

Rating: Buy
S&P 500: 1121

PetroChina Company Limited

Dividend Raised, Present Value Trimmed

<i>Symbol</i>	PTR	<i>Ebitda Next Twelve Months ending 6/30/05 (US\$mm)</i>	22,600
<i>Rating</i>	Buy	<i>North American Natural Gas/Ebitda (%)</i>	0
<i>Price (US\$/sh)</i>	50.69	<i>Natural Gas and Oil Production/Ebitda (%)</i>	88
<i>Pricing Date</i>	9/7/04	<i>Adjusted Reserves/Production NTM</i>	13.5
<i>Shares (mm)</i>	1758	<i>EV/Ebitda</i>	4.3
<i>Market Capitalization (US\$mm)</i>	89,100	<i>PV/Ebitda</i>	6.7
<i>Debt (US\$mm)</i>	8,500	<i>Undeveloped Reserves (%)</i>	18
<i>Enterprise Value (EV) (US\$mm)</i>	97,600	<i>Natural Gas and Oil Ebitda (US\$/boe)</i>	21.64
<i>Present Value (PV) (US\$mm)</i>	152,600	<i>Present Value Proven Reserves(US\$/boe)</i>	9.86
<i>Net Present Value (US\$/share)</i>	82	<i>Present Value Proven Reserves(US\$/mcf)</i>	1.64
<i>Debt/Present Value</i>	0.06	<i>Earnings Next Twelve Months (US\$/sh)</i>	5.57
<i>McDep Ratio - EV/PV</i>	0.64	<i>Price/Earnings Next Twelve Months</i>	9
<i>Dividend Yield (%/year)</i>	4.6	<i>Indicated Annual Dividend (US\$/sh)</i>	2.35

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

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

The Peoples Republic of China holds 90% of the outstanding shares.

Summary and Recommendation

We continue to recommend current purchase of the American Depositary Shares of **PetroChina (PTR)** for current income and oil and gas potential. A nine percent increase in dividend places the indicated annual yield at 4.6%. We illustrate a calculation of present value of \$82 a share that is a decrease from our previous estimate of \$88. Natural gas production is beginning to feed a new pipeline network and the price received is still modest. Stable oil production generates most of current cash flow while downstream operations are improving rapidly in profitability. To allow for political risk, investors may want to limit ownership to half a normal portfolio position.

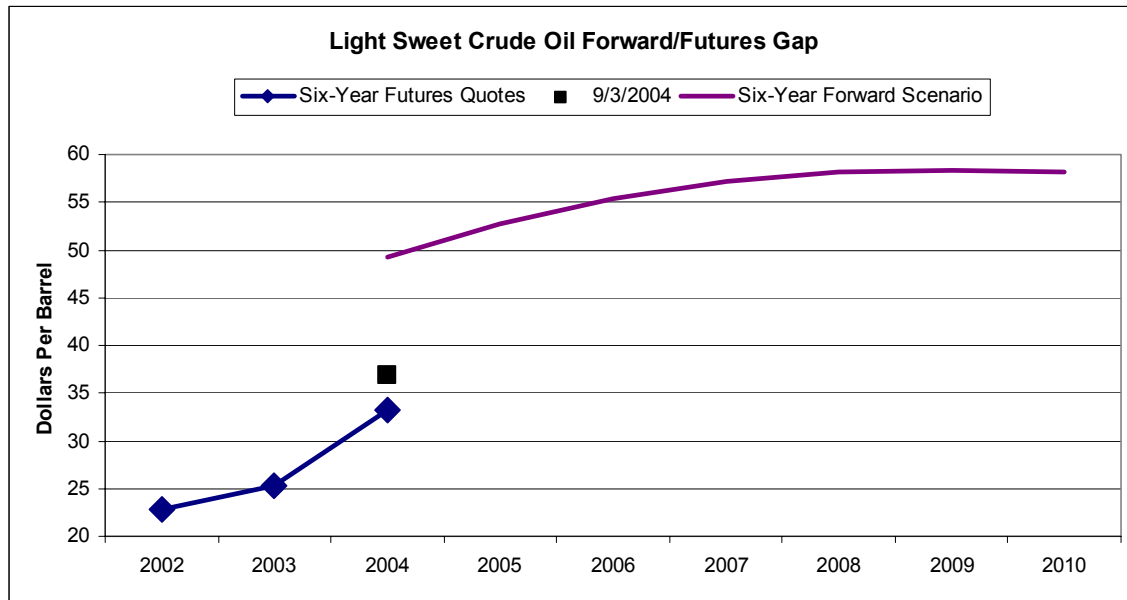
Moderate Oil Price Scenario

The value of the company depends in large part on the future price of crude oil. Publicly traded in the commodity markets, futures contracts for delivery over the next six years continue in a steep uptrend. Whether the trend will slow for awhile we cannot know. Our scenario is that a move that began in the low \$20 and is now in the mid \$30 could reach \$50 (see chart Light Sweet Crude Oil Forward/Futures Gap).

To construct the scenario we assumed oil would peak in 2010 at \$50 in constant dollars. That is more moderate than the peak in early 1981 at more than \$80 in constant dollars. Then we applied 3% per year inflation and calculated six-year averages to build a forward curve.

Economics support the price trends. Oil demand is strong with world economic growth paced by developing countries, especially China. Supply growth is limited as spare capacity has virtually disappeared. The largest producing fields in the Middle East are now mature. It will take time, large amounts of capital and a secure political climate to boost producing rates.

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Monetary factors favor oil investment as interest rates below inflation drive investors to real assets for protection against the dollar losing value. If similar past periods are any guide, the authorities may not raise interest rates above inflation for the rest of the decade.

Environmental factors favor higher oil and gas price. Coal is still a quarter of world primary energy supply. Cleaner oil and gas are undervalued as long as we tolerate environmentally disadvantageous coal.

Political factors favor higher oil price in consuming countries and producing countries. Consuming governments often resort to artificial forces to hold down oil price that can appear to work temporarily.

In producing countries we have seen time and again that oil production goes down when international oil companies are not welcome. After Iran, Iraq and Venezuela, now Saudi Arabia appears vulnerable to political change that may bring about production decline.

Too much of a gain in oil price might cause problems of economic adjustment though we think much of the concern expressed is exaggerated. Nonetheless we have a threshold of 60% gain in monthly price compared to a year earlier when we start to become concerned about weak demand for oil. October futures currently near \$43 a barrel would have to remain above \$52 for the 60% threshold to be breached.

One-Year Futures Point to Higher Cash Flow and Profits

PTR reports operations quarterly and financial results semiannually. Quarterly volumes and prices are stated in common international terms. We relate natural gas and oil price to the quotes for commodities traded on the New York Mercantile Exchange (see table Next Twelve Months Operations).

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Investors who want calendar year estimates can find 2004 in the table. For 2005 we suggest using the next twelve months as a rough estimate. Estimates can change frequently along with oil markets.

PetroChina Company Limited									
Next Twelve Months Operations									
	<i>Year</i>	<i>Q1</i>	<i>Q2</i>	<i>Q3E</i>	<i>Q4E</i>	<i>Year</i>	<i>Q1E</i>	<i>Q2E</i>	<i>Next</i>
	2003	3/31/04	6/30/04	9/30/04	12/31/04	2004E	3/31/05	6/30/05	Twelve
									Months
									6/30/05
Volume									
Natural gas (bcf)	692	218	193	186	213	809	215	193	807
Natural Gas (mmcf)	1,895	2,390	2,119	2,027	2,310	2,211	2,390	2,119	2,211
Days	365	91	91	92	92	366	90	91	365
Oil (mmb)	774	193	196	198	198	784	193	196	785
Oil (mbd)	2,122	2,120	2,149	2,149	2,149	2,142	2,149	2,149	2,149
Total gas & oil (mmb)	890	229	228	229	233	919	229	228	919
Total gas & oil (mbd)	2,437	2,518	2,503	2,487	2,534	2,511	2,548	2,503	2,518
Price									
Natural gas (\$/mcf)									
Henry Hub (\$/mmbtu)	5.49	5.64	6.10	5.36	5.44	5.64	6.51	5.92	5.81
Company	1.95	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98
Oil (\$/bbl)									
WTI Cushing	31.13	35.23	38.34	43.25	43.86	40.17	42.83	41.63	42.89
Company	27.19	28.31	31.19	35.18	35.68	32.62	34.84	33.87	34.90
Total gas & oil (\$/bbl)	25.18	25.71	28.47	32.02	32.07	29.58	31.25	30.76	31.53
Revenue (\$mm)									
Natural Gas	1,348	431	382	369	421	1,602	426	382	1,598
Oil	21,056	5,461	6,101	6,957	7,056	25,575	6,740	6,624	27,378
Total	22,404	5,892	6,483	7,326	7,477	27,177	7,166	7,006	28,975
Total(RMB)	185,160	48,691	53,574	60,548	61,791	224,605	59,226	57,902	239,466

Semiannual financial results are reported in the currency of China, the renminbi, also known as the yuan, pronounced “wahn” (see table Next Twelve Months Financial Results). Projected cash flow is about the same following recently reported results. We cautiously project some diminishing of cash flow from downstream operations in line with softening international margins. That could be low as PetroChina may not yet have reached world profitability downstream and might have more resistance to decline.

Present Value at Real Price and Real Return

NTM estimates determine to a large extent the first year of projected cash flow that we discount to present value (see table Present Value of Oil and Gas Reserves). The calculation is set up on the basis of a barrel of proven reserves, 0.82 developed and 0.18 undeveloped.

While there are many assumptions that could be discussed, discount rate and oil price are especially important. Price escalation and discount rate interact. In this case we make the simplification of dealing in constant dollars. That assumes price escalation, cost escalation and discount rate are all net of inflation.

For discount rate we use a 7% real return per year on an unlevered basis. That means a buyer who pays present value would earn 7% per year above inflation if all the projections were to materialize as stated.

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PetroChina Company Limited
Next Twelve Months Financial Results

	<i>Year</i>	<i>H1</i>	<i>H2E</i>	<i>Year</i>	<i>H1E</i>	<i>Next Twelve Months</i>
	2003	<i>6/30/04</i>	<i>12/31/04</i>	2004E	<i>6/30/05</i>	6/30/05
NY Harbor 3-2-1 (\$/bbl)	6.42	9.29	6.86	8.08	7.02	6.94
Revenue (RMB)						
Natural Gas						
Oil						
Upstream (from quarterly table)	185,160	102,266	122,339	224,605	117,127	239,466
Downstream Value Added	118,619	77,286	57,089	134,375	58,362	115,451
Total	303,779	179,552	179,428	358,980	175,490	354,917
Expense						
Production						
Other						
Total	135,951	85,013	84,951	169,964	82,982	167,933
Ebitda (RMB)						
Production	141,004	73,124	83,161	156,284	81,192	164,352
Other	26,824	21,415	11,316	32,731	11,953	23,269
Total	167,828	94,539	94,477	189,016	92,508	186,985
Exploration	10,577	5,630	5,630	11,260	5,630	11,260
Deprec., Deplet., & Amort.	40,531	24,673	24,673	49,346	24,673	49,346
Other non cash						
Ebit	116,720	64,236	64,174	128,410	62,205	126,379
Interest	2,346	925	925	1,850	925	1,850
Ebt	114,374	63,311	63,249	126,560	61,280	124,529
Income Tax	40,031	18,019	22,137	40,156	21,448	43,585
Net Income (RMB)						
Exploration and Production	92,370	52,701				
Other	7,998	11,549				
Unallocated	(30,754)	(18,958)				
Total	69,614	45,292	41,112	86,404	39,832	80,944
Shares (millions)	1,758	1,758	1,758	1,758	1,758	1,758
Earnings per share (RMB)	39.60	25.76	23.39	49.15	22.66	46.04
Ebitda Margin (E&P)	76%	72%	68%	70%	69%	69%
Tax Rate	35%	28%	35%	32%	35%	35%

First year oil price is from the futures market. We hold it constant at an arbitrary level thereafter. The assumed price listed in the upper right hand corner is the commonly quoted benchmark Light, Sweet Crude. A price of \$35 a barrel leads to present value of future cash flow from a barrel of reserves equal to \$9.80 (see box in right hand column).

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PetroChina Company Limited
Present Value of Oil and Gas Reserves

Volume Decline (%/yr):	7	Nymex Oil Price Post 2005 (\$/bbl)	35
Volume Enhancement (%/yr):	3	Price/Nymex Post 2005 (%):	81
Variable Cost (%):	22	Real Discount Rate (%/yr):	7.0
Capex/Cash Flow (%):	10		

Year	Basic (bbl)	Volume Enhanced (bbl)	Total (bbl)	Price (\$/bbl)	Revenue (\$)	Fixed Cost (\$)	Var. Cost (\$)	Cash Flow (\$)	Cap Ex (\$)	Free CF (\$)	Disc Factor	Present Value (\$)
Total 2005 through 2029; years ending on 6/30												
	0.821	0.179	1.000	28.57	28.55	5.01	6.28	17.26	0.83	16.43	0.60	9.80
2005	0.068	0.000	0.068	31.53	2.14	0.20	0.47	1.47	0.15	1.32	0.97	1.28
2006	0.063	0.002	0.066	28.35	1.86	0.20	0.41	1.25	0.13	1.13	0.90	1.02
2007	0.059	0.005	0.064	28.35	1.80	0.20	0.40	1.20	0.12	1.08	0.84	0.92
2008	0.055	0.007	0.062	28.35	1.74	0.20	0.38	1.16	0.12	1.04	0.79	0.82
2009	0.051	0.009	0.060	28.35	1.69	0.20	0.37	1.12	0.11	1.00	0.74	0.74
2010	0.048	0.010	0.058	28.35	1.63	0.20	0.36	1.07	0.11	0.97	0.69	0.67
2011	0.044	0.012	0.056	28.35	1.58	0.20	0.35	1.03	0.10	0.93	0.64	0.60
2012	0.041	0.013	0.054	28.35	1.53	0.20	0.34	0.99	0.00	0.99	0.60	0.60
2013	0.038	0.012	0.050	28.35	1.43	0.20	0.31	0.91	0.00	0.91	0.56	0.51
2014	0.036	0.011	0.047	28.35	1.33	0.20	0.29	0.84	0.00	0.84	0.53	0.44
2015	0.033	0.010	0.044	28.35	1.24	0.20	0.27	0.76	0.00	0.76	0.49	0.38
2016	0.031	0.010	0.041	28.35	1.15	0.20	0.25	0.70	0.00	0.70	0.46	0.32
2017	0.029	0.009	0.038	28.35	1.07	0.20	0.24	0.64	0.00	0.64	0.43	0.27
2018	0.027	0.008	0.035	28.35	1.00	0.20	0.22	0.58	0.00	0.58	0.40	0.23
2019	0.025	0.008	0.033	28.35	0.93	0.20	0.20	0.53	0.00	0.53	0.37	0.20
2020	0.023	0.007	0.031	28.35	0.87	0.20	0.19	0.48	0.00	0.48	0.35	0.17
2021	0.022	0.007	0.028	28.35	0.81	0.20	0.18	0.43	0.00	0.43	0.33	0.14
2022	0.020	0.006	0.027	28.35	0.75	0.20	0.17	0.39	0.00	0.39	0.31	0.12
2023	0.019	0.006	0.025	28.35	0.70	0.20	0.15	0.35	0.00	0.35	0.29	0.10
2024	0.018	0.005	0.023	28.35	0.65	0.20	0.14	0.31	0.00	0.31	0.27	0.08
2025	0.016	0.005	0.021	28.35	0.61	0.20	0.13	0.27	0.00	0.27	0.25	0.07
2026	0.015	0.005	0.020	28.35	0.57	0.20	0.12	0.24	0.00	0.24	0.23	0.06
2027	0.014	0.004	0.019	28.35	0.53	0.20	0.12	0.21	0.00	0.21	0.22	0.05
2028	0.013	0.004	0.017	28.35	0.49	0.20	0.11	0.18	0.00	0.18	0.20	0.04
2029	0.012	0.004	0.016	28.35	0.46	0.20	0.10	0.16	0.00	0.16	0.19	0.03

Present Value per Barrel Leads to Present Value per Share

We illustrate the calculation of Net Present Value (NPV) in a sensitivity table where each column is headed by a different oil price (see table [Net Present Value Calculation](#)). Oil price corresponds to present value per barrel which then leads step by step to the final result. The price of \$35 a barrel corresponds to our standardized present value of \$82 a share. Turn the comparison around and it is evident that a stock price of \$51, near the current quote, corresponds to a constant real oil price of \$22 a barrel.

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PetroChina Company Limited
Net Present Value Calculation

Constant Oil Price (\$/bbl):	22	35	40	50
Present Value per Barrel (\$):	5.90	9.80	11.40	14.40
Oil and Gas Reserves (million barrels equivalent):	13,609	13,609	13,609	13,609
Present Value of Oil and Gas Reserves (\$mm):	80,300	133,400	155,100	196,000
Present Value of Other Businesses (\$mm):	18,500	18,500	18,500	18,500
Total Present Value (\$mm):	98,800	151,900	173,600	214,500
Debt (\$mm):	8,500	8,500	8,500	8,500
Present Value of Equity (\$mm):	90,300	143,400	165,100	206,000
Shares (mm):	1,758	1,758	1,758	1,758
Net Present Value (\$/sh):	51	82	94	117

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