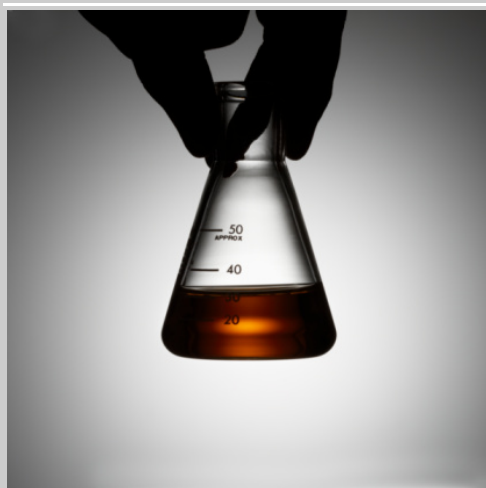




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China oil and gas distiller

Coalbed methane on the cusp

20 fold increase in China coal bed methane output by 2020

China's June 1 increase in natural gas prices has given domestic coal bed methane (CBM) producers a major boost. Estimated 2009 CBM production was a negligible ~1 billion cu m (1.2% of total). According to PetroChina, CBM output will reach 20 billion cu m by 2020 (~8-10% of total). We believe CBM production is on the cusp of substantial growth as continuing natural gas price increases, government subsidies, and foreign investment incentivise investment in CBM.

Unconventional and higher cost – Coalbed methane is an unconventional source of natural gas, where methane contained in coal seams is extracted through a dewatering process. CBM has been economically produced in Australia and North America, with wellhead prices from US\$3.5/mcf - 6.25/mcf (~Rmb0.85 -1.50 cu m) depending on depth and gas content of the coal.

CBM subsidies – China provides a direct subsidy of Rmb0.20/cu m to CBM producers. Indirect subsidies such as import tariff exemptions for CBM equipment, VAT tax rebates, and income tax exemptions push effective CBM subsidies to an estimated ~Rmb0.28/cu m. With subsidies, we believe CBM resources near Sichuan, Henan, and Shanxi are currently economical.

Foreign investors allowed – Technology-intensive assets like CBM are more open to foreign investments. China's three major CBM producers, PetroChina, CUCBM, and Jincheng Coal, will likely pursue PSCs with experienced foreign operators to accelerate the CBM learning curve.

Shale-gas playing catch-up – Policies, subsidies, resource estimates and production of shale gas in China are far behind CBM, largely because the shale-gas breakthrough in North America was unforeseen – we believe significant efforts to catch up are underway.

PetroChina acquiring unconventional gas technology – We believe PetroChina is acquiring CBM and shale-gas technology. PetroChina/Shell jointly purchased Arrow Energy, an Australian CBM play. The parent company recently signed a JV MOU with EnCana to develop Canadian shale formations.

China data distiller

The NDRC has capped coal contract prices to check inflation. **Fuel price decreases may follow** - Recent Sinopec GRMs have been over US\$10/bbl as the refiner processes sub US\$70/bbl oil purchased in late May. We believe the NDRC has room to lower fuel prices by ~Rmb200-300/tonne, achieving a break-even GRM on our estimates.

Stock implications

Of China's majors, PetroChina appears best positioned to benefit from China's extensive CBM resources. We believe the company's overseas acquisitions and JVs can be leveraged into domestic unconventional resources while CNOOC and Sinopec's acquisitions are necessary to offset dwindling domestic assets.

Small independent operators like Green Dragon Gas (GDG.L, NR) and Enviro Energy (8182 HK, NR) may have bright futures if their CBM costs are justified by rising natural gas prices.

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29 June 2010

Coalbed methane on the cusp

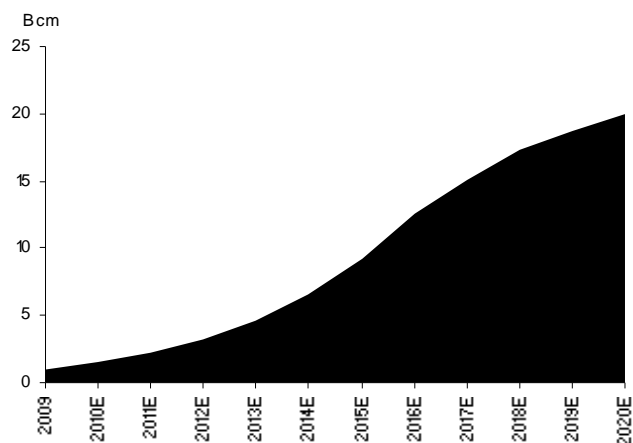
20 fold increase in China coal bed methane output by 2020

We believe CBM production is on the cusp of substantial growth

China's June 1 increase in natural gas prices has given domestic coal bed methane (CBM) producers a major boost. Estimated 2009 CBM production was a negligible ~1 billion cu m (1.2% of total). According to PetroChina (857 HK, HK\$8.93, Outperform, TP: HK\$11.00), CBM output will reach 20 billion cu m by 2020 (~8-10% of total).

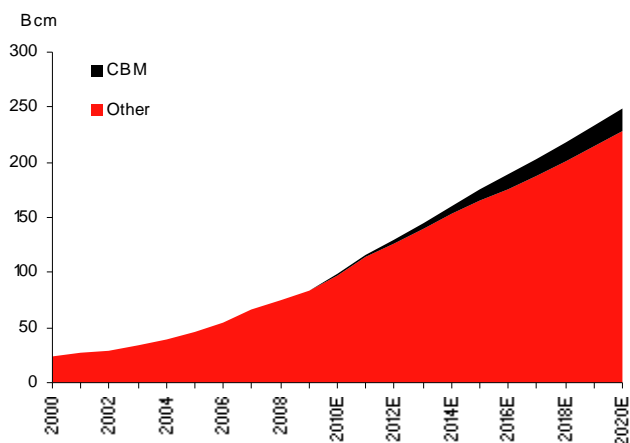
We believe CBM production is on the cusp of substantial growth as continuing natural gas price increases, government subsidies, and PSC contracts incentivise investment in CBM.

Fig 1 China forecast CBM production



Source: PetroChina, Macquarie Research, June 2010

Fig 2 China CBM vs. total gas production



Source: PetroChina, Macquarie Research, June 2010

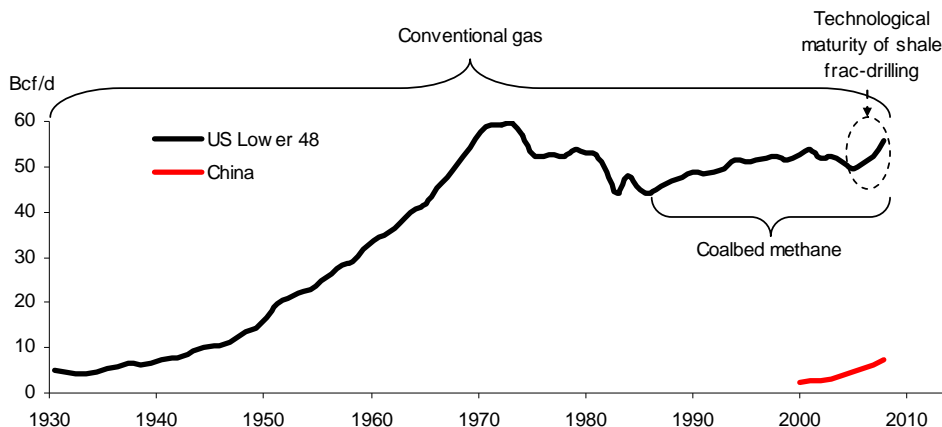
China's conventional natural gas production is itself in early days of exploitation

No threat to conventional gas

PetroChina expects CBM output to grow at over 30% CAGR to 2020. We believe this is feasible as rising natural gas prices clear the cost threshold of various CBM basins. Growing from a small base, CBM – and other unconventional natural gas resources – will likely not be a major contributor to China's natural gas supply in the medium term; China's conventional natural gas production is itself in early days of exploitation.

However, extensive CBM and other unconventional resources suggest that China's overall natural gas production growth will likely continue well past 2020 and that consumption can be far higher than the 300 billion cu m estimated for 2020. And with mature technology developed in North America, production growth will likely continue unabated for decades.

Fig 3 US natural gas production history vs. China



Source: US DOE, Macquarie Research, June 2010

Extensive CBM resources

According to CNPC, China has 37 trillion cu m of geological CBM resources (third to Russia and Canada) located largely in eight basins. Estimated proven CBM reserves of 185 billion cu m are a small fraction of geological resources (0.5% of geological resources).

Geological resources should be taken with a grain of salt. PetroChina's total proved natural gas reserves are a mere 1.78 trillion cu m (5% of CBM geological resources). These figures merely indicated that CBM resources are vast and in initial stages of exploitation.

Unconventional and higher cost

Coalbed methane is an unconventional source of natural gas. CBM is absorbed into the solid matrix of the coal. Methane is released when the coal seam is depressurised. Depressurising coal seams involves drilling wells into the coalbed and pumping out water, decreasing the water pressure. Lower pressure allows the methane to detach from the coal matrix, gasify, and flow up the well-bore.

CBM has been economically extracted in Australia and North America, with wellhead prices from US\$3.5/mcf - 6.25/mcf (~Rmb0.85 -1.50/cu m) depending on depth and gas content of the coal. CBM has become an important source of energy in United States, Canada, and Australia. In the US, CBM accounts for 7% of total natural gas output.

Fig 4 Wellhead natural gas prices in China

Oil and gas fields (province)	End user	Current benchmark price			Benchmark price post adjustment	
					Unit: RMB/cubic metres	
Chuanyu (Sichuan)	Fertilizer				0.690	0.920
	Direct supply				1.275	1.505
	Industrial				1.320	1.550
	Non-industrial				0.920	1.150
Changqin (Shanxi)	Fertilizer				0.710	0.940
	Direct supply				1.125	1.355
	Industrial				1.170	1.400
	Non-industrial				0.770	1.000
Qinghai (Qinghai)	Fertilizer				0.660	0.890
	Direct supply				1.060	1.290
	Industrial				1.060	1.290
	Non-industrial				0.660	0.890
Xinjiang (Xinjiang)	Fertilizer				0.560	0.790
	Direct supply				0.985	1.215
	Industrial				0.960	1.190
	Non-industrial				0.560	0.790
Dagang (Tianjin)		Tier 1	Tier 2	Average		-
	Fertilizer	0.660	0.980	0.710		0.940
	Direct supply	1.320	1.380	1.340		1.570
Liaohe (Liaoning)	Industrial	1.230	1.380	1.340		1.570
	Non-industrial	0.830	0.980	0.940		1.170
Zhongyuan (Henan)						
	Fertilizer				0.980	1.210
	Direct supply				1.380	1.610
	Industrial				1.380	1.610
Others	Non-industrial				0.980	1.210
Pipelines (province source)						
West-East Pipeline (Xinjiang)	Fertilizer				0.560	0.790
	Direct supply				0.960	1.190
	Industrial				0.960	1.190
	Non-industrial				0.560	0.790
Sichuan-Hubei (Sichuan)	Fertilizer				0.911	1.141
	Direct supply				1.311	1.541
	Industrial				1.311	1.541
	Non-industrial				0.911	1.141
Shanxi-Beijing (Shanxi)	Fertilizer				0.830	1.060
	Direct supply				1.230	1.460
	Industrial				1.230	1.460
	Non-industrial				0.830	1.060
Sichuan-East (Sichuan)					1.280	1.510

Source: China NDRC, June 2010

Subsidies aid economics

China provides a direct subsidy of Rmb0.20/cu m to CBM producers. Indirect subsidies such as income tax exemptions, import tariff exemptions for CBM equipment, and VAT tax rebates, push effective CBM subsidies to an estimated ~Rmb0.28/cu m.

With the subsidies and recent price increases, we believe much of CBM resources near Sichuan, Henan, and Shanxi are currently economical, with average wellhead prices of ~Rmb1.2/cu m (Figure 4). Assuming continued increases in natural gas prices, improved pipeline networks, and China moving up the CBM learning curve, we believe economic CBM can eventually be produced throughout China.

Three major players

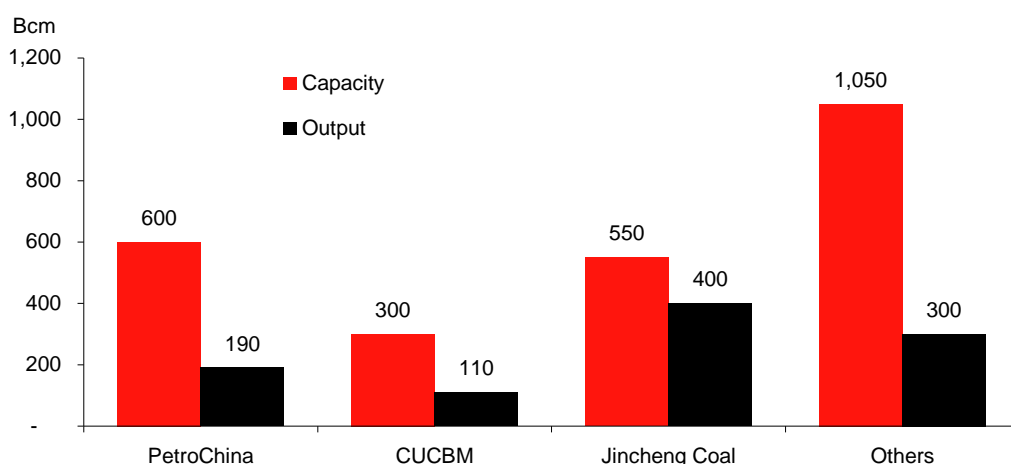
China's CBM industry is currently controlled by three large operators: PetroChina, CUCBM, and Jincheng Coal. China currently allows foreign companies to sign PSC contracts with CUCBM. The right to sign PSCs will likely be extended to PetroChina and local coal producers like Jincheng Coal as China opens investment in unconventional natural gas to foreign companies.

In the mid 1990s, China began exploring its CBM resources. China formed CUCBM as a 50/50 JV between PetroChina and China National Coal Group to concentrate spending and technology. CUCBM signed PSCs with foreign partners to invest in China's CBM production. In 2008, PetroChina split from CUCBM, inheriting many blocks with legacy PSCs. Since then, PetroChina, along with Sinopec (386 HK, HK\$6.56, Neutral, TP: HK\$6.75) and Jincheng Anthracite Coal Mining Group, have been lobbying for the right to sign new CBM cooperation agreements.

Throughout this period, local coal producers such as Jincheng Anthracite Mining Group of Shanxi province has been producing CBM in a legal gray area. PetroChina and CUCBM have raised the issue of Jincheng Coal's "illegal" extraction of CBM. This issue has been settled by the Ministry of Land Resources, which recently granted a CBM mining license to Jincheng Coal, signalling perhaps that local coal operators will be allowed into the CBM business.

The right to sign PSCs will likely be extended to PetroChina and local coal producers

Fig 5 China 2009 CBM capacity and output



Source: China NEA

***Policies, subsidies,
resource estimates
and production of
shale gas in China
are far behind CBM***

Shale-gas playing catch-up

Policies, subsidies, resource estimates and production of shale gas in China are far behind CBM, largely because the recent shale-gas breakthrough in North America was unforeseen while CBM has been economically produced in scale there for decades. China has an estimated exploitable shale-gas resource of 26 Tcf.

Efforts are underway to accelerate shale-gas development with similar policy advantages that CBM enjoys. China and the US signed the Sino-US Shale Gas Resource Cooperation Initiative earlier in November 2009 during U.S. President Barack Obama's first state visit to China. This initiative lays the groundwork for investment in China's fledgling shale-gas industry by US companies.

PetroChina acquiring unconventional gas technology

We believe PetroChina is acquiring CBM and shale-gas technology. PetroChina/Shell's jointly purchased Arrow Energy, an Australian CBM play. The parent company recently signed a JV MOU with EnCana to develop Canadian shale formations.

Of China's majors, PetroChina appears best positioned to benefit from China's extensive CBM resources. We believe the company's overseas acquisitions and JVs can be leveraged into domestic unconventional resources, while CNOOC (883 HK, HK\$13.84, Underperform, TP: HK\$11.00) and Sinopec's acquisitions are to offset dwindling domestic assets.

China data distiller

Crude oil supply

Surprising production growth... high import growth due to base effect from weak 1Q09 and low imports of refined products

China's Jan-May 2010 crude oil production grew 5.9% YoY. Using Jan- April data, 66% of growth was driven by CNOOC and offshore partners, with the remainder coming from PetroChina. Sinopec production actually decreased YoY despite US\$25/bbl higher oil prices.

China's Jan-May 2010 crude oil net imports grew 32% YoY, largely due to a base effect from a weak 1Q09. High crude import growth also offset declining net imports of refined products (which fell 240,000 bbl/d).

May crude imports of 4.2 mmbbl/d slowed substantially from 5.1 mmbbl/d in April. We believe Chinese imports will average ~4.4 mmbbl/d in 2010.

Natural gas supply

Double-digit production growth... spot cargoes and Fujian terminal more than double LNG imports... negligible imports from Turkmenistan through 2nd West-East Pipeline

China's Jan-May 2010 natural gas production grew 12% YoY. Using Jan- April data, 80% of growth was driven by PetroChina, with the remainder coming from Sinopec. PetroChina's natural gas production grew ~12% YoY Jan-Apr. Sinopec's natural gas production grew ~40% YoY Jan-Apr, largely due to the start-up of the Puguang natural gas field delivering gas to Shanghai through the Sichuan-East pipeline.

LNG imports more than doubled largely due to spot shipments of LNG in January and opening of the new Fujian terminal by CNOOC Group. According to media reports, approximately 1 billion cu m of natural gas has been imported through the 2nd West-East pipeline from Turkmenistan since commencing in July – about 2% of supply.

Refining margins

Sinopec's refining margins averaged US\$4.68/bbl YtD... relatively high recent GRMs... risk of fuel price decrease

The NDRC has capped coal contract prices to check inflation. Fuel price decreases may follow: recent Sinopec GRMs have been over US\$10/bbl as the refiner processes sub US\$70/bbl oil purchased in late May. We believe the NDRC has room to lower fuel prices by ~Rmb200-300/tonne, achieving a break-even GRM on our estimates.

Refined product supply

Surging production displacing imports... exports of gasoline, diesel, and kerosene and imports of fuel oil depends on domestic GRM ... 1H09 hoarding of gasoline skewing 2010 gasoline consumption growth

Refined product production grew 20% YoY Jan-May 2010, in line with implied consumption of crude oil. Net imports fell substantially, as China exported more gasoline and diesel and imported less fuel oil in 2010. This was likely the result of low domestic GRMs, which incentivised PetroChina and Sinopec to export and reduced independent refiner imports of fuel oil as low margins squeezed them out of the market.

We believe the mystery of low growth (1.8%) in gasoline consumption despite surging auto sales can largely be explained by massive speculative hoarding of gasoline in the Spring of 2009 as the NDRC was too slow in raising fuel prices. Full-year figures will likely smooth out consumption figures and reveal growing consumption of gasoline.

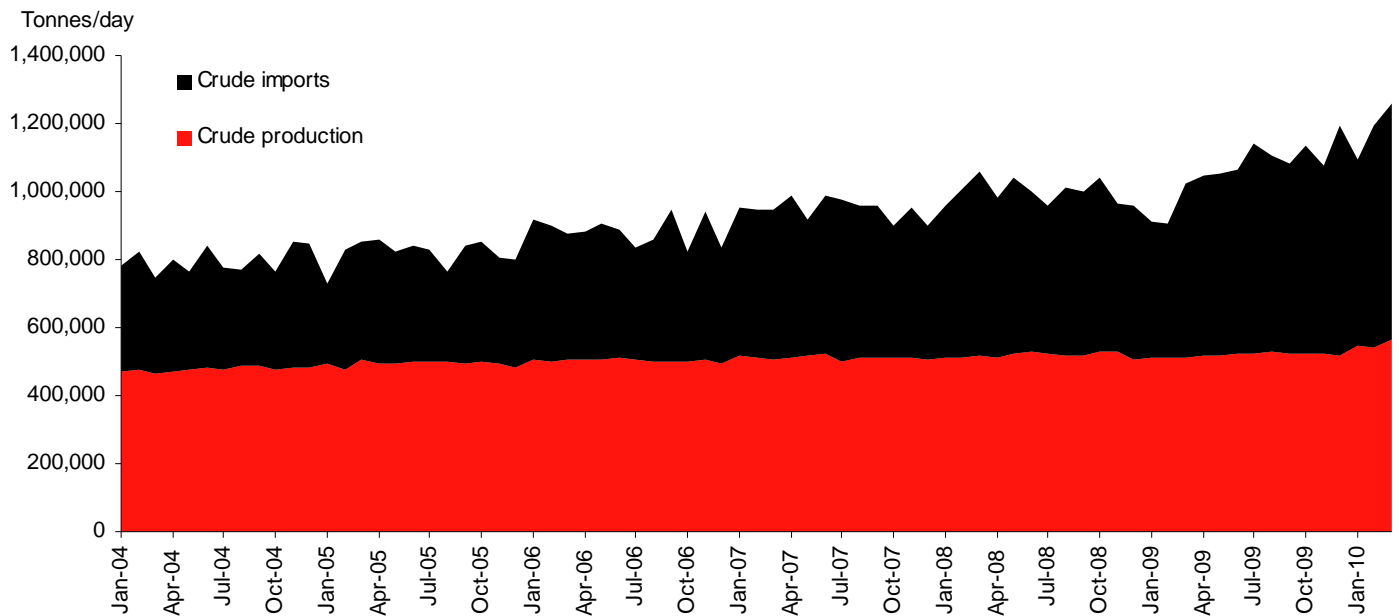
High crude import growth also offset declining net imports of refined products

Low growth in gasoline demand despite surging auto sales can be explained by speculative hoarding in Spring 2009

Appendices: charts and tables

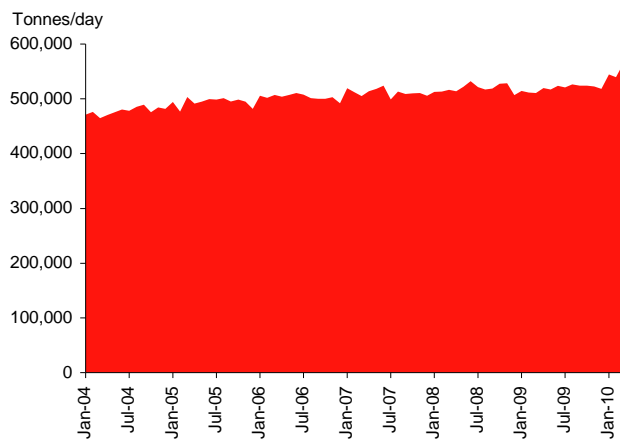
Crude oil supply

Fig 6 China crude production and imports



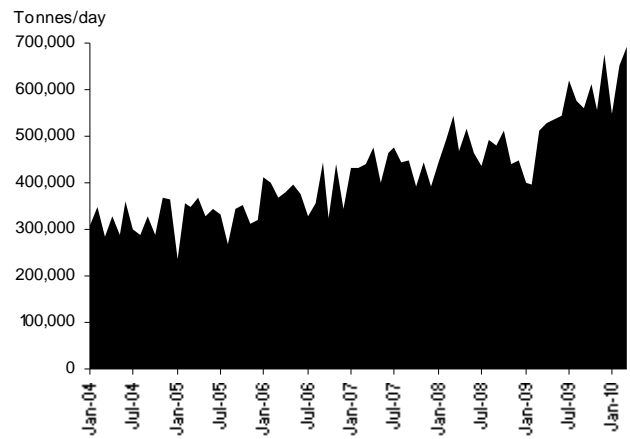
Source: Bloomberg, China NBS, Macquarie Research, June 2010

Fig 7 China crude production



Source: Bloomberg, China NBS, Macquarie Research, June 2010

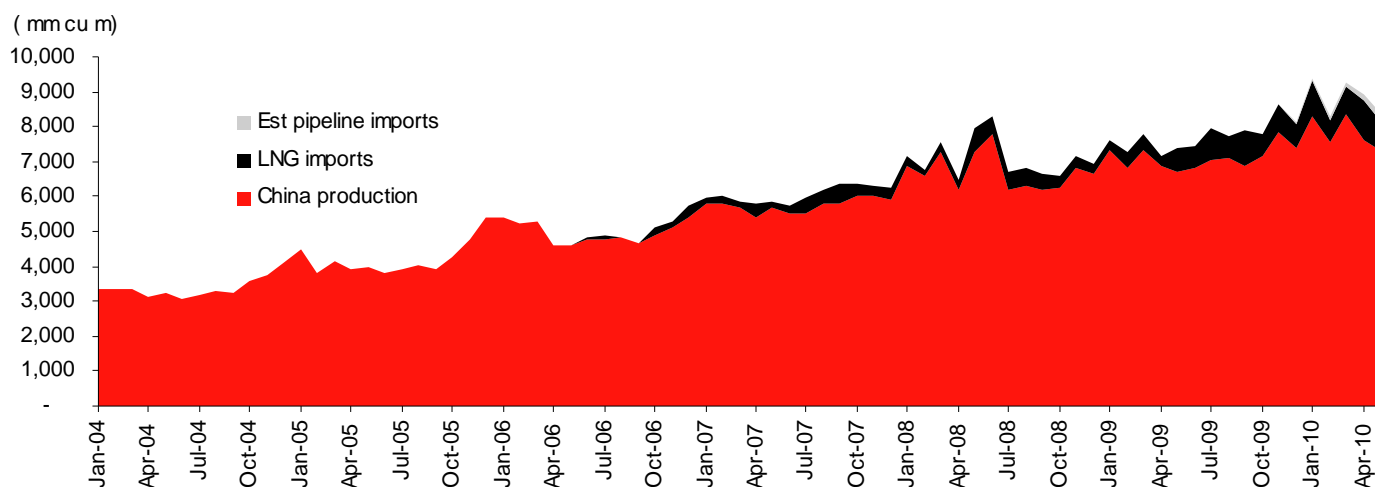
Fig 8 China crude imports



Source: Bloomberg, China NBS, Macquarie Research, June 2010

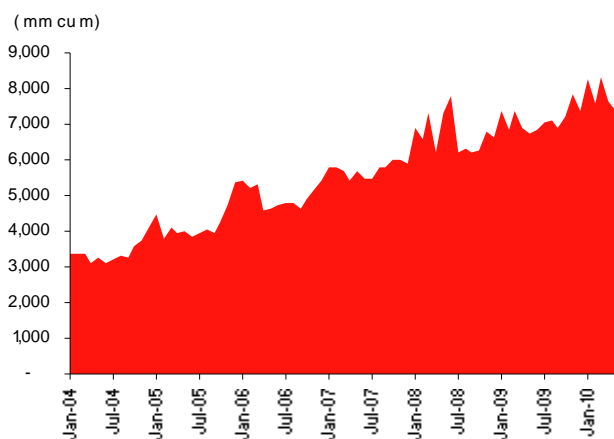
Natural gas supply

Fig 9 China natural gas production and imports



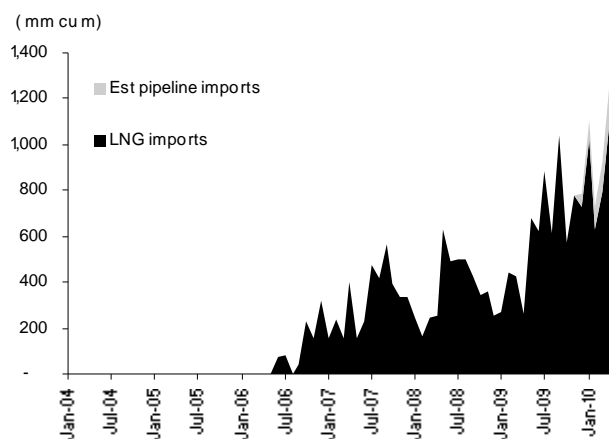
Source: Bloomberg, China NBS, Macquarie Research, June 2010

Fig 10 China natural gas production



Source: Bloomberg, China NBS, Macquarie Research, June 2010

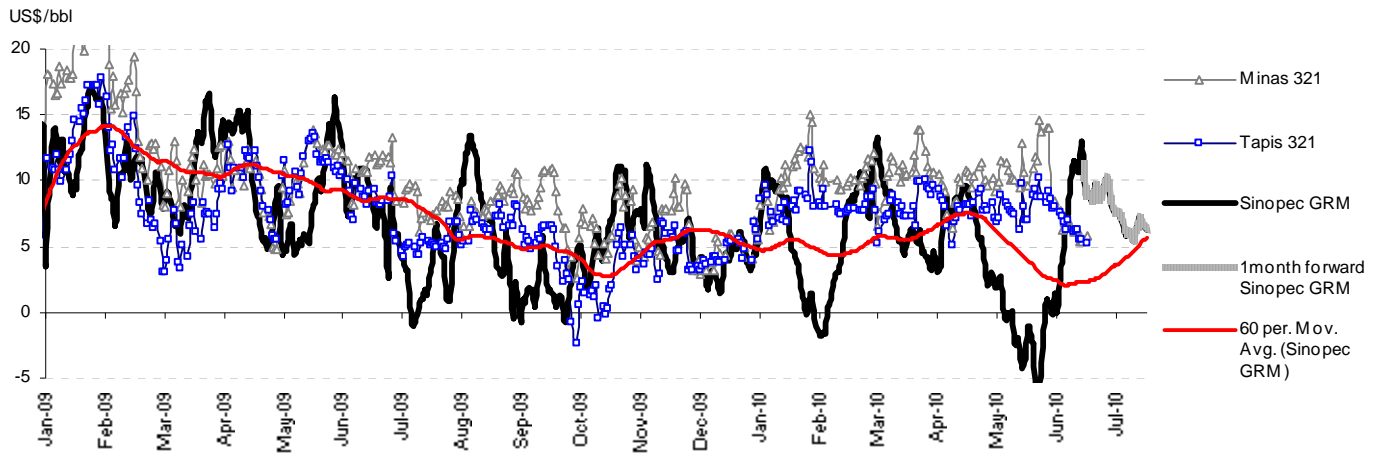
Fig 11 China natural gas imports



Source: Bloomberg, China NBS, Macquarie Research, June 2010

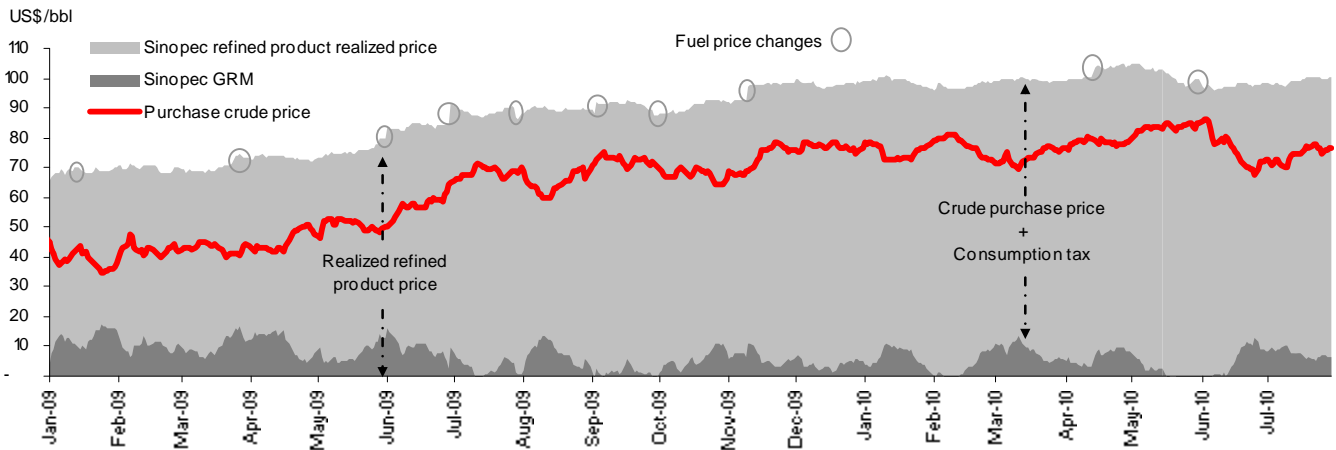
Refining margins

Fig 12 Sinopec GRM and regional 321 crack spreads



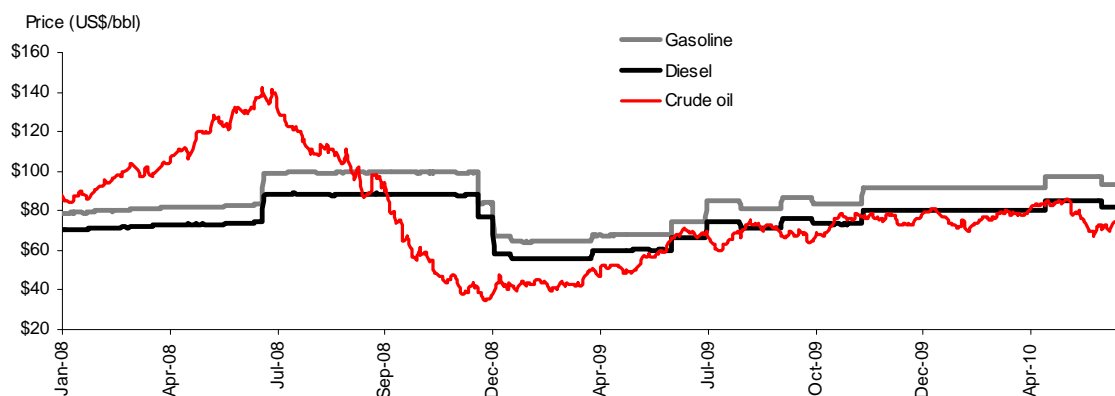
Note: apparent consumption = production + net imports
 Source: Company data, Macquarie Research, June 2010

Fig 13 Refined product sales price, crude purchase price, and Sinopec GRM



Source: Company data, Macquarie Research, June 2010

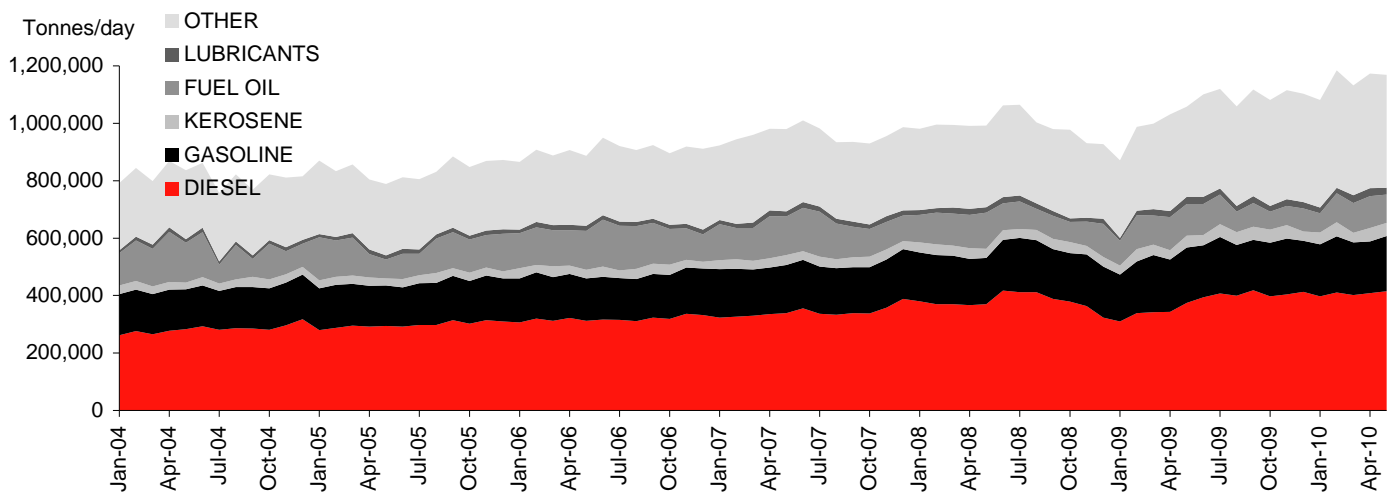
Fig 14 China gasoline and diesel price vs. purchased crude price



Source: Company data, Macquarie Research, June 2010

Refined product supply

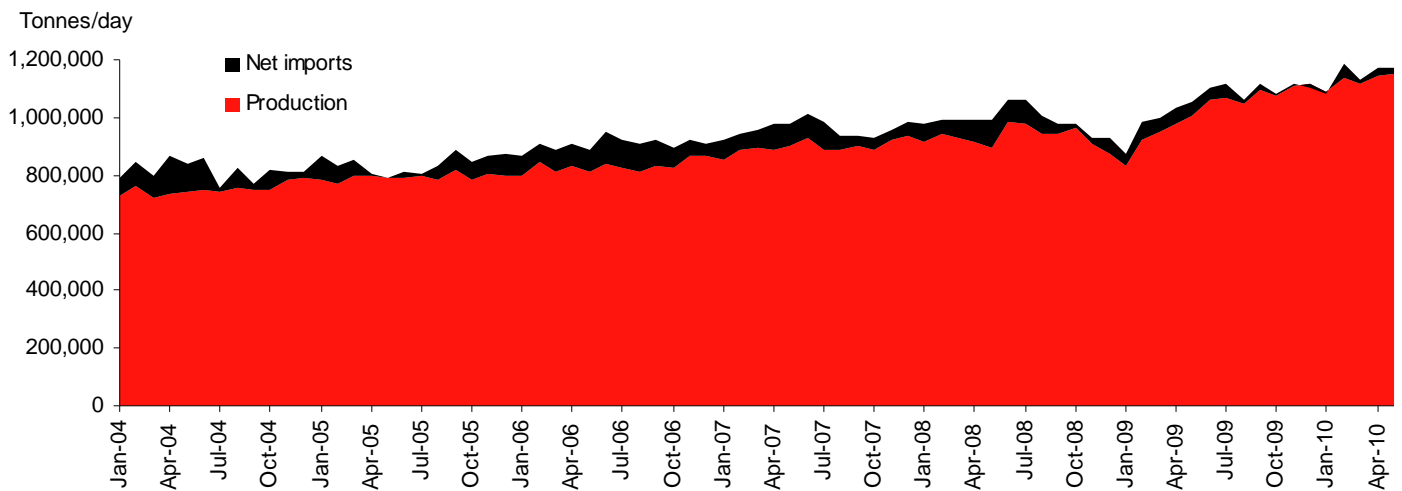
Fig 15 Refined product apparent consumption by product



Note: apparent consumption = production + net imports

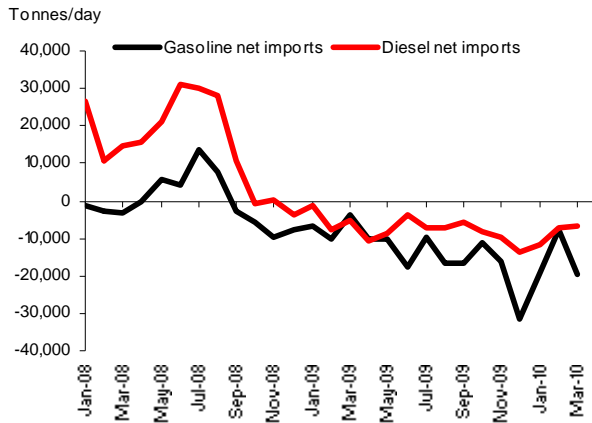
Source: Bloomberg, China NBS, Macquarie Research, June 2010

Fig 16 Refined product production and net imports



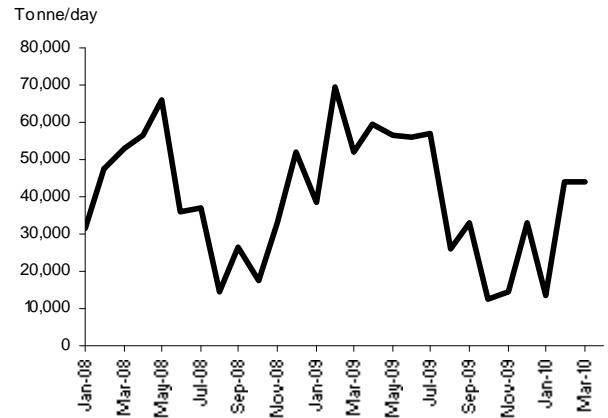
Source: Bloomberg, China NBS, Macquarie Research, June 2010

Fig 17 Gasoline/diesel net imports



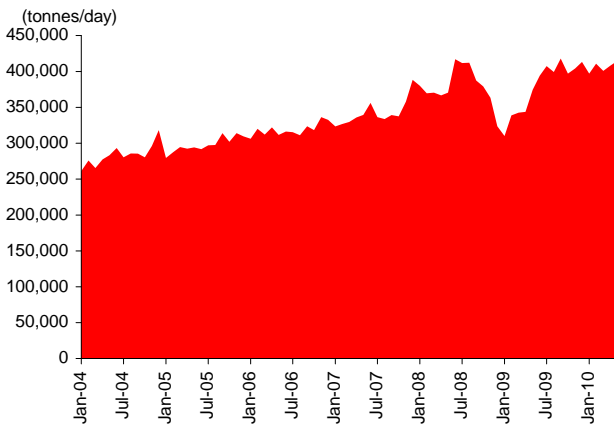
Source: Bloomberg, China NBS, Macquarie Research, June 2010

Fig 18 Fuel oil net imports



Source: Bloomberg, China NBS, Macquarie Research, June 2010

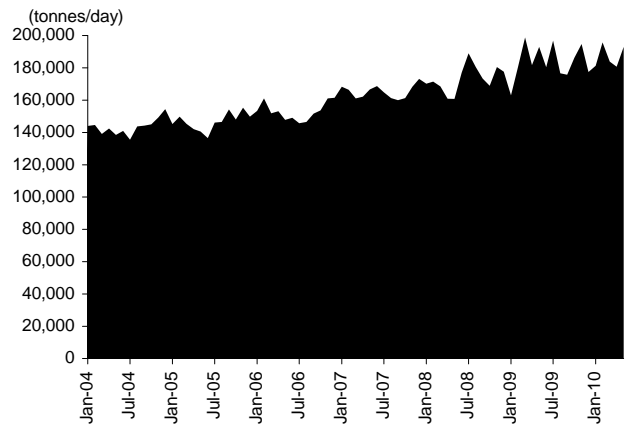
Fig 19 Gasoline apparent consumption



Note: apparent consumption = production + net imports

Source: Bloomberg, China NBS, Macquarie Research, June 2010

Fig 20 Diesel apparent consumption



Note: apparent consumption = production + net imports

Source: Bloomberg, China NBS, Macquarie Research, June 2010

Data tables

Fig 21 China crude implied demand

	Production		Net Imports		Apparent consumption		Inventory drawdown		Implied demand				
		YoY		YoY		YoY				YoY			
2007	511,534		436,565		948,099				948,099				
2008	519,191	1.5%	478,578	9.6%	997,769	5.2%	-23,952		973,883	2.7%			
2009	519,472	0.1%	544,123	13.7%	1,063,595	6.6%	-10,148		1,053,447	8.2%			
		YoY	HoH		YoY	HoH		YoY	HoH		YoY	HoH	
1H07	515,282			440,471			955,753			955,753			
2H07	507,848		-1.4%	432,723		-1.8%	940,571		-1.6%	940,571		-1.6%	
1H08	518,385	0.6%	2.1%	488,860	11.0%	13.0%	1,007,244	5.4%	7.1%	-35,290	1.7%	3.3%	
2H08	519,989	2.4%	0.3%	468,408	8.2%	-4.2%	988,397	5.1%	-1.9%	-12,607	3.7%	0.4%	
1H09	516,178	-0.4%	-0.7%	486,703	-0.4%	3.9%	1,002,881	-0.4%	1.5%	-6,047	2.6%	2.2%	
2H09	522,712	0.5%	1.3%	600,608	28.2%	23.4%	1,123,319	13.7%	12.0%	-14,181	1,109,138	13.7%	11.3%
		YoY	QoQ		YoY	QoQ		YoY	QoQ		YoY	QoQ	
1Q07	512,022			434,766			946,789			946,789			
2Q07	518,505		1.3%	446,112		2.6%	964,618		1.9%	964,618		1.9%	
3Q07	507,076		-2.2%	456,177		2.3%	963,253		-0.1%	963,253		-0.1%	
4Q07	508,620		0.3%	409,269		-10.3%	917,889		-4.7%	0	917,889		-4.7%
1Q08	519,856	1.5%	2.2%	499,475	14.9%	22.0%	1,019,331	7.7%	11.1%	-37,407	981,924	3.7%	7.0%
2Q08	522,626	0.8%	0.5%	483,733	8.4%	-3.2%	1,006,360	4.3%	-1.3%	-33,584	972,776	0.8%	-0.9%
3Q08	519,152	2.4%	-0.7%	469,985	3.0%	-2.8%	989,138	2.7%	-1.7%	6,009	995,146	3.3%	2.3%
4Q08	520,826	2.4%	0.3%	466,831	14.1%	-0.7%	987,657	7.6%	-0.1%	-31,222	956,435	4.2%	-3.9%
1Q09	512,091	-1.5%	-1.7%	437,265	-12.5%	-6.3%	949,356	-6.9%	-3.9%	-11,050	938,306	-4.4%	-1.9%
2Q09	520,220	-0.5%	1.6%	535,597	10.7%	22.5%	1,055,817	4.9%	11.2%	-1,099	1,054,718	8.4%	12.4%
3Q09	523,793	0.9%	0.7%	586,123	24.7%	9.4%	1,109,916	12.2%	5.1%	-17,689	1,092,227	9.8%	3.6%
4Q09	521,630	0.2%	-0.4%	615,092	31.8%	4.9%	1,136,723	15.1%	2.4%	-10,674	1,126,049	17.7%	3.1%
1Q10	543,333	6.1%	4.2%	622,785	42.4%	1.3%	1,166,119	22.8%	2.6%	-22,971	1,143,148	21.8%	1.5%
		YoY	MoM		YoY	MoM		YoY	MoM		YoY	MoM	
Jan-08	512,839	-1.2%	1%	443,896	2.8%	12.9%	956,735	0.6%	6.5%	0	956,735	0.6%	6.5%
Feb-08	513,276	0.2%	0.1%	492,894	14.1%	11.0%	1,006,170	6.6%	5.2%	-21,234	984,935	4.3%	2.9%
Mar-08	516,258	2.3%	0.3%	545,098	23.9%	10.6%	1,061,356	12.3%	5.5%	-88,735	972,621	2.9%	-1.3%
Apr-08	513,800	0.0%	-0.5%	467,170	-1.7%	-14.3%	980,970	-0.8%	-7.6%	-27,507	953,463	-3.6%	-2.0%
May-08	522,000	0.8%	1.6%	517,715	29.0%	10.8%	1,039,715	13.1%	6.0%	-102,652	937,064	1.9%	-1.7%
Jun-08	532,100	1.5%	1.9%	465,182	0.4%	-10.1%	997,282	1.0%	-4.1%	31,710	1,028,992	4.2%	9.8%
Jul-08	521,613	4.5%	-2.0%	436,543	-8.3%	-6.2%	958,156	-1.7%	-3.9%	60,419	1,018,575	4.5%	-1.0%
Aug-08	516,968	0.7%	-0.9%	492,071	11.0%	12.7%	1,009,039	5.5%	5.3%	-26,710	982,329	2.7%	-3.6%
Sep-08	518,867	1.9%	0.4%	481,721	7.3%	-2.1%	1,000,588	4.5%	-0.8%	-16,407	984,181	2.7%	0.2%
Oct-08	527,419	3.4%	1.6%	511,306	30.6%	6.1%	1,038,725	15.2%	3.8%	-38,032	1,000,693	11.0%	1.7%
Nov-08	528,667	3.6%	0.2%	438,409	-1.3%	-14.3%	967,076	1.3%	-6.9%	-16,447	950,629	-0.4%	-5.0%
Dec-08	506,645	0.2%	-4.2%	449,861	14.4%	2.6%	956,506	6.4%	-1.1%	-38,710	917,797	2.1%	-3.5%
Jan-09	514,419	0.3%	1.5%	399,124	-10.1%	-11.3%	913,543	-4.5%	-4.5%	-19,177	894,366	-6.5%	-2.6%
Feb-09	511,368	-0.4%	-0.6%	396,906	-19.5%	-0.6%	908,274	-9.7%	-0.6%	21,429	929,703	-5.6%	4.0%
Mar-09	510,416	-1.1%	-0.2%	511,859	-6.1%	29.0%	1,022,275	-3.7%	12.6%	-32,258	990,017	0.0%	6.5%
Apr-09	519,800	1.2%	1.8%	527,098	12.8%	3.0%	1,046,898	6.7%	2.4%	-33,333	1,013,564	6.3%	2.4%
May-09	517,161	-0.9%	-0.5%	536,100	3.6%	1.7%	1,053,261	1.3%	0.6%	-4,839	1,048,422	11.9%	3.4%
Jun-09	523,800	-1.6%	1.3%	543,578	16.9%	1.4%	1,067,378	7.0%	1.3%	35,000	1,102,378	7.1%	5.1%
Jul-09	520,742	-0.2%	-0.6%	619,279	41.9%	13.9%	1,140,021	19.0%	6.8%	-32,258	1,107,763	8.8%	0.5%
Aug-09	526,516	1.8%	1.1%	577,759	17.4%	-6.7%	1,104,275	9.4%	-3.1%	-9,677	1,094,598	11.4%	-1.2%
Sep-09	524,133	1.0%	-0.5%	560,503	16.4%	-3.0%	1,084,636	8.4%	-1.8%	-10,912	1,073,725	9.1%	-1.9%
Oct-09	524,355	-0.6%	0.0%	612,368	19.8%	9.3%	1,136,722	9.4%	4.8%	-10,560	1,126,163	12.5%	4.9%
Nov-09	522,333	-1.2%	-0.4%	556,708	27.0%	-9.1%	1,079,041	11.6%	-5.1%	-10,912	1,068,129	12.4%	-5.2%
Dec-09	518,226	2.3%	-0.8%	674,319	49.9%	21.1%	1,192,545	24.7%	10.5%	-10,560	1,181,985	28.8%	10.7%
Jan-10	544,194	5.8%	5.0%	547,711	37.2%	-18.8%	1,091,904	19.5%	-8.4%	-10,560	1,081,345	20.9%	-8.5%
Feb-10	539,643	5.5%	-0.8%	653,197	64.6%	19.3%	1,192,840	31.3%	9.2%	-50,000	1,142,840	22.9%	5.7%
Mar-10	545,806	6.9%	1.1%	670,392	31.0%	2.6%	1,216,198	19.0%	2.0%	-10,968	1,205,230	21.7%	5.5%
Apr-10	542,067	4.3%	-0.7%	699,200	32.7%	4.3%	1,241,267	18.6%	2.1%	26,667	1,267,933	25.1%	5.2%
May-10	553,387	7.0%	2.1%	569,243	6.2%	-18.6%	1,122,630	6.6%	-9.6%				

Note: apparent consumption = production + net imports

Implied demand = production + net imports + change in inventories

Source: Bloomberg, China NBS, Macquarie Research, June 2010

Fig 22 Refined product implied demand: production + net imports + inventory changes

	Production		Net Imports		Apparent Consumption		Inventory drawdown		Implied demand	
	YoY		YoY		YoY		YoY		YoY	
2007	898,622		61,197		959,819				959,819	
2008	932,913	3.8%	58,830	-3.9%	991,582	3.3%	-16,157		975,469	1.6%
2009	1,022,512	9.6%	31,207	-47.0%	1,053,719	6.3%	-3,269		1,050,450	7.7%
	YoY	HoH	YoY	HoH	YoY	HoH	YoY	HoH	YoY	HoH
1H07	893,254		72,830		966,085				966,085	
2H07	903,902	1.2%	49,753	-31.7%	953,655	-1.3%			953,655	-1.3%
1H08	931,176	4.2%	71,192	-2.2%	1,002,368	3.8%	-3,552	5.1%	998,815	3.4%
2H08	934,630	3.4%	46,283	-7.0%	980,914	2.9%	-28,537	-2.1%	952,377	-0.1%
1H09	958,414	2.9%	49,160	-30.9%	1,007,574	0.5%	18,756	2.7%	1,026,330	2.8%
2H09	1,085,565	16.1%	13,547	-70.7%	1,099,112	12.0%	-24,936	9.1%	1,074,176	12.8%
	YoY	QoQ	YoY	QoQ	YoY	QoQ	YoY	QoQ	YoY	QoQ
1Q07	878,833		63,258		942,092				942,092	
2Q07	907,516	3.3%	82,297	30.1%	989,814	5.1%			989,814	5.1%
3Q07	891,022	-1.8%	59,342	-27.9%	950,363	-4.0%			950,363	-4.0%
4Q07	916,783	2.9%	40,165	-32.3%	956,947	0.7%	-13,667		956,947	0.7%
1Q08	941,144	7.1%	59,757	-5.5%	1,000,901	6.2%	-6,672	4.6%	994,230	5.5%
2Q08	931,549	2.6%	83,284	1.2%	1,014,833	2.5%	-507	1.4%	1,014,327	2.5%
3Q08	953,783	7.0%	62,647	5.6%	1,016,429	7.0%	-43,408	0.2%	973,022	2.4%
4Q08	915,478	-0.1%	29,920	-25.5%	945,398	-1.2%	-13,667	-7.0%	931,732	-2.6%
1Q09	899,344	-4.4%	52,213	-12.6%	951,558	-4.9%	24,128	0.7%	975,686	-1.9%
2Q09	1,016,835	9.2%	46,140	-44.6%	1,062,975	4.7%	13,443	11.7%	1,076,418	6.1%
3Q09	1,070,620	12.2%	27,755	-55.7%	1,098,374	8.1%	-26,378	3.3%	1,071,996	10.2%
4Q09	1,100,511	20.2%	-661	-102.2%	1,099,849	16.3%	-23,493	0.1%	1,076,356	15.5%
1Q10	1,113,044	23.8%	17,915	-65.7%	1,130,960	18.9%	-7,444	2.8%	1,123,515	15.2%
	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM
Jan-08	917,484	7.6%	63,751	-7.8%	981,235	6.4%	0	-0.6%	981,235	6.4%
Feb-08	943,793	6.0%	51,223	-4.6%	995,016	5.4%	-11,867	1.4%	983,150	4.1%
Mar-08	931,968	4.3%	61,818	-6.3%	993,785	3.5%	-8,268	-0.1%	985,517	2.7%
Apr-08	912,633	2.7%	78,149	-15.5%	990,783	1.0%	6,835	-0.3%	997,618	1.7%
May-08	896,129	-0.6%	96,309	24.6%	992,438	1.3%	-827	0.2%	991,611	1.3%
Jun-08	987,067	5.9%	74,960	-3.0%	1,062,026	5.2%	-7,517	7.0%	1,054,509	4.5%
Jul-08	977,613	10.1%	86,969	-7.8%	1,064,582	8.4%	-44,334	0.2%	1,020,248	3.9%
Aug-08	941,645	6.1%	61,723	34.0%	1,003,368	7.5%	-77,496	-5.7%	925,872	-0.8%
Sep-08	941,700	4.8%	38,468	4.2%	980,168	4.8%	-7,226	-2.3%	972,943	4.0%
Oct-08	960,935	7.9%	16,776	-56.0%	977,711	5.3%	-29,855	-0.3%	947,856	2.0%
Nov-08	908,900	-1.5%	21,461	-34.1%	930,361	-2.6%	-8,498	-4.8%	921,864	-3.5%
Dec-08	876,387	-6.5%	51,250	3.4%	927,637	-6.0%	-2,480	-0.3%	925,157	-6.3%
Jan-09	831,258	-9.4%	39,811	-37.6%	871,069	-11.2%	1,968	-6.1%	873,037	-11.0%
Feb-09	921,357	-2.4%	66,517	29.9%	987,874	-0.7%	4,265	13.4%	992,139	0.9%
Mar-09	947,548	1.7%	51,697	-16.4%	999,245	0.5%	64,229	1.2%	1,063,474	7.9%
Apr-09	980,900	7.5%	50,769	-35.0%	1,031,669	4.1%	40,467	3.2%	1,072,136	7.5%
May-09	1,006,065	12.3%	51,415	-46.6%	1,057,480	6.6%	17,946	2.5%	1,075,426	8.5%
Jun-09	1,063,900	7.8%	36,058	-51.9%	1,099,958	3.6%	-18,233	4.0%	1,081,725	2.6%
Jul-09	1,068,161	9.3%	51,372	-40.9%	1,119,533	5.2%	-31,105	1.8%	1,088,429	6.7%
Aug-09	1,050,258	11.5%	9,090	-85.3%	1,059,348	5.6%	22,536	-5.4%	1,081,884	16.9%
Sep-09	1,094,200	16.2%	22,637	-41.2%	1,116,837	13.9%	-72,038	5.4%	1,044,799	7.4%
Oct-09	1,073,742	11.7%	8,192	-51.2%	1,081,934	10.7%	-69,714	-3.1%	1,012,220	6.8%
Nov-09	1,112,100	22.4%	3,154	-85.3%	1,115,254	19.9%	111,778	3.1%	1,227,032	33.1%
Dec-09	1,116,065	27.3%	-13,207	-125.8%	1,102,858	18.9%	-108,181	-1.1%	994,677	7.5%
Jan-10	1,087,226	30.8%	-5,945	-114.9%	1,081,280	24.1%	0	-2.0%	1,081,280	23.9%
Feb-10	1,139,750	23.7%	44,813	-32.6%	1,184,563	19.9%	-62,500	9.6%	1,122,063	13.1%
Mar-10	1,114,742	17.6%	17,482	-66.2%	1,132,224	13.3%	34,839	-4.4%	1,167,062	9.7%
Apr-10	1,146,867	16.9%	26,592	-47.6%	1,173,459	13.7%	31,667	3.6%	1,205,125	12.4%
May-10	1,154,613	14.8%	14,274	-72.2%	1,168,887	10.5%		-0.4%		3.3%

Note: apparent consumption = production + net imports

Implied demand = production + net imports + change in inventories

Source: Bloomberg, China NBS, Macquarie Research, June 2010

Fig 23 Gasoline implied demand

	Production	YoY YoY	MoM	Net Imports	YoY YoY	MoM	Apparent Consumption	YoY YoY	MoM	Inventory drawdown	Implied Consumption	YoY YoY	MoM
2007	165,238						165,238						
2008	173,396	4.9%		-133			173,264	4.9%		-5,107	168,171		
2009	197,184	13.7%		-13,421	10000.5%		183,762	6.1%		-7,084	176,678	5.1%	
		YoY	HoH		YoY	HoH		YoY	HoH			YoY	HoH
1H07	165,624						165,624				0		
2H07	164,859		-0.5%				164,859		-0.5%		0		
1H08	167,632	1.2%	1.7%	464			168,096	1.5%	2.0%	-1,031	167,065		
2H08	179,098	8.6%	6.8%	-723	-255.7%		178,375	8.2%	6.1%	-9,111	169,264	1.3%	
1H09	192,685	14.9%	7.6%	-9,765	-2203.7%	1251.2%	182,920	8.8%	2.5%	7,384	190,303	13.9%	12.4%
2H09	201,609	12.6%	4.6%	-17,017	2254.6%	74.3%	184,591	3.5%	0.9%	-21,317	163,274	-3.5%	-14.2%
		YoY	QoQ		YoY	QoQ		YoY	QoQ			YoY	QoQ
1Q07	165,311						165,311						
2Q07	165,934		0.4%				165,934		0.4%				
3Q07	162,130		-2.3%				162,130		-2.3%				
4Q07	167,587		3.4%				167,587		3.4%	-5,352			
1Q08	174,378	5.5%	4.1%	-2,444			171,934	4.0%	2.6%	-2,345	169,589		
2Q08	162,802	-1.9%	-6.6%	3,345	-236.9%		166,148	0.1%	-3.4%	258	166,405	-1.9%	
3Q08	174,837	7.8%	7.4%	6,222	86.0%		181,059	11.7%	9.0%	-12,870	168,189	1.1%	
4Q08	183,359	9.4%	4.9%	-7,668	-223.2%		175,691	4.8%	-3.0%	-5,352	170,339	1.3%	
1Q09	187,600	7.6%	2.3%	-6,859	180.6%	-10.6%	180,741	5.1%	2.9%	13,156	193,898	14.3%	13.8%
2Q09	197,714	21.4%	5.4%	-12,640	-477.8%	84.3%	185,074	11.4%	2.4%	1,675	186,749	12.2%	-3.7%
3Q09	197,522	13.0%	-0.1%	-14,366	-330.9%	13.6%	183,156	1.2%	-1.0%	-20,870	162,286	-3.5%	-13.1%
4Q09	205,696	12.2%	4.1%	-19,669	156.5%	36.9%	186,026	5.9%	1.6%	-21,764	164,263	-3.6%	1.2%
1Q10	202,300	7.8%	-1.7%	-15,619	127.7%	-20.6%	186,681	3.3%	0.4%	5,889	192,570	-0.7%	17.2%
		YoY	MoM		YoY	MoM		YoY	MoM			YoY	MoM
Jan-08	171,290	1.8%	-1.1%	-1,090			170,200	1.1%	-1.7%		170,200		
Feb-08	174,448	4.7%	1.8%	-2,925	168.4%		171,523	3.0%	0.8%	-3,234	168,289		
Mar-08	171,774	6.6%	-1.5%	-3,268	11.7%		168,506	4.5%	-1.8%	-3,782	164,724		-2.1%
Apr-08	161,067	-0.8%	-6.2%	-206	-93.7%		160,861	-0.9%	-4.5%	3,126	163,987		-0.4%
May-08	154,806	-7.2%	-3.9%	5,867	-2949.1%		160,674	-3.6%	-0.1%	-378	160,296		-2.3%
Jun-08	172,800	2.4%	11.6%	4,291	-26.9%		177,091	5.0%	10.2%	-1,954	175,137		9.3%
Jul-08	175,548	6.5%	1.6%	13,487	214.3%		189,036	14.6%	6.7%	-12,480	176,556		0.8%
Aug-08	173,032	7.2%	-1.4%	7,515	-44.3%		180,547	11.9%	-4.5%	-22,312	158,235		-10.4%
Sep-08	175,967	10.0%	1.7%	-2,620	-134.9%		173,347	8.3%	-4.0%	-3,517	169,830		7.3%
Oct-08	174,742	8.3%	-0.7%	-5,831	122.6%		168,911	4.7%	-2.6%	-8,320	160,591		-5.4%
Nov-08	190,100	13.0%	8.8%	-9,461	62.2%		180,639	7.4%	6.9%	-6,643	173,996		8.3%
Dec-08	185,452	7.1%	-2.4%	-7,770	-17.9%		177,682	2.6%	-1.6%	-1,135	176,547		1.5%
Jan-09	169,742	-0.9%	-8.5%	-6,736	518.0%	-13.3%	163,005	-4.2%	-8.3%	8,698	171,703		-2.7%
Feb-09	190,429	9.2%	12.2%	-10,225	249.5%	51.8%	180,203	5.1%	10.6%	3,768	183,971	9.3%	7.1%
Mar-09	202,903	18.1%	6.6%	-3,940	20.5%	-61.5%	198,963	18.1%	10.4%	26,094	225,057	36.6%	22.3%
Apr-09	191,967	19.2%	-5.4%	-10,359	4930.3%	162.9%	181,608	12.9%	-8.7%	11,723	193,331	17.9%	-14.1%
May-09	202,935	31.1%	5.7%	-10,006	-270.5%	-3.4%	192,930	20.1%	6.2%	0	192,930	20.4%	-0.2%
Jun-09	198,067	14.6%	-2.4%	-17,644	-511.2%	76.3%	180,423	1.9%	-6.5%	-6,643	173,780	-0.8%	-9.9%
Jul-09	206,387	17.6%	4.2%	-9,600	-171.2%	-45.6%	196,787	4.1%	9.1%	-6,429	190,358	7.8%	9.5%
Aug-09	193,419	11.8%	-6.3%	-16,727	-322.6%	74.2%	176,692	-2.1%	-10.2%	9,076	185,768	17.4%	-2.4%
Sep-09	192,600	9.5%	-0.4%	-16,850	543.1%	0.7%	175,750	1.4%	-0.5%	-66,737	109,013	-35.8%	-41.3%
Oct-09	197,355	12.9%	2.5%	-11,125	90.8%	-34.0%	186,230	10.3%	6.0%	-64,584	121,645	-24.3%	11.6%
Nov-09	210,967	11.0%	6.9%	-16,187	71.1%	45.5%	194,779	7.8%	4.6%	106,373	301,152	73.1%	147.6%
Dec-09	208,935	12.7%	-1.0%	-31,583	306.5%	95.1%	177,352	-0.2%	-8.9%	-102,946	74,407	-57.9%	-75.3%
Jan-10	200,710	18.2%	-3.9%	-19,372	187.6%	-38.7%	181,338	11.2%	2.2%	4,839	186,176	8.4%	150.2%
Feb-10	203,179	6.7%	1.2%	-7,528	-26.4%	-61.1%	195,651	8.6%	7.9%	8,929	204,579	11.2%	9.9%
Mar-10	203,097	0.1%	0.0%	-19,174	386.7%	154.7%	183,923	-7.6%	-6.0%	4,194	188,117	-16.4%	-8.0%
Apr-10	203,933	6.2%	0.4%	-23,230	124.2%	21.2%	180,704	-0.5%	-1.8%	-1,667	179,037	-7.4%	-4.8%
May-10	210,258	3.6%	3.1%	-17,292	72.8%	-25.6%	192,966	0.0%	6.8%				

Note: apparent consumption = production + net imports

Implied demand = production + net imports + change in inventories

Source: Bloomberg, China NBS, Macquarie Research, June 2010

Fig 24 Diesel implied demand

	Production	YoY YoY	MoM	Net Imports	YoY YoY	MoM	Apparent Consumption	YoY YoY	MoM	Inventory drawdown	Implied Consumption	YoY YoY	MoM
2007	339,438			2,636			342,074						
2008	363,943	7.2%		15,394	484.0%		379,295	10.9%		-11,050	368,275		
2009	386,025	6.1%		-7,316	-147.5%		378,709	-0.2%		3,815	382,524	3.9%	
	YoY	HoH		YoY	HoH		YoY	HoH			YoY	HoH	
1H07	335,331			-119			335,213						
2H07	343,478		2.4%	5,346	-4602.3%		348,824		4.1%				
1H08	359,077	7.1%	4.5%	19,956	273.3%		379,033	13.1%	8.7%	-2,522	376,512		
2H08	368,755	7.4%	2.7%	10,798	-45.9%		379,553	8.8%	0.1%	-19,426	360,127		-4.4%
1H09	356,646	-0.7%	-3.3%	-6,087	-130.5%	-156.4%	350,559	-7.5%	-7.6%	11,372	361,932	-3.9%	0.5%
2H09	414,924	12.5%	16.3%	-8,524	-178.9%	40.0%	406,400	7.1%	15.9%	-3,619	402,781	11.8%	11.3%
	YoY	QoQ		YoY	QoQ		YoY	QoQ			YoY	QoQ	
1Q07	325,333			1,238			326,571						
2Q07	345,220		6.1%	-1,460	-218.0%		343,759		5.3%				
3Q07	337,337		-2.3%	-918	-37.2%		336,419		-2.1%				
4Q07	349,620		3.6%	11,609	-1365.0%		361,229		7.4%	-8,315			
1Q08	360,089	10.7%	3.0%	17,574	1319.9%	51.4%	377,663	15.6%	4.5%	-4,327	373,336		
2Q08	362,022	4.9%	0.5%	22,532	-1643.0%	28.2%	384,554	11.9%	1.8%	-764	383,790		2.8%
3Q08	380,848	12.9%	5.2%	22,985	-2604.6%	2.0%	403,833	20.0%	5.0%	-30,538	373,296		-2.7%
4Q08	356,663	2.0%	-6.4%	-1,389	-112.0%	-106.0%	355,274	-1.6%	-12.0%	-8,315	346,959		-7.1%
1Q09	334,678	-7.1%	-6.2%	-4,560	-125.9%	228.2%	330,118	-12.6%	-7.1%	10,972	341,090	-8.6%	-1.7%
2Q09	378,374	4.5%	13.1%	-7,597	-133.7%	66.6%	370,776	-3.6%	12.3%	11,768	382,545	-0.3%	12.2%
3Q09	414,598	8.9%	9.6%	-6,566	-128.6%	-13.6%	408,032	1.0%	10.0%	-5,508	402,524	7.8%	5.2%
4Q09	415,250	16.4%	0.2%	-10,483	654.4%	59.6%	404,767	13.9%	-0.8%	-1,730	403,038	16.2%	0.1%
1Q10	416,378	24.4%	0.3%	-11,670	155.9%	11.3%	404,708	22.6%	0.0%	-1,516	403,192	18.2%	0.0%
Jan-08	353,581	10.2%	-2.5%	26,427	858.7%	3.3%	380,008	17.5%	-2.1%		380,008		
Feb-08	359,000	9.7%	1.5%	10,692	-1965.8%	-59.5%	369,692	13.2%	-2.7%	-8,633	361,060		
Mar-08	356,000	8.5%	-0.8%	14,592	977.4%	36.5%	370,592	12.4%	0.2%	-4,487	366,105		1.4%
Apr-08	351,200	4.3%	-1.3%	15,493	-2030.8%	6.2%	366,693	9.2%	-1.1%	3,709	370,402		1.2%
May-08	349,000	1.8%	-0.6%	21,261	-732.5%	37.2%	370,261	9.1%	1.0%	-449	369,813		-0.2%
Jun-08	386,300	8.4%	10.7%	30,884	-20237.3%	45.3%	417,184	17.1%	12.7%	-5,563	411,621		11.3%
Jul-08	381,226	12.7%	-1.3%	30,265	-1803.5%	-2.0%	411,490	22.3%	-1.4%	-31,854	379,636		-7.8%
Aug-08	384,097	14.5%	0.8%	27,833	-1824.7%	-8.0%	411,929	23.4%	0.1%	-55,184	356,745		-6.0%
Sep-08	377,100	11.4%	-1.8%	10,455	1417.4%	-62.4%	387,555	14.2%	-5.9%	-3,709	383,846		7.6%
Oct-08	379,903	13.8%	0.7%	-795	-122.5%	-107.6%	379,109	12.3%	-2.2%	-21,535	357,573		-6.8%
Nov-08	362,833	3.0%	-4.5%	398	-92.8%	-150.1%	363,232	1.5%	-4.2%	-1,854	361,377		1.1%
Dec-08	327,452	-9.7%	-9.8%	-3,714	-114.5%	-1032.7%	323,737	-16.6%	-10.9%	-1,346	322,391		-10.8%
Jan-09	311,065	-12.0%	-5.0%	-1,023	-103.9%	-72.5%	310,042	-18.4%	-4.2%	-6,730	303,312		-5.9%
Feb-09	346,357	-3.5%	11.3%	-7,539	-170.5%	637.1%	338,818	-8.4%	9.3%	497	339,315	-6.0%	11.9%
Mar-09	347,742	-2.3%	0.4%	-5,407	-137.1%	-28.3%	342,335	-7.6%	1.0%	38,135	380,471	3.9%	12.1%
Apr-09	354,267	0.9%	1.9%	-10,521	-167.9%	94.6%	343,746	-6.3%	0.4%	28,744	372,490	0.6%	-2.1%
May-09	383,000	9.7%	8.1%	-8,505	-140.0%	-19.2%	374,495	1.1%	8.9%	17,946	392,441	6.1%	5.4%
Jun-09	397,700	3.0%	3.8%	-3,736	-112.1%	-56.1%	393,964	-5.6%	5.2%	-11,590	382,374	-7.1%	-2.6%
Jul-09	414,645	8.8%	4.3%	-7,055	-123.3%	88.8%	407,590	-0.9%	3.5%	-24,676	382,914	0.9%	0.1%
Aug-09	406,097	5.7%	-2.1%	-7,000	-125.1%	-0.8%	399,097	-3.1%	-2.1%	13,460	412,557	15.6%	7.7%
Sep-09	423,333	12.3%	4.2%	-5,613	-153.7%	-19.8%	417,720	7.8%	4.7%	-5,301	412,420	7.4%	0.0%
Oct-09	405,065	6.6%	-4.3%	-8,050	913.1%	43.4%	397,015	4.7%	-5.0%	-5,130	391,885	9.6%	-5.0%
Nov-09	413,700	14.0%	2.1%	-9,626	-2517.2%	19.6%	404,074	11.2%	1.8%	5,405	409,479	13.3%	4.5%
Dec-09	426,935	30.4%	3.2%	-13,744	270.0%	42.8%	413,192	27.6%	2.3%	-5,235	407,956	26.5%	-0.4%
Jan-10	408,839	31.4%	-4.2%	-11,707	1044.6%	-14.8%	397,132	28.1%	-3.9%	-4,839	392,293	29.3%	-3.8%
Feb-10	417,607	20.6%	2.1%	-6,964	-7.6%	-40.5%	410,643	21.2%	3.4%	-71,429	339,215	0.0%	-13.5%
Mar-10	407,452	17.2%	-2.4%	-6,445	19.2%	-7.5%	401,007	17.1%	-2.3%	30,645	431,652	13.5%	27.3%
Apr-10	423,233	19.5%	3.9%	-15,310	45.5%	137.6%	407,923	18.7%	1.7%	33,333	441,257	18.5%	2.2%
May-10	429,097	12.0%	1.4%	-14,617	71.9%	-4.5%	414,480	10.7%	1.6%				

Note: apparent consumption = production + net imports

Implied demand = production + net imports + change in inventories

Source: Bloomberg, China NBS, Macquarie Research, June 2010

Important disclosures:

Recommendation definitions

Macquarie - Australia/New Zealand

Outperform – return >5% in excess of benchmark return
Neutral – return within 5% of benchmark return
Underperform – return >5% below benchmark return

Macquarie – Asia/Europe

Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

Macquarie First South - South Africa

Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

Macquarie - Canada

Outperform – return >5% in excess of benchmark return
Neutral – return within 5% of benchmark return
Underperform – return >5% below benchmark return

Macquarie - USA

Outperform (Buy) – return >5% in excess of Russell 3000 index return
Neutral (Hold) – return within 5% of Russell 3000 index return
Underperform (Sell) – return >5% below Russell 3000 index return

Recommendations – 12 months

Note: Quant recommendations may differ from Fundamental Analyst recommendations

Volatility index definition*

This is calculated from the volatility of historical price movements.

Very high-highest risk – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

High – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

Medium – stock should be expected to move up or down at least 30–40% in a year.

Low-medium – stock should be expected to move up or down at least 25–30% in a year.

Low – stock should be expected to move up or down at least 15–25% in a year.

* Applicable to Australian/NZ/Canada stocks only

Financial definitions

All "Adjusted" data items have had the following adjustments made:
Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

EPS = adjusted net profit / epowa*

ROA = adjusted ebit / average total assets

ROA Banks/Insurance = adjusted net profit / average total assets

ROE = adjusted net profit / average shareholders funds

Gross cashflow = adjusted net profit + depreciation

*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

Recommendation proportions – For quarter ending 31 March 2010

	AU/NZ	Asia	RSA	USA	CA	EUR	
Outperform	50.55%	62.20%	42.25%	42.39%	62.16%	46.74%	(for US coverage by MCUSA, 6.53% of stocks covered are investment banking clients)
Neutral	36.63%	19.02%	47.89%	50.35%	31.89%	34.78%	(for US coverage by MCUSA, 9.62% of stocks covered are investment banking clients)
Underperform	12.82%	18.78%	9.86%	7.27%	5.95%	18.48%	(for US coverage by MCUSA, 0.00% of stocks covered are investment banking clients)

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Quantitative

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Daniel McCormack (Asia)	(852) 3922 4073
Mark Matthews (Asia)	(852) 3922 3585
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David Gibson (Japan)	(813) 3512 7880
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Chan Hwang (Korea)	(822) 3705 8643
Prem Jearajasingam (Malaysia)	(603) 2059 8989
Edward Ong (Malaysia)	(603) 2059 8982
Alex Pomento (Philippines)	(632) 857 0899
Patrick Yau (Singapore)	(65) 6231 2835
Daniel Chang (Taiwan)	(8862) 2734 7516
Alastair Macdonald (Thailand)	(662) 694 7741

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CapitalIQ	www.capitaliq.com
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Sales

Regional Heads of Sales

Chris Gray (ASEAN)	(65) 6231 2888
Justin Crawford (Asia)	(852) 3922 2065
Peter Slater (Boston)	(1 617) 598 2502
Jeffrey Shiu (China & Hong Kong)	(852) 3922 2061
Thomas Renz (Geneva)	(41) 22 818 7712
Andrew Mouat (India)	(9122) 6653 3200
Stanley Dunda (Indonesia)	(6221) 515 1555
Kenneth Yap (Indonesia)	(6221) 515 1555
JJ Kim (Korea)	(822) 3705 8799
Jason Lee (Malaysia)	(603) 2059 8888
Gino C Rojas (Philippines)	(632) 857 0761
Greg Norton-Kidd (New York)	(1 212) 231 2527
Luke Sullivan (New York)	(1 212) 231 2507
Scot Mackie (New York)	(1 212) 231 2848

Regional Heads of Sales cont'd

Sheila Schroeder (San Francisco)	(1 415) 762 5001
Angus Kent (Thailand)	(662) 694 7601
Michael Newman (Tokyo)	(813) 3512 7920
Charles Nelson (UK/Europe)	(44) 20 3037 4832
Rob Fabbro (UK/Europe)	(44) 20 3037 4865
Nick Ainsworth (Generalist)	(852) 3922 2010

Sales Trading

Adam Zaki (Asia)	(852) 3922 2002
Mike Keen (Europe)	(44) 20 3037 4905
Yat Quan Tan (Hong Kong)	(852) 3922 2028
Stanley Dunda (Indonesia)	(6221) 515 1555
Mario Argyrides (Korea)	(822) 3705 8610
Edward Robinson (London)	(44) 20 3037 4902

Sales Trading cont'd

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Michael Santos (Philippines)	(632) 857 0813
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Isaac Huang (Taiwan)	(8862) 2734 7582
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Alternative Strategies

Convertibles - Roland Sharman	(852) 3922 2095
Depository Receipts - Robert Ansell	(852) 3922 2094
Derivatives - Wayne Edelist	(852) 3922 2134
Futures - Tim Smith	(852) 3922 2113
Structured Products - Andrew Terlich	(852) 3922 2013