

Rating: Buy
S&P 500: 1191

Norsk Hydro ASA New High for Oil and Aluminum

<i>Symbol</i>	NHY	<i>Ebitda Next Twelve Months ending 3/31/06 (US\$m)</i>	6,210
<i>Rating</i>	Buy	<i>North American Natural Gas/Ebitda (%)</i>	0
<i>Price (\$/sh)</i>	84.25	<i>Natural Gas and Oil Production/Ebitda (%)</i>	68
<i>Pricing Date</i>	4/7/05	<i>Adjusted Reserves/Production NTM</i>	8.5
<i>Shares (mm)</i>	252	<i>EV/Ebitda</i>	4.2
<i>Market Capitalization (\$mm)</i>	21,300	<i>PV/Ebitda</i>	4.9
<i>Debt (\$mm)</i>	4,800	<i>Undeveloped Reserves (%)</i>	25
<i>Enterprise Value (EV) (\$mm)</i>	26,000	<i>Natural Gas and Oil Ebitda (\$/boe)</i>	20.40
<i>Present Value (PV) (\$mm)</i>	30,200	<i>Present Value Proven Reserves(\$/boe)</i>	10.20
<i>Net Present Value (\$/share)</i>	101	<i>Present Value Proven Reserves(\$/mcf)</i>	1.70
<i>Debt/Present Value</i>	0.16	<i>Earnings Next Twelve Months (US\$/sh)</i>	9.12
<i>McDep Ratio - EV/PV</i>	0.86	<i>Price/Earnings Next Twelve Months</i>	9
<i>Dividend Yield (%/year)</i>	3.7	<i>Indicated Annual Dividend (US\$/sh)</i>	3.15

Note: Estimated cash flow and earnings tied to one-year futures prices for oil.

Reported results may vary widely from estimates. Estimated present value per share revised only infrequently.

The Norwegian government owns 44% of the shares in Norsk Hydro.

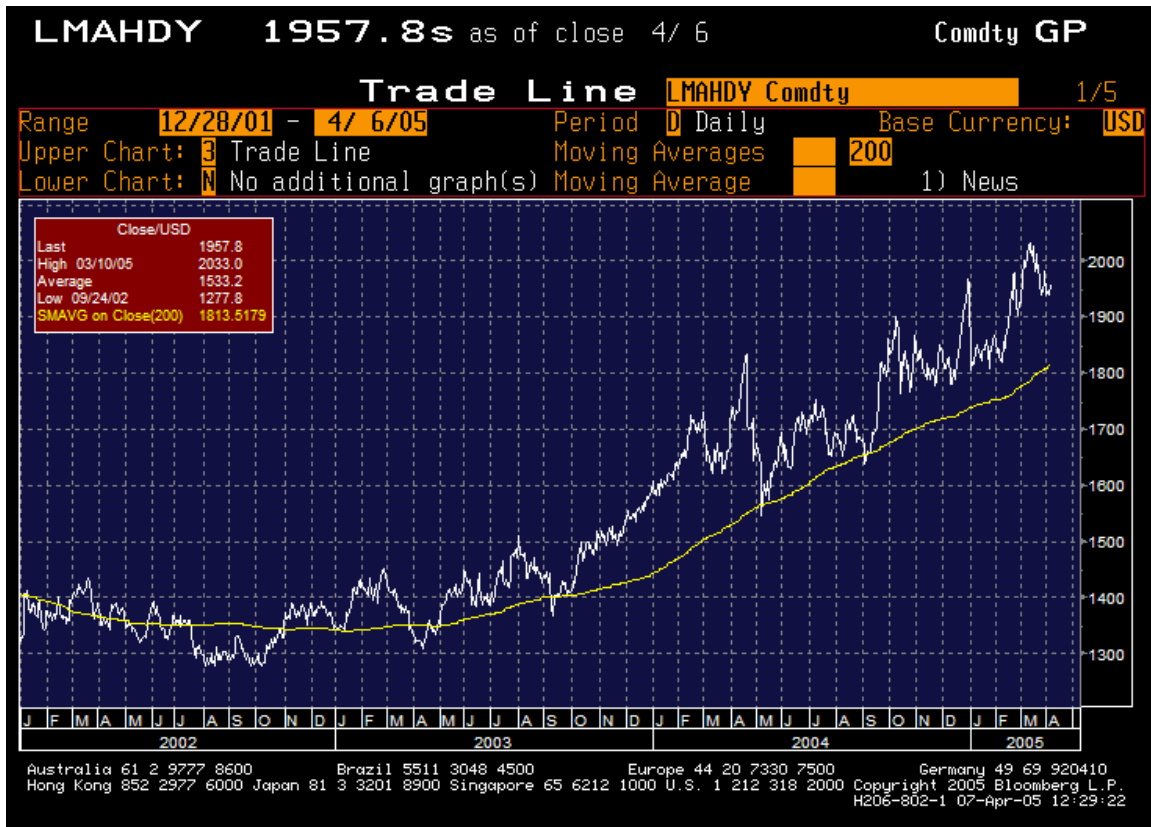
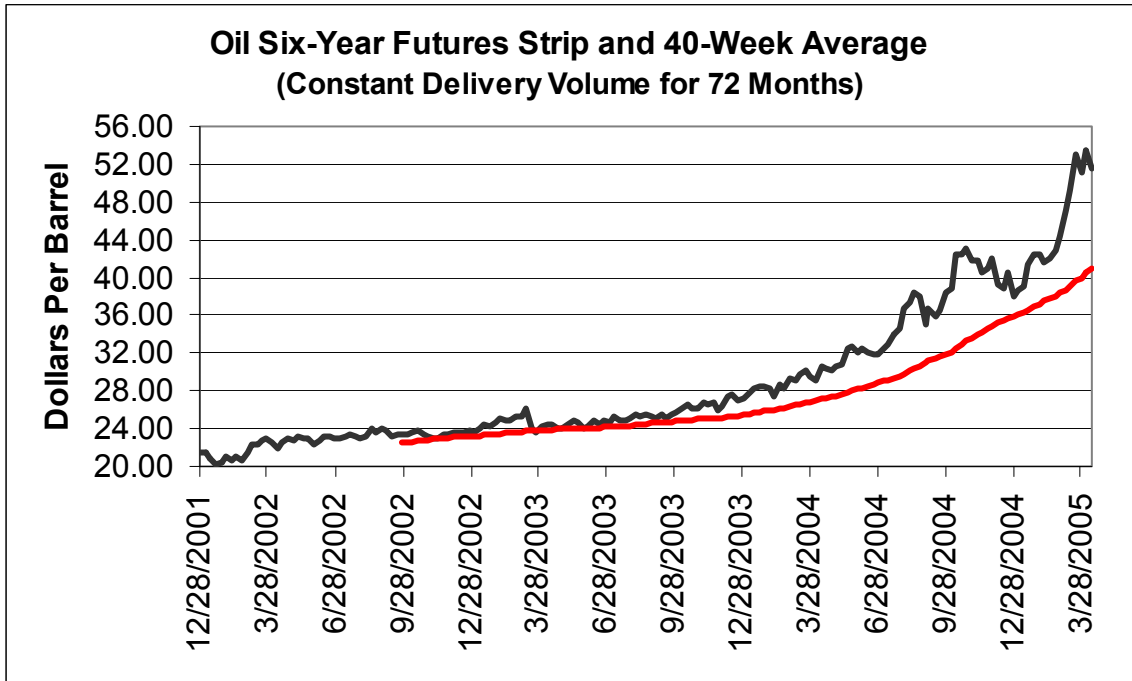
Summary and Recommendation

Buy-recommended **Norsk Hydro ASA (NHY)** offers concentrated exposure to the rising commodity price appeal of oil, natural gas and aluminum. Oil for delivery over six years has exceeded \$52 a barrel while the daily price of aluminum traded in London exceeded US\$2000 a metric ton recently. Investors can also gain from the diversification of non-U.S. domicile at a time of currency uncertainty without the higher risk of emerging market domicile as in China and Russia. Norsk Hydro's aluminum operations, third most important after Alcoa and Alcan, seem to be valued near the same low cash flow multiple as oil and gas. At our standard assumption of \$40 for Light, Sweet Crude Oil the stock has 20% appreciation potential to estimated net present value of \$101 a share.

Parallel Price Trends

Week by week our tally of the average oil futures price for the next six years quoted on the *New York Mercantile Exchange* has been marching upward (see chart [Oil Six-Year Futures Strip and 40-Week Average](#)). Over the same period, the daily spot price of aluminum on the *London Metals Exchange* has also been marching upward (see chart LMAHDY from *Bloomberg*).

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Valuation Lagging Price Trends

There seems little doubt that if price trends remain near the current level or continue upward at a moderate pace, Norsk Hydro stock is undervalued. While there is a risk that the trends could be reversed there is no sign of change in direction.

We see natural gas accounting for 23% of value; oil, 39%; and everything else, primarily aluminum, 38% (see table Functional Cash Flow and Present Value). While the presence of aluminum is unique, the concentration on oil and gas production is typical for an integrated oil company. The difference is that where NHY has aluminum, another company might have a downstream oil business of comparable importance.

Norsk Hydro					
Functional Cash Flow and Present Value					
	<i>NTM Ebitda</i>	<i>Adjusted</i>	<i>PV/</i>	<i>Present</i>	
	<i>(US\$mm)</i>	<i>R/P</i>	<i>Ebitda</i>	<i>Value</i>	
				<i>(US\$mm)</i>	
Natural Gas	850	16.2	8.2	7,000	23%
Oil	3,350	5.6	3.5	11,700	39%
Aluminum	2,010	-	5.8	11,600	38%
	6,210	8.5	4.9	30,300	100%
Debt (US\$mm)					4,800
Net Present Value (US\$mm)					25,500
Shares (mm)					252
Net Present Value (US\$/sh)					101

Cash Flow Grows with Higher Price

Projected cash flow for the next twelve months is up some 25% since the beginning of 2005 (see table Next Twelve Months Operating and Financial Results). The oil futures price for the next twelve months is up from about \$44 a barrel to \$56 a barrel in that time.

“Other” Ebitda, primarily aluminum, is projected at a moderate level that should be exceeded considering the progress of aluminum price. NHY derives half of its alumina (raw material) supply from equity sources where it profits directly from higher price. It obtains the rest under contract that gives protection against higher spot price. Primary aluminum is produced from alumina with the copious consumption of electrical energy. Smelters in Germany with high energy cost have become uncompetitive, but NHY has lower cost smelters in Norway, Canada and Australia. The primary aluminum that the company produces is combined with about an equal amount of recycled scrap to supply the company’s cast houses that refine the metal further. Half the casting output is semi-fabricated in NHY’s facilities to extruded products, rolled products and wire rod. A higher price for aluminum is a good sign as it relates to accelerating demand, but much of the higher price is necessary to offset the higher cost of energy.

The pure metal might be considered “packaged energy”. If the value of energy goes up on a sustained basis and economic growth remains positive, the value of existing aluminum should go

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up. In the aluminum “package”, energy can be transported economically. Practically speaking, aluminum should not be extracted in consuming areas where energy costs are high. Instead, aluminum should be extracted where energy costs are low as in the Middle East.

Indeed Norsk Hydro is embarking on an aluminum extraction plant in Qatar and is shutting down older facilities near markets where energy costs are high. Qatar has the world’s largest natural gas field that has little value unless the gas can be transported in liquefied or another form. In this case the natural gas would be used to generate electricity to extract aluminum. The aluminum would be transported relatively economically to a consuming area. To some extent the aluminum from the Middle East might displace aluminum extracted in a consuming area and free the electricity otherwise dedicated to the displaced aluminum for other uses.

Norsk Hydro
Next Twelve Months Operating and Financial Estimates

	<i>Q3</i>	<i>Q4</i>	<i>Year</i>	<i>Q1E</i>	<i>Q2E</i>	<i>Q3E</i>	<i>Q4E</i>	<i>Year</i>	<i>Q1E</i>	<i>Next Twelve Months</i>
	<i>9/30/04</i>	<i>12/31/04</i>	<i>2004</i>	<i>3/31/05</i>	<i>6/30/05</i>	<i>9/30/05</i>	<i>12/31/05</i>	<i>2005E</i>	<i>3/31/06</i>	<i>3/31/06</i>
Volume										
Natural Gas (mmcf)	738	1,056	928	1,038	882	738	1,056	928	1,038	928
Oil (mbd)	391	415	417	415	415	380	422	408	422	410
Total gas & oil (mbd)	514	591	572	588	562	503	598	563	595	564
Price										
Natural gas (NOK/mcf)	30	34	31	34	34	34	34	34	34	34
Natural gas (NOK/Sm ³)	1.07	1.20	0.88	1.20	1.20	1.20	1.20	0.96	1.20	0.96
Oil										
WTI Cushing US\$/bbl)	43.89	48.30	41.44	49.44	54.60	56.23	56.23	54.12	55.63	55.67
Kroner/\$	6.87	6.32	6.74	6.36	6.36	6.36	6.36	6.36	6.36	6.36
WTI Cushing (NOK/bbl)	302	305	279	314	347	357	357	344	354	354
NHY (NOK/bbl)	286	264	251	272	300	309	309	297	306	306
Total gas & oil (NOK/bbl)	261	246	233	252	275	283	278	272	276	278
Aluminum (US\$/tonne)	1,746	1,889	1,751							
Revenue (NOKmm)										
Natural Gas	2,058	3,303	10,524	3,176	2,758	2,308	3,303	11,545	3,176	11,545
Oil	10,295	10,072	38,291	10,143	11,450	10,797	11,992	44,383	11,606	45,845
Other	28,233	28,977	117,134	28,977	23,977	23,977	23,977	100,908	23,977	95,908
Total	38,528	39,049	155,425	42,296	38,186	37,083	39,272	156,836	38,758	153,299
Expense										
Production	7,510	7,395	26,815	7,379	7,626	7,330	7,942	30,277	7,809	30,707
Other	25,521	23,809	102,890	25,777	20,777	20,777	20,777	88,108	20,777	83,108
Total	33,031	31,203	129,705	33,157	28,403	28,107	28,719	118,386	28,586	113,815
Ebitda (NOKmm)										
Exploration and Production	4,843	5,980	22,001	5,940	6,583	5,776	7,353	25,650	6,972	26,683
Other	2,711	5,169	14,243	3,200	3,200	3,200	3,200	12,800	3,200	12,800
Total Ebitda	7,555	11,148	36,244	9,140	9,783	8,976	10,553	38,450	10,172	39,483
Exploration	298	518	1,264	518	518	518	518	2,072	518	2,072
Deprec., Deplet., & Amort.	3,533	6,417	17,238	3,500	3,500	3,500	3,500	14,000	3,500	14,000
Ebit										
Ebit	3,724	4,213	17,742	5,122	5,765	4,958	6,535	22,378	6,154	23,411
Interest	316	230	1,413	230	230	230	230	920	230	920
Foreign Exchange	(424)	(1,606)	(1,350)							
Ebt										
Ebt	3,832	5,589	17,679	4,892	5,535	4,728	6,305	21,458	5,924	22,491
Income Tax	1,341	1,956	6,188	1,712	1,937	1,655	2,207	7,510	2,074	7,872
Net Income (NOKmm)										
Exploration and Production	7,521	8,621	30,408							
Other Operations	526	(2,387)	1,139							
Non operating deductions	(5,556)	(2,601)	(20,055)							
Total	2,491	3,633	11,492	3,179	3,598	3,073	4,098	13,948	3,851	14,619
Shares (millions)										
Shares (millions)	254	252	254	252	252	252	252	252	252	252
Per share (NOK)	9.80	14.40	45.20	12.60	14.26	12.18	16.24	55.29	15.26	57.95
Ebitda Margin (E&P)	39%	45%	45%	45%	46%	44%	48%	46%	47%	46%
Tax Rate	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%

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Buy Oil and Gas Producers at Mid Decade

NHY stock appears to have attractive potential in an attractive group for investment (see table of stocks ranked by McDep Ratio). Three to five-fold gain potential for oil and gas price over the next 5 to 13 years justifies investment in recommended oil and gas producers, in our opinion.

Rank by McDep Ratio: Market Cap and Debt to Present Value

	<i>Symbol/</i>		<i>Price</i>		<i>Market</i>	<i>Net</i>		
	<i>Rating</i>		<i>(\$/sh)</i>	<i>Shares</i>	<i>Cap</i>	<i>Present</i>	<i>Debt/</i>	<i>McDep</i>
			<i>7-Apr</i>	<i>(mm)</i>	<i>(\$mm)</i>	<i>Value</i>	<i>Present</i>	<i>Ratio</i>
			<i>2005</i>			<i>(\$/sh)</i>	<i>Value</i>	
Producer/Refiners - Large Cap and Mid Cap								
Kinder Morgan, Inc.	KMI	S2	76.25	125	9,530	20.00	0.74	1.74
Imperial Oil Limited (30%)	IMO	B	78.09	105	8,230	64.00	0.11	1.20
Marathon Oil Corporation	MRO	B	48.41	347	16,820	42.00	0.30	1.11
ConocoPhillips	COP	B	110.35	706	77,900	128.00	0.23	0.89
Norsk Hydro ASA	NHY	B	84.25	252	21,260	101.00	0.16	0.86
Petro-Canada	PCZ	B	58.10	264	15,340	70.00	0.18	0.86
Suncor Energy	SU	B	40.04	460	18,420	54.00	0.10	0.77
Lukoil Oil Company	LUKOY	B	145.75	209	30,000	208.00	0.03	0.71
PetroChina Company Ltd (10%)	PTR	B	63.87	176	11,230	94.00	0.05	0.70
	<i>Total or Median</i>				<i>209,000</i>		<i>0.16</i>	<i>0.86</i>

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