

An Investment Analysis Case Study: Nike

This case is a group project that is due on March 28 just before class begins at 10.30.

Format: Each group will turn in one report (sounds obvious, but might as well make it explicit). Each report should have a cover page that contains the following – the names of the group members in alphabetical order and the following summary information on the analysis:

Decision on Expansion: Accept or Reject

Return on capital: % value

NPV: \$ value

IRR: % value

And please don't title it: "*Just do it*".

With its dominance of the athletic shoe and sporting apparel businesses, Nike generated \$2.81 billion in operating income on revenues of \$20.9 billion in the fiscal year that ended in May 2011. While its stock price has rebounded in the last three years (see Exhibit 1), its sales and earnings are being affected by increased competition from both established firms (like Reebok and Adidas) and upstarts (such as Under Armour). Exhibit 2 summarizes Nike's income statement for the last 4 years, and Exhibit 3 summarizes its balance sheet for the last 2 years.

Nike, which currently views itself as operating in the sporting wear (shoes and clothes) segment, is considering an expansion into the fashion apparel business, producing high-priced casual clothing for teenagers and young adults. You have been asked to collect the data to make the assessment and have come back with the following information:

1. You estimate that it will cost Nike \$ 2.5 billion to establish a presence in this business. Of this amount, \$ 1 billion will have to be spent right now acquiring land, equipment and other assets needed for the business. There will be an additional \$ 1 billion investment a year from now, and final investment of \$ 0.5 billion at the end of 2 years. The business will be operational at the start of the third year.
2. Of the initial investment of \$ 2.5 billion, \$1.5 billion is fully depreciable over 10 years starting in the third year, and will be depreciated using double-declining

balance depreciation (switching to straight line when it provides a higher depreciation).

3. You have employed a major market-testing organization to do a market study. Their initial study, which has already been completed and expensed, cost \$ 250 million and has provided you with a sense of the magnitude of this market, and Nike's potential in the market.¹
4. The total market for casual apparel is estimated to be \$ 75 billion currently, growing at 5% a year. Nike is expected to gain a 2% market share in the first year that it enters the market (which is the third year), and to increase its market share by 0.5% a year to reach 5% of the market in the ninth year.² Beyond that point, Nike's revenues are expected to grow at the same rate as the overall market. Nike expects to generate 50% of the apparel revenues to come from the United States, 20% from China, 20% from India and 10% from Brazil.
5. The pre-tax gross profit margins (prior to depreciation, advertising expenses and allocations of corporate costs) are expected to be 23% of revenues.
6. Nike will allocate 5% of its existing general and administrative costs to the new division. These costs now total \$ 2 billion for the entire firm and are expected to grow 5% a year for the next 12 years, irrespective of whether Nike enters the apparel business. In addition, it is expected that Nike will have an increase of \$ 50 million in general and administrative costs in year 3 when the new division starts generating revenues, and that this amount will grow with the new division's revenues after that. The latter cost is directly related to the new divisions and will be charged to them in addition to the allocated corporate G&A costs.
7. While the new business will need distributional support, it is anticipated that Nike can use excess capacity in its existing distribution network. The shoe business is currently using 60% of the distribution capacity, and revenues from that business are growing 5% a year (it will use 63% next year, 66.3% the year after and so on..). The apparel business will use 10% of the capacity in year 3 (which is the first year of revenue

¹ When an item is expensed, it is treated as an expense in the period and provides a tax benefit immediately. When an item is capitalized, it is depreciated over a longer period.

² The market share in year 4 will be 2.50%, in year 5 will be 3% etc...

generation) and its usage will track revenue growth beyond that point. When Nike runs out of distribution capacity, it will have to pay for an expansion of the distribution network. This is a major endeavor and will cost a substantial amount and have to be capitalized. (The current estimate of the cost of expansion is \$ 1 billion, but this cost will grow at the inflation rate.)

8. Nike spent \$ 1 billion in advertising expenses in the most recent year and expects these expenses to grow 4% a year for the next 12 years, if the casual apparel division is not created. If the casual apparel division is added to the company, total advertising expenses are expected to be 7% higher than they would have been without the apparel division each year from year 3 (the first year of sales for the division) to year 12.
9. The apparel division will create working capital needs, which you have estimated as follows:
 - The sale of apparel on credit to wholesalers and large retailers will create accounts receivable amounting to 5% of revenues each year.
 - Inventory (of both raw material and finished goods) will be approximately 10% of the cost of goods sold (not including depreciation, allocations or advertising expenses).
 - The credit offered by suppliers will be 7.5% of the cost of goods sold (not including depreciation, allocations or advertising expenses).

All of these working capital investments will have to be made at the beginning of each year in which goods are sold. Thus, the working capital investment for the third year will have to be made at the beginning of the third year.

10. The beta for Nike is 0.91, calculated using monthly returns over the last 5 years and against the S&P 500 Index. The details of the beta calculation are included in Exhibit 4. Nike is currently rated A+, and A+ rated bonds trade at a default spread of 1.0% over the long-term treasury bond rate. The current stock price for the firm is \$ 106.79 and there are 368.94 million shares outstanding.
11. Nike expects to finance this apparel division using the same mix of debt and equity (in market value terms) as it is using currently in the rest of its business. Nike's interest bearing debt (short term and long term) has average maturity of 5 years but it has lease commitments for the future:

Years out	Operating lease commitments
Next year	374
Year 2	310
Year 3	253
Year 4	198
Year 5	174
Beyond year 5	535

The lease payment for the most recent financial year was \$390 million.

12. Nike's effective tax rate is 24%, but its marginal tax rate is 40%.
13. The current long-term US treasury bond rate is 3%, and the expected inflation rate is 2%. Exhibit 5 includes the equity risk premiums that you can use, broken down geographically.
14. You have collected information on other apparel companies that you believe will be the competitors to your apparel division in Exhibit 6. The data includes the betas of these companies and relevant information on both market value and operations. You can assume a 40% tax rate for these firms, as well.

Added Clarifications

1. Time: You can assume that the current year has just ended and that now is time 0. Year 1 begins today and the end of year 1 is a year from today.
2. Depreciation: For any assets that you may invest in, where no depreciation schedule is given, assume straight line depreciation and a reasonable life.
3. Accounting allocations: If you have to allocate any expenses, where an allocation schedule is not provided, make a reasonable assumption about allocation and move on.

Appendix: How to estimate double declining balance depreciation

Step 1: Estimate the straight line depreciation rate based upon the life of the asset (for example, with a 10 year life, your depreciation would be 10%)

Step 2: Double the straight line rate. With a 10-year life, you would get 20%.

Step 3: For each year, estimate the double declining balance depreciation

DDB Depreciation = Remaining book value * DDB rate (from step 2)

For instance, assume that you have an asset with depreciable value of \$ 5 billion and a 10-year life. The double declining balance depreciation for the first two years will be:

Depreciation in year 1 = \$ 5 * 20% = \$ 1 billion Remaining BV = \$ 4 billion

Depreciation in year 2 = \$ 4 * 20% = \$0.8 billion Remaining BV = \$3.2 billion

Step 4: Each year, also estimate the straight-line depreciation if you switched in that year... This would require that you divide the remaining depreciable book value by the remaining life of the asset each year.

Straight line Depreciation in year 1 = Depreciable BV * (1/n) = 5*(1/10) = \$0.50

Straight line Depreciation in year 2 = Remaining Depreciable BV * (1/n) = 4*(1/9) = \$0.45

Note that the depreciable book value in year 2 is based upon the BV of \$ 4 billion left over and that the remaining life is reduced to 9 years.

Step 5: Pick the higher of the two numbers. Once you switch to straight line, remain with straight line for the remaining life of the asset.

Questions on the Project

1. Accounting Return Analysis

- Estimate the operating income from the proposed apparel division investment to Nike over the next 12 years.
- Estimate the after-tax return on capital for the operating portion of this period (Years 3-12)
- Based upon the after-tax return on capital, would you accept or reject this project?

(This will require you to make some assumptions about allocation and expensing. Make your assumptions as consistent as you can and estimate the return on capital.)

2. Cash Flow Analysis

- Estimate the after-tax incremental cash flows from the proposed apparel investment to Nike over the next 12 years.
- If the project is terminated at the end of the 12th year, and both working capital and investment in other assets can be sold for book value at the end of that year, estimate the net present value of this project to Nike. Develop a net present value profile and estimate the internal rate of return for this project.
- If the apparel division is expected to have a life much longer than 12 years, estimate the net present value of this project, making reasonable assumptions about investments and cash flows after year 12. Develop a net present value profile and estimate the internal rate of return for this project.

3. Sensitivity Analysis

- Estimate the sensitivity of your numbers to changes in at least three of the key assumptions underlying the analysis (You get to pick what you think are the three key assumptions).

Based upon your analysis, and any other considerations you might have, tell me whether you would accept this project or reject it. Explain, briefly, your decision.

Exhibit 1: Nike – Stock Prices

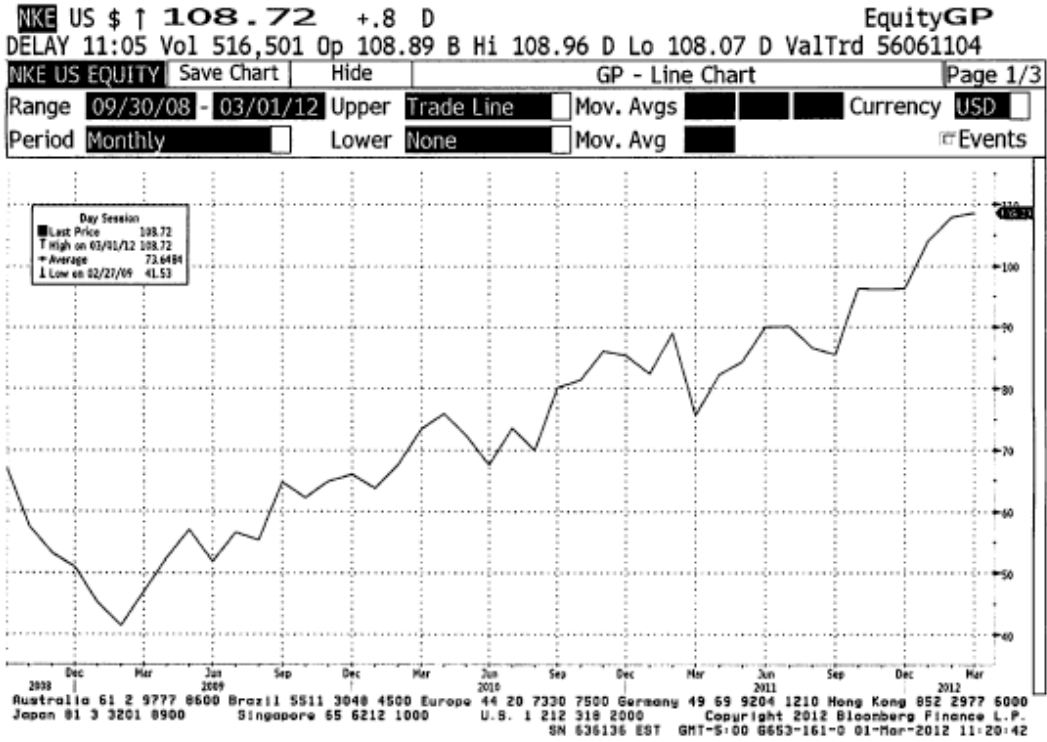


Exhibit 2: Nike's Income Statements

Page
Hit 1 <Go> for more income statement information (FA IS).
INCOME STATEMENT (Mil of USD) Page 8 /10
NKE US NIKE INC -CL B

	5/2011	5/2010	5/2009	5/2008
Revenue	20862.00	19014.00	19176.10	18627.00
Cost of Revenue	11354.00	10213.60	10571.70	10239.60
Operating Expenses	6693.00	6326.40	6149.60	5953.70
Operating Income	2815.00	2474.00	2454.80	2433.70
Interest Expense	34.00	36.40	40.30	40.70
For Exchange L (G)	.00	.00	.00	
Net non-op L (G)	-63.00	-79.30	458.00	-109.90
Income Tax Expense	711.00	610.20	469.80	619.50
Income bef XO items	2133.00	1906.70	1486.70	1883.40
XO L(G) pretax	.00	.00	.00	.00
Tax effect on XO items	.00	.00	.00	.00
Minority Interests	.00	.00	.00	.00
Net Income	2133.00	1906.70	1486.70	1883.40
Tot cash pref. dvd	.00	.00	.00	.00
Tot cash comm. dvd	569.00	514.80	475.20	432.80
Diluted EPS Cont Ops	4.39	3.86	3.82	3.53
Diluted EPS bef XO	4.39	3.86	3.03	3.74
Diluted EPS	4.39	3.86	3.03	3.74
# Shrs Diluted EPS	485.70	493.90	490.70	504.10

Australia 61 2 9777 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2012 Bloomberg Finance L.P.
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Exhibit 3: Nike's Balance Sheets

EquityDES

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Hit 1 <Go> for more balance sheet information (FA BS).

(Mil of USD) Page 9 /10

BALANCE SHEET

NKE US **NIKE INC -CL B**

	5/2011	5/2010		5/2011	5/2010
Cash & Near Cash	1955.00	3079.10	Accounts Payable	1469.00	1254.50
Marketable sec	2583.00	2066.80	ST borrowings	387.00	146.00
Accounts & Notes R	3138.00	2649.80	Other ST liab	2102.00	1963.70
Inventories	2715.00	2040.80	Current Liabilitie	3958.00	3364.20
Other Current Asse	906.00	1122.70			
Current Assets	11297.00	10959.20	LT Debt	276.00	445.80
			Other LT Liabiliti	921.00	855.30
LT Investments & L	.00	.00	Noncur liabilities	1197.00	1301.10
			Total Liabilities	5155.00	4665.30
Depr fixed assets	4542.00	3990.00			
Non-depr fixed ass	364.00	399.80	Preferred Equity	.00	.30
Accumulated Deprec	2791.00	2457.90	Minority Interest	.00	.00
Net fixed assets	2115.00	1931.90	Share cap & APIC	3947.00	3443.40
			Retained earnings	5896.00	6310.30
Other Assets	1586.00	1528.20	Total Equity	9843.00	9754.00
			Tot liab & equity	14998.00	14419.30
Total Assets	14998.00	14419.30			
			ST part of LT debt	200.00	7.40
Shares Outstanding	468.00	483.02	# treasury shares	.00	.00
			Amt treasury stock	.00	.00

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* ST borrowings and LT borrowings represent interest bearing debt. The average maturity of this debt is 5 years.

Exhibit 4: Nike's Beta

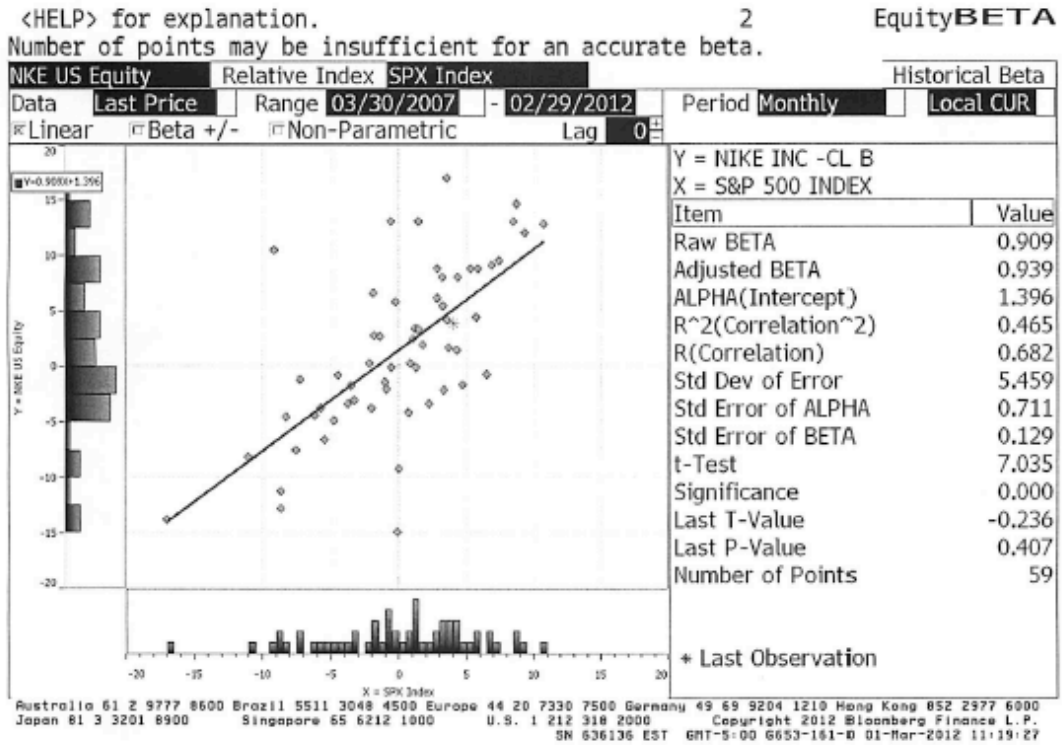


Exhibit 5: Country Risk Premiums January 2012

Canada	6.00%
United States of America	6.00%

Bahamas	7.73%
Barbados	9.00%
Bermuda	6.75%
Cayman Islands	7.05%
Cuba	16.50%
Dominican Republic	12.00%
Jamaica	15.00%
St. Vincent	12.00%
Suriname	10.88%
Trinidad	8.25%

Argentina	15.00%
Belize	15.00%
Bolivia	12.00%
Brazil	8.63%
Chile	7.05%
Colombia	9.00%
Costa Rica	9.00%
Ecuador	18.75%
El Salvador	10.13%
Guatemala	9.60%
Honduras	13.50%
Mexico	8.25%
Nicaragua	15.00%
Panama	9.00%
Paraguay	12.00%
Peru	9.00%
Timor	9.60%

Austria [1]	6.00%
Belgium [1]	7.05%
Cyprus [1]	9.00%
Denmark	6.00%
Finland [1]	6.00%
France [1]	6.00%
Germany [1]	6.00%
Greece [1]	16.50%
Iceland	9.00%
Ireland [1]	9.60%
Italy [1]	7.50%
Malta [1]	7.50%
Netherlands [1]	6.00%
Norway	6.00%
Portugal [1]	10.13%
Spain [1]	7.28%
Sweden	6.00%
Switzerland	6.00%
United Kingdom	6.00%

Angola	10.88%
Botswana	7.50%
Egypt	13.50%
Mauritius	8.63%
Morocco	9.60%
Namibia	9.00%
South Africa	7.73%
Tunisia	9.00%

Armenia	10.13%
Azerbaijan	9.60%
Belarus	15.00%
Bosnia and Herzegovina	13.50%
Bulgaria	8.63%
Croatia	9.00%
Czech Republic	7.28%
Estonia	7.28%
Georgia	10.88%
Hungary	9.60%
Kazakhstan	8.63%
Latvia	9.00%
Lithuania	8.25%
Moldova	15.00%
Montenegro	10.88%
Poland	7.50%
Romania	9.00%
Russia	8.25%
Slovakia	7.28%
Slovenia [1]	7.28%
Ukraine	13.50%

Bahrain	8.25%
Israel	7.28%
Jordan	10.13%
Kuwait	6.75%
Lebanon	12.00%
Oman	7.28%
Qatar	6.75%
Saudi Arabia	7.05%
Senegal	12.00%

Bangladesh	10.88%
Cambodia	13.50%
China	7.05%
Fiji Islands	12.00%
Hong Kong	6.38%
India	9.00%
Indonesia	9.60%
Japan	7.05%
Korea	7.28%
Macao	7.05%
Malaysia	7.73%
Mongolia	12.00%
Pakistan	15.00%
Papua New Guinea	12.00%
Philippines	10.13%
Singapore	6.00%
Sri Lanka	12.00%
Taiwan	7.05%
Thailand	8.25%
Turkey	10.13%
Vietnam	12.00%

Australia	6.00%
New Zealand	6.00%

Exhibit 6: Comparable Firm Data

<i>Company Name</i>	<i>Beta</i>	<i>Market Cap</i>	<i>Total Debt</i>	<i>Cash</i>	<i>Company Name</i>	<i>Beta</i>	<i>Market Cap</i>	<i>Total Debt</i>	<i>Cash</i>
Cygne Designs Inc.	1.56	\$4.60	\$15.90	\$0.20	Sport-Haley Inc	1.44	\$1.10	\$0.00	\$2.10
Ironclad Performance wear Co.	1.12	\$10.90	\$1.60	\$0.20	I.C. Isaacs & Co.	1.44	\$0.10	\$2.80	\$1.20
People's Liberation Inc.	1.20	\$7.60	\$0.20	\$1.90	Cherokee Inc.	1.48	\$142.60	\$0.00	\$13.70
rue21 Inc	1.04	\$617.40	\$19.50	\$4.60	Gildan Activewear	1.48	\$2,970.60	\$53.00	\$12.40
China Stationery and Office	3.00	\$0.40	\$16.60	\$1.80	Maidenform Brands Inc	1.52	\$385.00	\$88.90	\$43.50
FTS Group Inc	0.56	\$5.00	\$3.80	\$0.00	Phillips-Van Heusen	1.60	\$2,086.10	\$399.60	\$328.20
Total Apparel Group Inc	0.60	\$4.10	\$0.30	\$0.10	Warnaco Group	1.60	\$1,917.60	\$243.70	\$147.60
Kronos Advanced Tech Inc	0.64	\$4.90	\$1.60	\$0.90	Guess Inc.	1.64	\$3,976.90	\$38.60	\$294.10
Superior Uniform Group	0.64	\$59.50	\$4.10	\$0.10	Hanesbrands Inc.	1.64	\$2,400.40	\$2,238.20	\$67.30
Boss Holdings Inc	0.72	\$12.40	\$2.10	\$0.80	Hartmarx Corp.	1.68	\$0.40	\$120.70	\$4.40
Hampshire Group Ltd.	0.84	\$16.70	\$0.00	\$35.10	Polo Ralph Lauren `A`	1.08	\$8,107.10	\$483.00	\$819.90
Inca Designs Inc	0.84	\$0.50	\$1.80	\$0.00	Man Sang Int'l BVI Ltd	1.72	\$14.70	\$39.50	\$68.90
Talon International Inc.	0.92	\$1.60	\$13.20	\$2.40	True Religion Apparel Inc	1.76	\$463.40	\$0.00	\$62.10
Chaus (Bernard)	1.00	\$11.20	\$6.60	\$0.10	Under Armour	1.76	\$1,384.00	\$45.60	\$102.00
Delta Galil Industries Ltd	1.04	\$129.30	\$138.20	\$4.50	American Apparel Inc.	1.76	\$220.20	\$111.60	\$11.40
Jaclyn Inc.	1.08	\$14.90	\$14.70	\$0.50	Iconix Brand Group	1.80	\$861.30	\$668.10	\$67.30
Tandy Brands Access.	1.08	\$22.30	\$0.00	\$3.70	G-III Apparel Group Ltd	1.84	\$338.50	\$29.00	\$2.50
Swank Inc.	1.16	\$16.40	\$10.00	\$0.30	Perry Ellis Intl Inc	1.84	\$201.60	\$229.00	\$8.80
Ever-Glory Int'l Group Inc	1.20	\$38.60	\$9.20	\$1.40	Unifi Inc.	1.88	\$230.90	\$189.50	\$42.70
Delta Apparel Inc	1.24	\$93.70	\$91.60	\$0.70	Volcom Inc.	1.88	\$411.90	\$0.10	\$79.60
Destination Maternity	1.28	\$111.20	\$78.70	\$12.10	Frederick's of Hollywood Grou	1.92	\$31.70	\$23.70	\$2.00
Alpha Pro Tech Ltd	1.28	\$93.40	\$0.00	\$4.60	Jones Apparel Group	1.92	\$1,392.00	\$782.00	\$338.30
Blue Holdings Inc	1.32	\$0.80	\$14.10	\$0.10	Liz Claiborne	1.96	\$498.80	\$743.60	\$25.40
Carter's Inc.	1.32	\$1,474.10	\$338.00	\$162.30	Oxford Inds.	1.96	\$357.80	\$199.30	\$3.30
Columbia Sportswear	1.36	\$1,314.80	\$0.00	\$253.10	Nitches Inc.	2.00	\$0.50	\$9.50	\$0.40
V.F. Corp.	1.36	\$8,149.20	\$1,198.40	\$381.80					
Benetton Group S.p.A. ADR	1.36	\$1,526.70	\$1,212.70	\$185.30					
Tefron Ltd.	1.41	\$7.00	\$19.30	\$15.10					