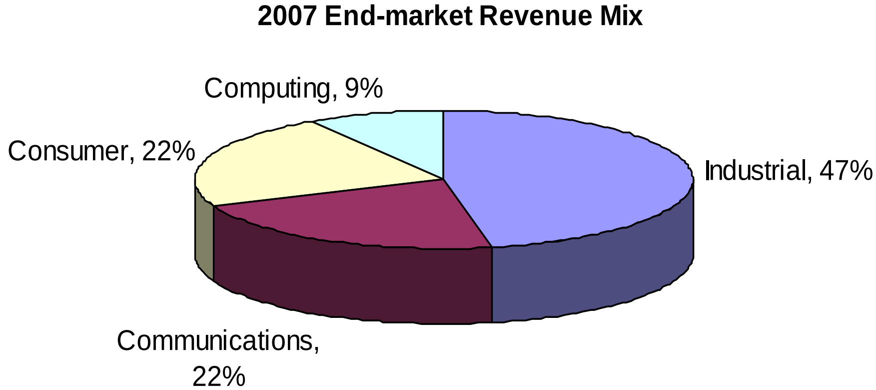
Reason for undervaluation in the market:

We feel that the market might be over-estimating the detrimental impact of ADI's increased presence in the consumer electronics market on gross margins. When compared to the historical margins of approx 59%, most firms specializing in the consumer electronics market have margins in the low to mid 50% range. The current market price factors in gross margins at this rate (assuming gross margin is the sole differentiating factor).

We feel that margins will continue to remain at historical levels. Although traditionally, products for consumer end-markets have lower margins, the products that ADI is providing to the consumer market are very specialized and therefore carry higher margins. Moreover, gross margin reductions if any in the consumer end-market will be offset by the volume growth. Therefore, we do not think that the shift in product mix is going to have a significant adverse impact on ADI's business.

Business Description

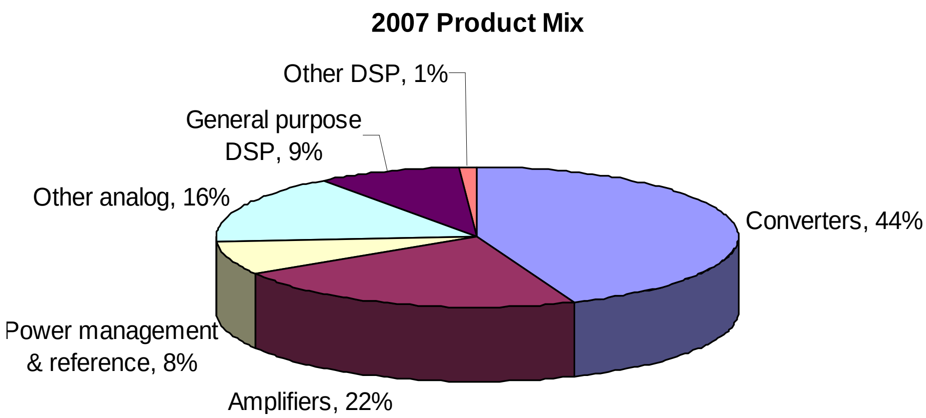
Analog Devices, Inc. designs, manufactures and markets analog, and signal processing (DSP) integrated circuits (IC) used in industrial (includes automotive and medical sectors), communication, computer and consumer applications.



Source: Company Reports

Analog Devices has been around for more than 40 years (founded in 1965), has a product portfolio of more than 10,000 products and serves about 60,000 customers worldwide. Its integrated circuits are designed to address a range of real world signal processing applications. The company's products convert real world phenomena, such as temperature, motion, pressure, light and sound into electrical signals to be used in an array of electronic equipment ranging from industrial process control, factory automation systems, defense electronics, portable wireless communications devices, cellular base stations, central office networking equipment, computers, automobiles, medical imaging equipment, digital cameras and digital televisions.

The company's products are broadly classified into 2 categories- high-performance analog products (converters, amplifiers, power management and other) and digital signal processing products, with high-performance analog products accounting for 90% of its revenues and DSP accounting for the remaining 10% in 2007.



Source: Company Reports

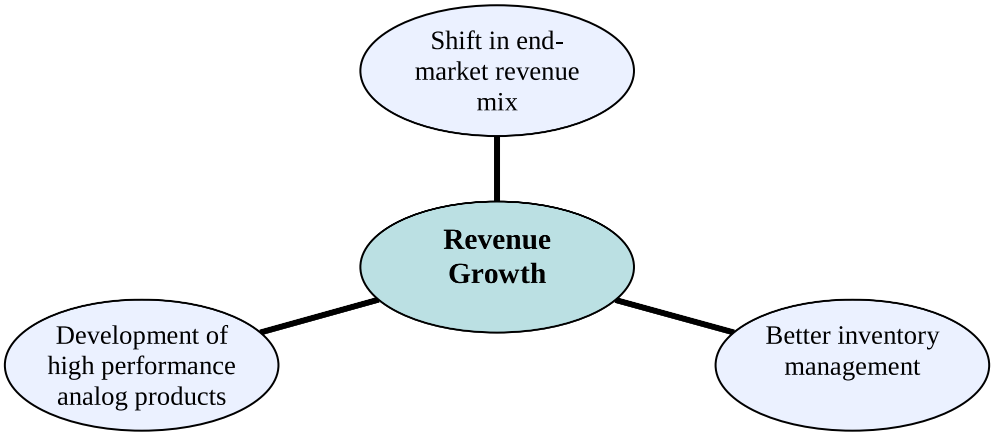
Manufacturing Strategy:

Approximately two-thirds of ADI's revenues come from products that are fabricated in their own wafer fabs, which are located in Massachusetts and Ireland. The remaining portion of revenues comes from products fabricated by external foundries, mainly Taiwan Semiconductor Manufacturing Company. ADI completes test and assembly of products at a large, company-owned and staffed centralized assembly and test facility in the Philippines, and at test and assembly subcontractors in Asia.

We think that this manufacturing strategy is suitable for ADI because ADI is a well-established company (started in 1965) and has the capital to set up its own fabrication facilities to handle some of its manufacturing. A fabless manufacturing model is more characteristic of new companies that don't have the capital required to build their own fabs. The "mixed" model allows ADI to have more control over inventories of the high-end products it manufactures in-house because it doesn't have to place orders in advance with external foundries.

Revenue Drivers

We think that ADI's future growth will stem from the following three factors:



1. Shift in strategy toward serving growing end-markets such as consumer electronics

ADI is offering new products that will enable it to make strong inroads into high-growth end-markets. For example, ADI makes the motion-sensing (MEMS) technology that has made the Nintendo Wii console a big hit. Nintendo Wii hardware unit sales are expected to more than double from 6.4 million 2007 (YTD) to 14 million in 2008.[1] The success of this match differentiates ADI from its competition, and could give it an edge when other consumer electronics companies want to copy that feature. The firm will soon launch another sophisticated chip that gauges vehicle stability, to help reduce the likelihood of accidents. We believe that ADI will see strong demand for these chips in the U.S. and Europe.

End-market	2007 ADI Revenue mix[2]	2006-2007 growth in revenues from end-market	2008 overall end-market growth
Industrial	47%	7%	10%[3]
Communications	22%	7%	10%[4]
Consumer	22%	23%	12%[5]
Computing	9%	(17%)	11.1%[6]
Total	**100%**		

Investors are currently worried that there might be a risk to this strategy- the shift in product mix towards consumer electronics might be detrimental to ADI's gross margin because products sold to the consumer electronics market typically carry lower gross margins and revenues in this end-market can be cyclical. This worry stems from the fact that consumers are typically fickle and electronic items that are "hot" at one point can quickly become unfashionable. We think that although traditionally, products for consumer end-markets have

[1] Nintendo's fiscal estimates: http://www.beyond3d.com/content/articles/47/
[2] Percentage of revenues contributed by products for each end-market is provided in company reports
[3] Databeans (market research firm) report
[4] iSuppli
[5] Standard and Poor's Industry Survey: Semiconductors, May 31, 2007
[6] Gartner report 2Q07 Update, Global PC Scenarios: 2006-08

carried lower margins, the new kind of products that ADI is providing to this market is not only very specialized but also carries higher margins.

2. Continued focus on maintaining market leadership through growth of proprietary portfolio of high performance analog products

The analog market is very fragmented which means that there is room for small players to grow. However, we predict that ADI will maintain its market share in the analog market because of its strong position in high performance application-specific analog products such as data converters and amplifiers which together account for approximately 66% of ADI's revenues in 2007[7] and about 40% of the overall worldwide analog semiconductor market and its continued R&D focus on its high-performance product portfolio.[8]

- ***Data Converters:*** An important product category in the high-performance analog market, data converters are the complex circuits that allow real-world analog signals, such as voice and video, to be processed digitally. According to Gartner estimates, ADI has actually increased its markets share in this category by 10 percentage points over the last decade and now has a market share in this category of about 40% while TI is a distant second with a 15% market share.[9]

- ***Amplifiers:*** According to ChipCenter, ADI is also a market leader in the high-performance amplifiers- the products that boost analog signals so that they can be read and processed by other circuits, with a 20% market share while TI, its closest competitor in this segment has approximately 15% market share.[10]

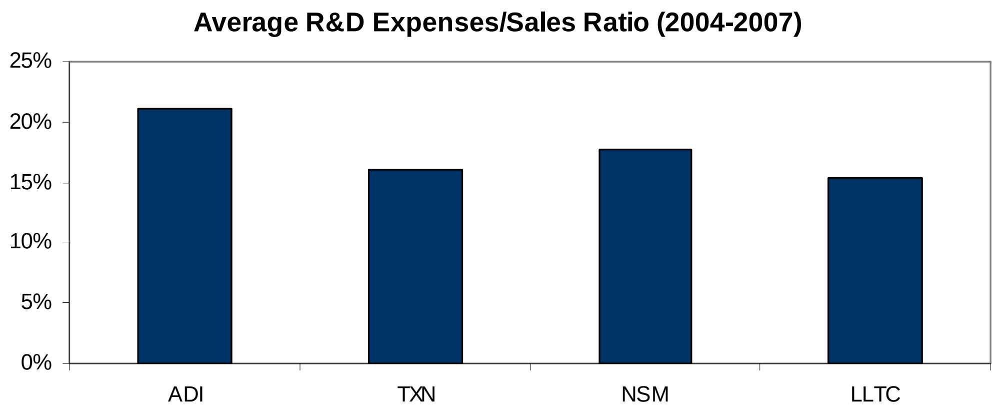
Moreover, high performance data converters and amplifiers are very critical to overall system performance because they form the front-end and back-end of several electronic devices such as cameras. This gives ADI's high-performance products an edge in this market because a majority of its products are proprietary which means that equivalent products are not available from ADI's competitors.

ADI's analog products are highly respected among professional Electrical Engineers as high end products – in polls of electrical design engineers ADI's brand normally ranks as the #1 or #2 choice.[11] ADI focuses on developing products for difficult applications for which commodity products are inadequate. Because of this, ADI is able to sell its products at a price premium over other devices (Independent Research firm, GARP estimates that ADI's high-performance products are priced 5X higher than those of its peers). Given ADI's strong R&D focus and the solid lineup of products it is planning for the near future, we believe ADI is not at risk of losing this price advantage.

New products/technology:

ADI has the highest expenditure amongst its peers on R&D (see chart below). We think that this is an indicator of ADI's focus on R&D to keep growing its product portfolio.

[7] Company reports
[8] WSTS, IC Insights
[9] http://www.planetanalog.com/news/showArticle.jhtml?articleID=162100770
[10] http://archive.chipcenter.com/knowledge_centers/analog/product_review/showArticle.jhtml?articleID=15200691
[11] EETimes article

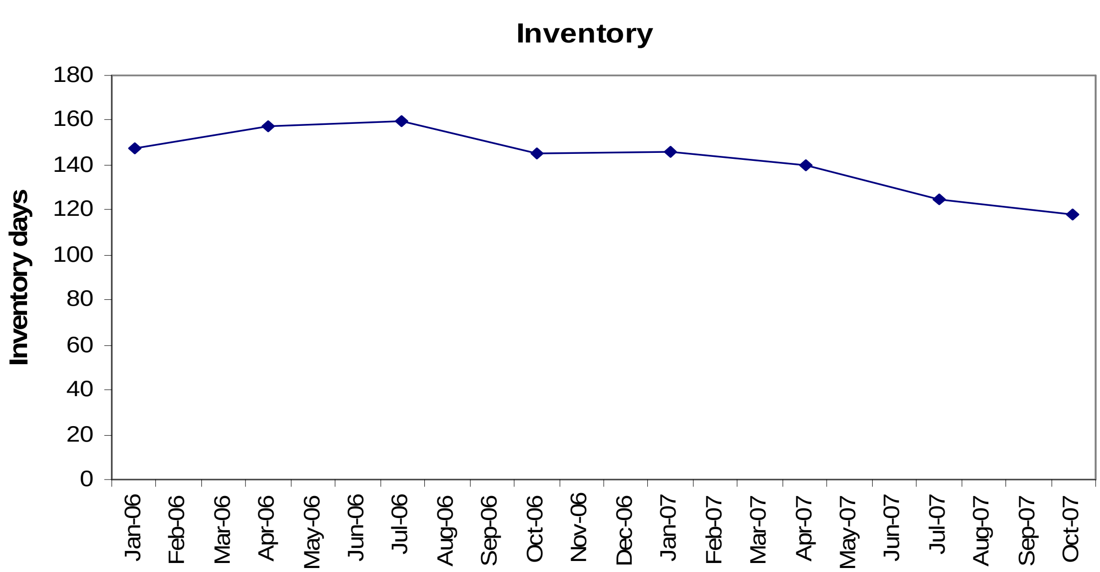


Source: Capital IQ

ADI is also planning to leverage its MEMS technology- a motion-sensing chip (this technology is currently being used in Nintendo Wii's game controller) to stimulate demand from other consumer applications such as cell phones. For example: handset makers such as Samsung and Nokia are planning to introduce certain models that use MEMS chips to offer a pedometer-like feature, allowing consumers to count their paces and measure physical activity.

3. Continued focus on inventory management to limit price erosion

ADI is taking strong steps to minimize price erosion by cutting down on excess capacity and manage its inventory better. In November 2006, it shut down its Sunnyvale, CA wafer fabrication facility and transferred most of its production to the Massachusetts facility to improve capacity utilization and inventory management. We see that this step has made a marked improvement in ADI's inventory levels bringing inventory days down from 145 in October 2006 to 118 in October 2007. Going forward, we expect that ADI's consolidation of production facilities will enable it to monitor inventory levels better and prevent excessive production/inventory levels. We expect production and inventory control to have a positive effect on pricing.



Source: Capital IQ

Growth Predictions

The Semiconductor Industry Association (SIA) estimates that analog chip sales will grow at a CAGR of 8.3% for the next 5 years. We think that this is an appropriate growth rate to apply for ADI because:

- 90% of its revenues are derived from mainstream, high performance analog products.
- Historically, there has been significant correlation between the YoY growth of the overall analog market and ADI's revenue growth. (please refer to the Appendix for further information).[12]

Therefore, we have used an annual growth rate of 8.3% from 2008-2012 in our Discounted Cash Flow Analysis of ADI. The average annual growth rate of ADI over the past 5 years is 9%.

To double-check this growth rate, we also looked at the growth of the end-markets that ADI serves. Since we know the percentage of ADI's revenues contributed by each end-market in 2007, we can estimate the growth rate of ADI in 2008 based on the growth of its end-markets. From this analysis, we expect that ADI's revenues will grow at 10.5% in 2008.

End-market	2007 Product-Revenue mix[13]	2007 Segment Revenue	2008 Segment Growth	2008 Segment Revenue	Overall 2008 Growth
Total	**100%**	**2,511**		**2,776**	**10.5%**
Industrial	47%	1,180	10%[14]	1,298	
Communications	22%	552	10%[15]	608	
Consumer	22%	552	12%[16]	619	
Computing	9%	226	11.1%[17]	251	

However, to be on the more conservative side, we used the lower figure of 8.3% as the predicted growth rate for 2008 and beyond.

[12] Bank of American research estimates
[13] Percentage of revenues contributed by each end-market is provided in company reports
[14] Databeans (market research firm) report
[15] iSuppli
[16] Standard and Poor's Industry Survey: Semiconductors, May 31, 2007
[17] Gartner report 2Q07 Update, Global PC Scenarios: 2006-08

Divestitures

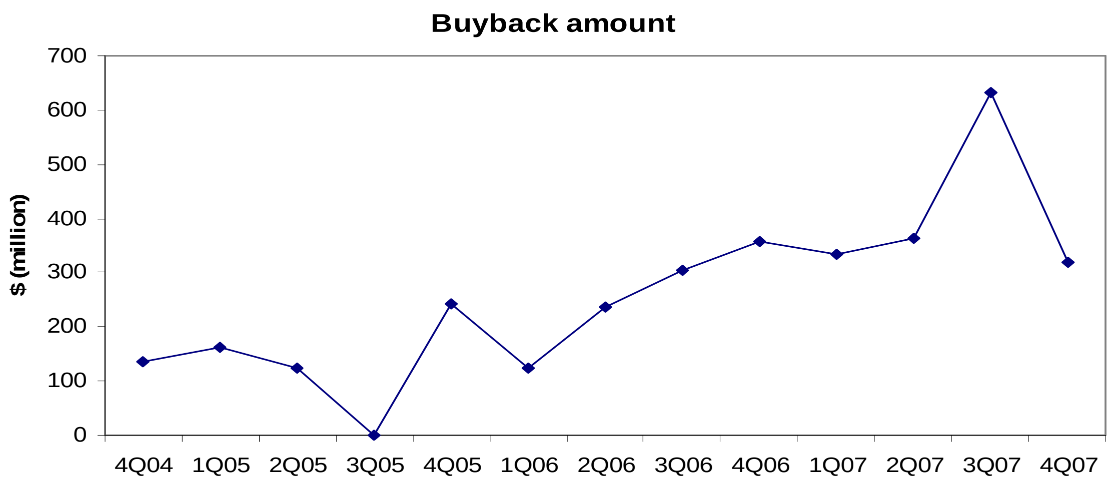
- In November 2007, ADI announced plans to sell its CPU and PC thermal monitoring product line to ON Semiconductor for a total consideration of $185 MM, which includes a 1 year-prepaid manufacturing agreement. ADI expects to earn an after tax gain of $52MM-$60MM on the completion of the sale.
- Earlier in the year, the Company announced its intentions to sell its wireless handset chipset business to Mediatek Inc. for a consideration of $350MM. ADI expects to earn an after tax gain of $150 MM-$160 MM on the completion of the sale.

These divisions together account for approximately 12% (Wireless handset-about $230 million revenues and CPU/PC Thermal monitoring- about $80 million revenues) of ADI's FY07 revenues. We think that these divestitures are part of a two-fold strategy to improve company margins on an ongoing basis and at the same time to sharpen the focus on its highly differentiated core analog products in the future. Analyst estimates show that by excluding these divisions gross margins for 4Q07 would have improved by approximately 150 basis points.[18]

Given that ADI has already pruned its product portfolio in 2007 and is now focusing on its core products after the two divestitures, we don't expect any more divestitures in the near term, especially because its remaining products complement each other and can generate cross-selling opportunities for ADI to sell to its customers.

Dividends and Buybacks

Over the last 2 years, ADI has spent a total of approximately $2.6 billion to buy back approximately 20% of its shares outstanding in an effort to return value to its shareholders. In June 2007, management announced intentions to buy back $1 billion of its shares.



Source: CapitalIQ

Management has good enough reason to believe that its shares are undervalued, with it stock lagging the S&P 500 by about 9 percentage points over the last year and underperforming rivals like Texas Instruments TXN. The

[18] Lehman Brothers Report, November 2007.

company has sufficient cash on hand (approx. $1 billion as at Nov 2007) and has no long term debt on its balance sheet. Furthermore, given its historical record of going through with its buyback programs, there is a very high likelihood that ADI will be able to go through with its latest buyback program.

ADI has also consistently paid dividends to shareholders since 2004 (see chart below) and we think that it will continue to do so in the future to return value to shareholders.

Source: Google Finance

Although there has been reason in the past for management to come under criticism in the past due to questionable compensation practices, we are encouraged by the fact that management makes concerted efforts to return value to shareholders in the form of stock buybacks and cash dividends.

Valuation Analysis

Financial Highlights:

Legend: TXN: Texas Instruments, NSM, National Semiconductor, BRCM: Broadcom, LLTC: Linear Technology, ISIL: Intersil, MCHP: Microchip Technology

	ADI	TXN	NSM	BRCM	LLTC	ISIL	MCHP
Market Cap ($B) as of 11/30/2007	9.41	44.14	6.04	14.46	6.81	3.27	6.17
Sales (TTM) ($B)	2.51	13.74	1.86	3.67	1.07	0.725	1.03
Current ratio	6.1	3.8	4.3	4.9	4.8	4.6	6.7
Debt/Equity (MRQ)	NA	0.4%	1.2%	NA	NA	NA	NA
Gross Margin	59.2%	50.9%	60.7%	51.3%	77.7%	57.1%	59.8%
EBIT Margin	23.3%	24.8%	25.9%	7.1%	49.1%	19.4%	29.8%
Receivables Turnover (TTM)	7.9	8.3	10.7	10.6	7.6	6.42	8.29
Inventory Turnover (TTM)	3.0	5.3	4.1	9.0	5.4	3.35	3.42
Asset Turnover (TTM)	4.4	3.7	3.2	28.1	4.2	0.29	0.45

Source: CapitalIQ

We are supporting our "BUY" recommendation using 2 types of analysis:

1) Valuation Multiples
2) Discounted Cash Flow Analysis

1. Valuation Multiples:

	ADI	TXN	NSM	BRCM	LLTC	ISIL	MCHP	Median	Implied ADI Share Price ($)
Price ($)	30.78	31.57	22.86	26.74	30.46	24.94	28.79		
Shares outstanding (million)	305.8	1,400	264.01	540.8	223.48	130.92	214.24		
EV/Sales (TTM)	3.32	3.13	3.83	4.41	7.79	3.79	5.17	4.12	38.19
EV/EBITDA (TTM)	11.47	9.71	11.88	111.43	14.77	15.73	11.99	13.38	35.91
Average									**37.1**

Source: CapitalIQ, our calculations

We looked at the EV/Sales and EV/EBITDA multiples of comparable firms and took an average of the implied share price obtained from these multiples. This gives us a price of $37.1 for ADI.

However, these multiples are not forward-looking. Therefore, we rely on our Discounted Cash Flow Analysis to come up with a fair market value for ADI.

2. Discounted Cash Flow Analysis:

Our DCF gives us a price range of $35 to $43. The following is a brief discussion of the different assumptions that we have made in our DCF.

(a) Revenues

As discussed earlier, we have assumed a revenue growth rate of 8.3% over the forecast period.

(b) Gross Margins

Currently gross margins are at roughly 59%. As mentioned earlier, analysts estimate that the divestitures of the wireless chipset and the CPU power management lines should improve the gross margin by approximately 150 basis points. However to be conservative, we didn't factor in any gross margin improvements and kept the gross margins steady at current level throughout the forecast period.

(c) Selling, General & Administrative Expenses

We expect SG&A expenses in the projection period to be in line with levels recorded in the last 3 quarter of FY07 (15% of revenues). Taking a conservative stand, we do not factor in any improvement in SG&A levels in the forecast period.

(d) Research & Development Expenses

The Company's research and development strategy focuses on building technical leadership in core technologies for signal sensing, conditioning, conversion and processing. The Company spends significantly more on R&D as compared to its peers. A review of R&D expenses over the last 21 quarters reveals that R&D levels have consistently remained at approximately 21% of revenues. We project these expenses to be in line with historical average of approximately 22%.

(e) Capital expenditures

We expect capital expenditures to remain at LTM 2007 levels, i.e. at 5% of revenues. ADI management has forecasted no significant increase in capital expenditure in the forecast period.

(f) Working capital

In order to calculate working capital requirements we have used expectations for Days Sales Outstanding, Inventory Days and Days Payables Outstanding. We expect working capital days to be in line with historical averages. This assumption is based on the fact that these levels have more or less remained constant in the historical period. Taking a conservative stand, we do not project any improvements in these levels.

(g) Cost of Capital

- We have assumed a Market Risk Premium of 7% (56 year average of risk premium over 10 year T-bills)
- We have taken the risk-free rate as 4% (10 year US treasury bond yield as of 12/03/2007)
- ADI's beta is 1.37 (based on our regression of 2-year weekly returns from the CRSP database)

(h) Terminal Growth Rate

We have assumed a terminal growth rate of 4% which is in line with the GDP growth.

Discounted Cash Flow Analysis (calculations):

	Projected FYE October 31,				
	2008	2009	2010	2011	2012
Revenue	$2,383.8	$2,581.6	$2,795.9	$3,028.0	$3,279.3
Revenue Growth %	*8.3%*	*8.3%*	*8.3%*	*8.3%*	*8.3%*
Less: Cost of Goods Sold	975.0	1,055.9	1,143.5	1,238.4	1,341.2
Gross Margins	1,408.8	1,525.8	1,652.4	1,789.5	1,938.1
GM %	*59.1%*	*59.1%*	*59.1%*	*59.1%*	*59.1%*
Less: Selling, General & Administrative	357.6	387.2	419.4	454.2	491.9
Less: Research & Development	493.0	533.9	578.2	626.2	678.2
Add: Adjustments (2)					
Adjusted EBIT	**558.3**	**604.6**	**654.8**	**709.1**	**768.0**
EBIT Margin %	*23%*	*23%*	*23%*	*23%*	*23%*
Less: Taxes	128.40	139.06	150.60	163.10	176.64
Debt-Free Earnings	**429.86**	**465.54**	**504.18**	**546.03**	**591.35**
Less: Capital Expenditures	119.19	129.08	139.80	151.40	163.97
Less: Working Capital Requirements	-16.06	42.84	46.39	50.25	54.42
Add: Depreciation and Amortization	143.03	154.90	167.76	181.68	196.76
Total Net Investment	246.15	326.82	353.95	383.32	415.14
Net Debt-Free Cash Flows	**676.02**	**792.36**	**858.13**	**929.35**	**1,006.49**

Sensitivity Analysis (to cost of equity):

	1	2	3	4	5				
Discount rate	**2008**	**2009**	**2010**	**2011**	**2012**	**Disc TV**	**Cash**	**EV**	Per share value
10.00%	$614.56	$558.69	$507.90	$461.73	$419.75	$10,832.49	$1,081.00	$14,476.13	**$46.52**
10.50%	$611.78	$553.65	$501.04	$453.43	$410.34	$9,775.04	$1,081.00	$13,386.27	**$43.02**
11.00%	$609.02	$548.67	$494.30	$445.31	$401.18	$8,874.22	$1,081.00	$12,453.71	**$40.02**
11.50%	$606.29	$543.76	$487.68	$437.38	$392.27	$8,098.55	$1,081.00	$11,646.93	**$37.43**
12.00%	$603.59	$538.92	$481.18	$429.62	$383.59	$7,424.43	$1,081.00	$10,942.32	**$35.16**
12.50%	$600.90	$534.14	$474.79	$422.03	$375.14	$6,833.79	$1,081.00	$10,321.79	**$33.17**
13.00%	$598.24	$529.42	$468.51	$414.61	$366.91	$6,312.60	$1,081.00	$9,771.31	**$31.40**
13.50%	$595.61	$524.77	$462.35	$407.36	$358.90	$5,849.79	$1,081.00	$9,279.77	**$29.82**
14.00%	$593.00	$520.17	$456.29	$400.26	$351.10	$5,436.49	$1,081.00	$8,838.31	**$28.40**
14.50%	$590.41	$515.64	$450.34	$393.31	$343.50	$5,065.55	$1,081.00	$8,439.75	**$27.12**

Selected Enterprise Value Range	**$10,942.32**	--	**$13,386.27**
Less: Total Interest-Bearing Debt	$0.00	--	$0.00
Equity Value	**$10,942.32**	--	**$13,386.27**
No. of shares outstanding as at October 26, 2007 (in millions	311.19		311.19
Per share value	**$35.16**		**$43.02**

Please see the disclaimer at the back of this report for important information

Projected Balance Sheet:

Particulars	3-Nov-07	3-Nov-08	3-Nov-09	3-Nov-10	3-Nov-11	3-Nov-12
Cash & ST Investments	$1,081.21	$1,299.23	$1,494.62	$1,725.72	$1,995.50	$2,307.18
Accounts Receivable	$336.38	$307.61	$333.14	$360.79	$390.73	$423.17
Inventories	$347.52	$320.32	$346.90	$375.69	$406.88	$440.65
Other current assets	$213.89	$182.57	$197.72	$214.13	$231.90	$251.15
Total current assets	**$1,979.00**	**$2,109.72**	**$2,372.38**	**$2,676.33**	**$3,025.02**	**$3,422.15**
PPE	$1,956.78	$2,075.97	$2,205.05	$2,344.84	$2,496.24	$2,660.21
Less: Acc dep.	-$1,396.28	-$1,539.30	-$1,694.20	-$1,861.96	-$2,043.64	-$2,240.40
	$560.50	**$536.66**	**$510.85**	**$482.89**	**$452.61**	**$419.81**
Goodwill & Intangible assets	$303.62	$238.38	$258.16	$279.59	$302.80	$327.93
Other assets	$128.83	$119.19	$129.08	$139.80	$151.40	$163.97
Total Assets	**$2,971.95**	**$3,003.95**	**$3,270.47**	**$3,578.61**	**$3,931.82**	**$4,333.86**
Current liabilities						
Accounts payable	$376.55	$111.79	$121.07	$131.11	$142.00	$153.78
Accrued expenses	$85.76	$119.19	$129.08	$139.80	$151.40	$163.97
Others		$96.90	$101.78	$107.08	$112.81	$119.02
Non-current liabilities	$171.50	$143.03	$154.90	$167.76	$181.68	$196.76
Total current liabilities	**$633.81**	**$470.90**	**$506.83**	**$545.74**	**$587.89**	**$633.53**
Stockholders equity	$2,338.14	$2,533.05	$2,763.64	$3,032.86	$3,343.94	$3,700.33
Total Liabilities And Equity	**$2,971.95**	**$3,003.95**	**$3,270.47**	**$3,578.61**	**$3,931.82**	**$4,333.86**

Projected Cash Flow Statement:

Particulars (USD mns)	2008	2009	2010	2011	2012
Net Income	429.86	465.54	504.18	546.03	591.35
Add: D&A	143.03	154.90	167.76	181.68	196.76
Less: WC Changes	-16.06	42.84	46.39	50.25	54.42
Less: Capex	135.98	147.26	159.48	172.72	187.06
Less: Common dividends paid	234.96	234.96	234.96	234.96	234.96
Changes in cash	**218.02**	**195.38**	**231.10**	**269.79**	**311.68**

Risks to our valuation

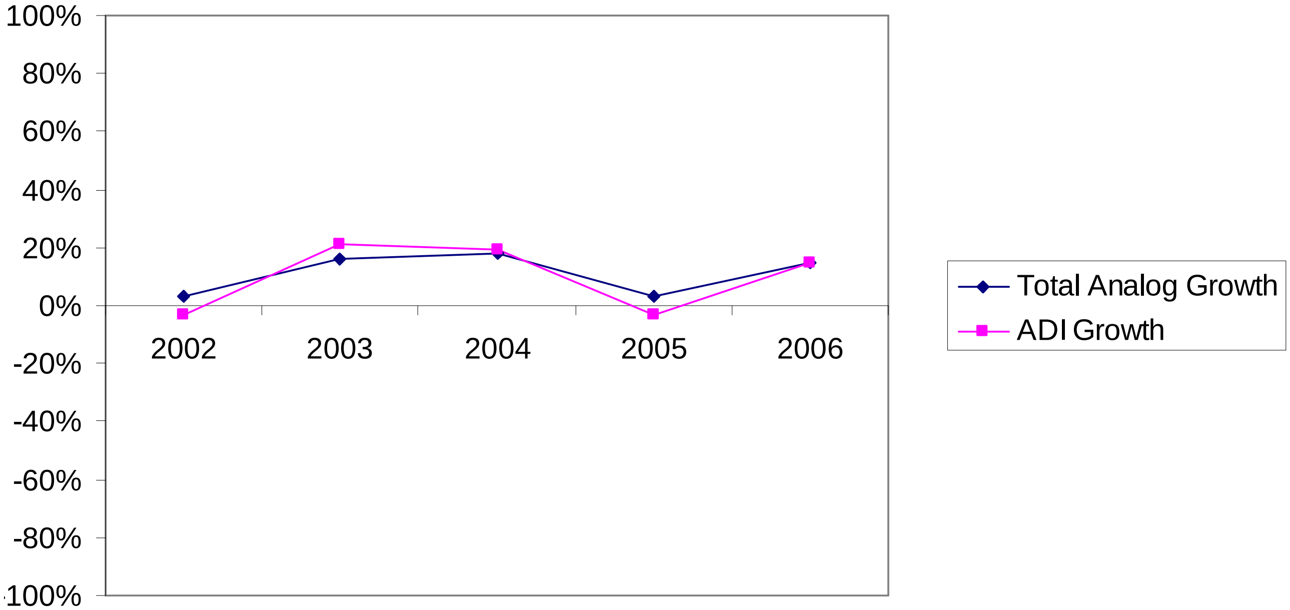
- **Innovation and Human Capital**: ADI is able to maintain its market leading position in the analog market due to continuous research and development efforts. These efforts in turn depend upon ADI's ability to source hard-to-find talent in the analog and mixed-signal engineering area.

- **Tradeoff between inventory management and capacity utilization:** Like its peers in the semiconductor universe, ADI must maintain a tight control on inventory levels to prevent an inventory glut (and subsequent write-downs or price erosion). To control inventories, ADI has to resort to production restriction. This can have an adverse impact on capacity utilization and drag down gross margins because the fixed costs will end up being spread over less volume of goods sold.

- **New applications for ADI technology:** ADI develops cutting-edge products that are used in a variety of end-applications. Therefore ADI has to depend on its customers to continuously develop new end-use applications for ADI's technology to be sued in.

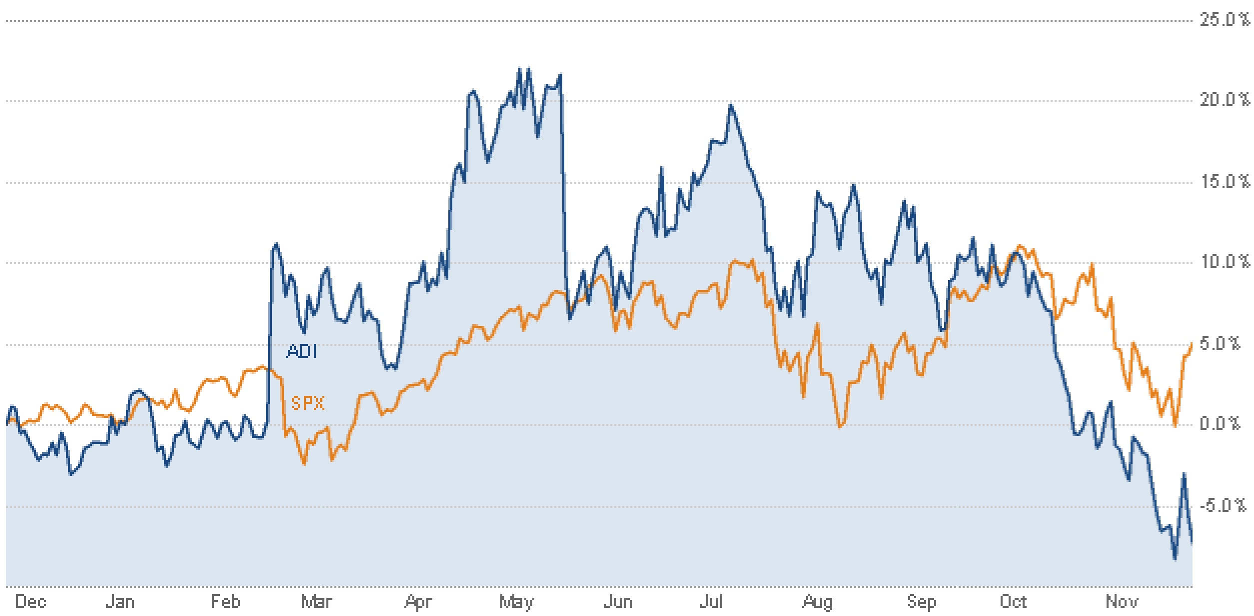
Appendix

Overall analog market growth(Y/Y) and ADI's revenue growth (Y/Y)



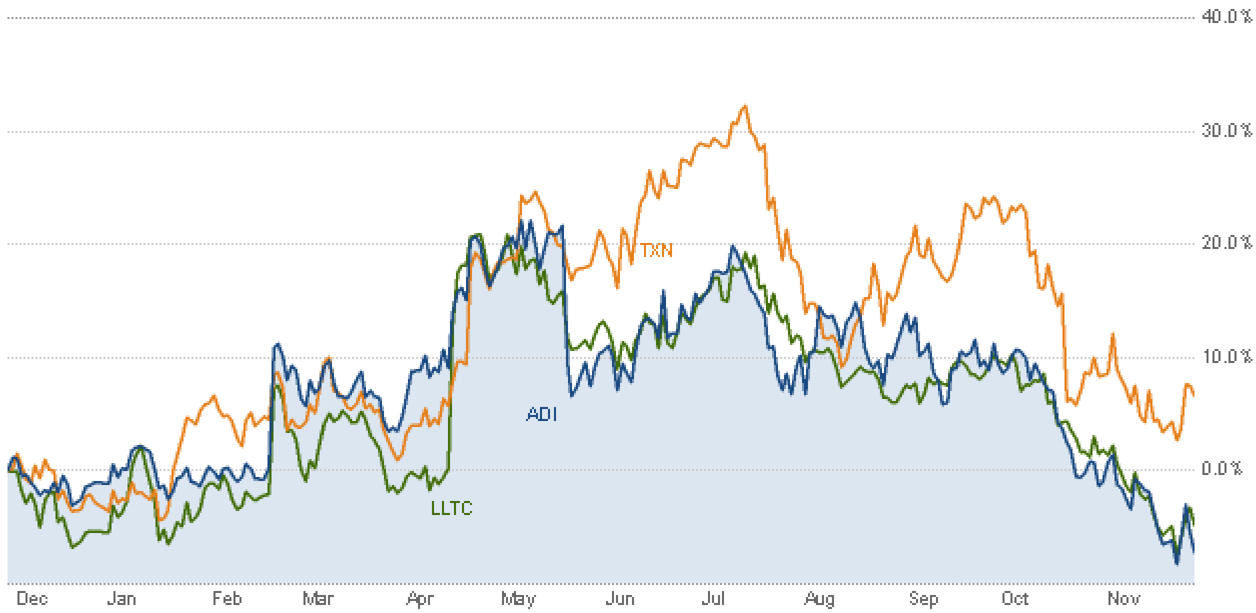
Source: Bank of America research estimates

Stock performance comparison with S&P500 (TTM)



Source: Reuters

Stock performance comparison with competitors (TTM)



Source: Reuters

Recent (TTM) News:

Source Reuters

ADI announces dividend and declares that orders from customers and distributors have been strengthening over the past month indicating the that end is near for the industry down cycle

ADI's profit narrows in the second quarter and ADI serves up guidance that is at the low end of Wall Street expectations.

Historical Income Statement

Particulars (USD mns)	2002	2003	2004	2005	2006	2007
Revenue	1,707.5	2,047.3	2,633.8	2,388.8	2,573.2	2,511.1
Total Revenue	**1,707.5**	**2,047.3**	**2,633.8**	**2,388.8**	**2,573.2**	**2,511.1**
Cost Of Goods Sold	803.0	923.2	1,080.0	1,006.0	1,048.7	1,026.9
Gross Profit	**904.5**	**1,124.1**	**1,553.8**	**1,382.8**	**1,524.4**	**1,484.2**
Selling General & Admin Exp.	257.1	288.0	340.0	338.3	394.1	393.2
R & D Exp.	410.1	452.9	514.4	497.1	536.7	519.3
Amort. of Goodwill and Intangibles	56.9	-	-	-	-	-
Other Operating Exp., Total	**724.0**	**740.9**	**854.5**	**835.4**	**930.8**	**912.5**
Operating Income	**180.5**	**383.2**	**699.3**	**547.5**	**593.6**	**571.7**
Interest Expense	(44.5)	(32.2)	(0.2)	0	(0.1)	0
Interest and Invest. Income	64.9	41.2	36.0	71.7	100.2	87.7
Net Interest Exp.	**20.4**	**9.0**	**35.8**	**71.7**	**100.1**	**87.7**
Other Non-Operating Inc. (Exp.)	2.8	(11.6)	(2.4)	0	(2.5)	92.7
EBT Excl. Unusual Items	**203.7**	**380.6**	**732.7**	**619.2**	**691.2**	**664.4**
Restructuring Charges	-	-	-	-	(18.3)	(32.8)
Merger & Related Restruct. Charges	(13.8)	-	-	-	-	-
Impairment of Goodwill	-	-	-	-	-	-
Gain (Loss) On Sale Of Invest.	(1.1)	-	-	-	-	-
Gain (Loss) On Sale Of Assets	-	-	-	-	13.0	-
In Process R & D Exp.	-	-	-	-	(21.7)	-
Legal Settlements	-	-	-	-	-	-
Other Unusual Items	(48.5)	1.3	-	(31.5)	(1.8)	(5.5)
EBT Incl. Unusual Items	**140.4**	**381.8**	**732.7**	**587.7**	**662.4**	**658.9**
Income Tax Expense	35.1	83.6	162.0	172.9	113.7	158.4
Minority Int. in Earnings	-	-	-	-	0.7	0.2
Earnings from Cont. Ops.	**105.3**	**298.3**	**570.7**	**414.8**	**549.5**	**500.7**
Earnings of Discontinued Ops.	-	-	-	-	-	-
Extraord. Item & Account. Change	-	-	-	-	-	-
Net Income	**105.3**	**298.3**	**570.7**	**414.8**	**549.5**	**496.9**

Please see the disclaimer at the back of this report for important information

Historical Balance Sheet:

Particulars (USD mns)	2-Nov-02	1-Nov-03	30-Oct-04	29-Oct-05	28-Oct-06	3-Nov-07
ASSETS						
Cash & ST Investments	**2,898.0**	**2,116.7**	**2,685.0**	**2,705.9**	**2,128.3**	**1,081.2**
Accounts Receivable	228.3	294.8	330.2	320.5	329.4	336.4
Total Receivables	**228.3**	**294.8**	**330.2**	**320.5**	**329.4**	**336.4**
Inventory	306.4	287.5	348.4	325.6	378.7	347.5
Prepaid Exp.	38.9	42.4	56.7	59.6	82.8	-
Deferred Tax Assets, Curr.	152.6	144.2	70.3	86.4	91.0	-
Other Current Assets	-	-	5.4	234.4	1.1	213.9
Total Current Assets	**3,624.2**	**2,885.7**	**3,495.9**	**3,732.5**	**3,011.3**	**1,979.0**
Gross Property, Plant & Equipment	1,905.5	1,781.7	1,815.3	1,860.8	1,913.2	-
Accumulated Depreciation	(1,124.6)	(1,110.6)	(1,147.6)	(1,260.9)	(1,350.6)	-
Net Property, Plant & Equipment	**780.9**	**671.1**	**667.8**	**599.9**	**562.6**	**556.9**
Long-term Investments	2.0	37.6	3.9	2.4	0.9	36.9
Goodwill	161.8	163.4	163.4	163.4	256.2	-
Other Intangibles	12.9	8.6	6.0	4.2	42.8	303.6
Deferred Tax Assets, LT	-	-	41.2	13.3	54.7	-
Other Long-Term Assets	398.4	326.4	345.1	67.5	58.3	95.5
Total Assets	**4,980.2**	**4,092.9**	**4,723.3**	**4,583.2**	**3,986.9**	**2,971.9**
LIABILITIES						
Accounts Payable	91.3	99.3	126.8	128.3	124.6	-
Accrued Exp.	151.9	113.0	133.3	396.5	155.9	-
Short-term Borrowings	3.7	-	-	-	-	-
Curr. Income Taxes Payable	126.5	129.8	157.5	172.3	61.0	-
Unearned Revenue, Current	110.3	121.3	158.0	121.8	149.5	151.7
Other Current Liabilities	-	-	-	-	-	396.3
Total Current Liabilities	**483.6**	**463.5**	**575.6**	**818.9**	**490.9**	**548.1**
Long-Term Debt	1,274.5	-	-	-	-	-
Minority Interest	-	-	-	-	0.2	-
Def. Tax Liability, Non-Curr.	22.6	16.6	10.7	1.7	3.4	-
Other Non-Current Liabilities	299.4	324.8	337.4	71.1	56.5	85.8
Total Liabilities	**2,080.2**	**804.8**	**923.7**	**891.7**	**551.1**	**633.8**
Common Stock	61.3	61.7	62.6	61.1	57.0	2,338.1
Additional Paid In Capital	762.5	745.5	759.6	380.2	-	-
Retained Earnings	2,179.6	2,477.9	2,973.6	3,269.4	3,379.0	-
Treasury Stock	(101.4)	-	-	-	-	-
Comprehensive Inc. and Other	(1.9)	3.0	3.7	(19.3)	(0.2)	-
Total Common Equity	**2,900.0**	**3,288.1**	**3,799.6**	**3,691.5**	**3,435.8**	**2,338.1**
Total Equity	**2,900.0**	**3,288.1**	**3,799.6**	**3,691.5**	**3,435.8**	**2,338.1**
Total Liabilities And Equity	**4,980.2**	**4,092.9**	**4,723.3**	**4,583.2**	**3,986.9**	**2,971.9**

Historical Cash Flow Statement:

Particulars (USD mns)	2002	2003	2004	2005	2006	2007
Net Income	**105.3**	**298.3**	**570.7**	**414.8**	**549.5**	**496.9**
Depreciation & Amort.	181.1	165.7	149.9	153.2	166.9	142.2
Amort. of Goodwill and Intangibles	56.9	2.6	2.7	2.4	5.3	12.6
Depreciation & Amort., Total	**238.0**	**168.3**	**152.6**	**155.6**	**172.2**	**154.8**
(Gain) Loss From Sale Of Assets	-	-	-	-	(13.0)	-
(Gain) Loss On Sale Of Invest.	-	-	1.7	-	-	(7.9)
Asset Writedown & Restructuring Costs	-	-	-	-	21.7	-
Stock-Based Compensation	-	-	7.3	4.9	75.4	72.7
Tax Benefit from Stock Options	0.9	6.1	20.3	50.4	(181.2)	(40.9)
Minority Int. in Earnings	-	-	-	-	(0.7)	(0.2)
Other Operating Activities	(15.1)	29.9	29.3	16.4	(27.2)	(1.6)
Change in Trad. Asset Securities	(35.1)	(26.4)	(14.5)	41.2	245.6	-
Change in Acc. Receivable	(10.8)	(63.6)	(30.7)	5.3	(6.7)	-
Change In Inventories	(59.4)	19.1	(58.6)	22.8	(52.0)	-
Change in Acc. Payable	(45.3)	(23.2)	71.0	(5.9)	5.7	-
Change in Inc. Taxes	4.5	3.1	27.6	15.0	96.3	-
Change in Other Net Operating Assets	43.0	21.3	1.5	(47.7)	(264.4)	146.6
Cash from Ops.	**226.1**	**433.0**	**778.0**	**672.7**	**621.1**	**820.4**
Capital Expenditure	(57.4)	(67.7)	(146.2)	(85.5)	(129.3)	(141.8)
Sale of Property, Plant, and Equipment	-	1.5	-	-	1.7	-
Cash Acquisitions	(5.2)	-	-	-	(157.0)	(9.2)
Divestitures	-	-	-	-	23.1	-
Invest. in Marketable & Equity Securt.	150.0	(348.9)	(533.2)	69.9	305.6	1,144.0
Net (Inc.) Dec. in Loans Originated/Sold	-	-	-	-	-	-
Other Investing Activities	2.8	69.1	(10.4)	5.6	0.7	(8.4)
Cash from Investing	**90.2**	**(346.0)**	**(689.9)**	**(10.0)**	**44.8**	**984.6**
Short Term Debt Issued	-	-	-	-	-	-
Long-Term Debt Issued	-	-	-	-	-	-
Total Debt Issued	**-**	**-**	**-**	**-**	**-**	**-**
Short Term Debt Repaid	-	-	-	-	-	-
Long-Term Debt Repaid	(8.3)	(1,254.4)	-	-	-	-
Total Debt Repaid	**(8.3)**	**(1,254.4)**	**-**	**-**	**-**	**-**
Issuance of Common Stock	37.3	70.9	124.1	89.4	94.4	109.1
Repurchase of Common	(97.8)	(0.1)	(137.1)	(525.5)	(1,025.0)	(1,647.2)
Common Dividends Paid	-	-	(75.0)	(119.0)	(201.5)	(228.3)
Total Dividends Paid	**-**	**-**	**(75.0)**	**(119.0)**	**(201.5)**	**(228.3)**
Special Dividend Paid	-	-	-	-	-	-
Other Financing Activities	-	-	-	-	181.2	40.9
Cash from Financing	**(68.7)**	**(1,183.6)**	**(88.0)**	**(555.1)**	**(950.9)**	**(1,725.5)**
Foreign Exchange Rate Adj.	1.2	0.7	0.9	1.0	1.3	1.5
Net Change in Cash	**248.8**	**(1,095.9)**	**1.1**	**108.7**	**(283.6)**	**81.0**

Important Disclaimer

Please read this document before reading this report.

This report has been written by MBA students at Yale's School of Management in partial fulfillment of their course requirements. *The report is a **student and not a professional*** report. It is intended solely to serve as an example of student work at Yale's School of Management. It is not intended as investment advice. It is based on publicly available information and may not be complete analyses of all relevant data.

If you use this report for any purpose, you do so at your own risk. **YALE UNIVERSITY, YALE SCHOOL OF MANAGEMENT, AND YALE UNIVERSITY'S OFFICERS, FELLOWS, FACULTY, STAFF, AND STUDENTS MAKE NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, ABOUT THE ACCURACY OR SUITABILITY FOR ANY USE OF THESE REPORTS, AND EXPRESSLY DISCLAIM RESPONSIBIIITY FOR ANY LOSS OR DAMAGE, DIRECT OR INDIRECT, CAUSED BY USE OF OR RELIANCE ON THESE REPORTS**