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CATERPILLAR TO PRODUCE EXCAVATORS IN NANJING

In June 2008, Caterpillar announced plans to manufacture a range of hydraulic excavators under 20 tonnes in China. It will build a new factory for these in Nanjing, the capital city of Jiangsu Province. The proposed facility will be located on 150,000 m² of land in Jiangning Science Park, and Caterpillar intends to begin construction of the 36,500 m² manufacturing building in early 2009 depending upon the appropriate governmental approvals. This facility will be wholly owned and operated by Caterpillar, and will probably be called Caterpillar Nanjing Ltd, but this has not yet been officially announced.

Caterpillar began to manufacture crawler excavators over 20 tonnes in Xuzhou in 1995 through its joint venture with XCMG, and a mini excavator at 5.5 tonnes was later introduced in 2004. It has been a major supplier of standard crawler excavators in the country for the last decade, but has had less penetration in the mini and midi sectors. Caterpillar Xuzhou is now in the process of expanding its production capacity on its existing site, in order to meet continually increasing demand in its domestic and emerging markets.

It is unclear why Caterpillar chose Nanjing to produce excavators under 20 tonnes, but this location will no doubt offer Caterpillar a business friendly environment with excellent access to transportation facilities, established suppliers and a skilled workforce, and it is also close to other Caterpillar operations in Wuxi and Suzhou. Besides, the local government might also be offering a number of preferential policies to entice new business into the area.

Table 1. Caterpillar: Sales of Crawler Excavators Under 20 Tonnes, 2005-2007

(Units)

	2005	2006	2007
Under 6 Tonnes	82	179	307
– % Share in the Domestic Market	1	1	2
6.1-18.9 Tonnes	3	2	133
– % Share in the Domestic Market	-	-	1

Source: Off-Highway Research

Caterpillar’s plan to build this hydraulic excavator manufacturing facility in Nanjing is in response to the steady domestic growth of the mini and midi excavator sectors in the past three years. Caterpillar has been unable to match the growth achieved by other international suppliers, and only has a nominal market share. It had not competed in these sectors until 2004, but now feels that it needs to manufacture locally if it is to take advantage of improved market conditions.

This new investment will now enable Caterpillar to provide domestic customers with a full range of excavators from 5.5-35.0 tonnes, and offer much greater competition in the market as a whole.

Caterpillar is expanding its domestic manufacturing presence either through acquisition, or the construction of its wholly owned facilities. China will become its manufacturing base to supply both the domestic market, and the emerging regional markets. Currently, Caterpillar builds crawler excavators, mini excavators, crawler dozers, motor graders, compaction equipment and cold planers in its two factories in Xuzhou, and wheeled loaders of the SEM brand in Qingzhou. It will produce Caterpillar branded wheeled loaders and motor graders in Suzhou in 2009 when the facilities become operational. It also manufactures components at several factories in the country.

Table 2. Caterpillar: Mini and Midi Excavators Available, 2008

Model	Engine		Operating Weight (Tonnes)
	HP	Manufacturer	
305.5	54	Mitsubishi	5.50
307D	56	Mitsubishi	7.08
308D CR	56	Mitsubishi	7.85
308D CR SB	56	Mitsubishi	8.40
312D/312DL	91	Caterpillar	13.45
315D/315DL	117	Caterpillar	17.28

Source: Company Information

Caterpillar has now six basic models of mini and midi excavators available in China. It makes sense for the model 305.5 now being manufactured in Xuzhou to be moved to Nanjing when the factory has been completed. The other two models that are likely to be first produced in Nanjing are the 307D and 315D, reflecting the increasing imports in the first half of 2008, and are two of the most popular weight categories in this sector of the market.

FUSHUN EXCAVATOR ACQUIRES JINZHOU

In June 2008 Fushun Excavator completed the acquisition of Jinzhou Huayuan Heavy Machinery, a truck-mounted crane manufacturer based in its home province of Liaoning, a move that is seen to be a further consolidation of the industry. Since 2003 the mobile crane industry in China has seen a number of mergers, namely Puyuan with Zoomlion, Changjiang with Terex, Beijing Crane with Tadano, Tai'an Crane with Manitowoc, and most recently Bengbu with Liugong.

Table 3. Fushun Excavator, Turnover, 2003-2007

	2003	2004	2005	2006	2007
RMB Mns	160	220	360	430	910

Source: Off-Highway Research

Fushun Excavator, also known as FU WA, is based in Fushun of Liaoning Province, and has a history that goes back over a century. It began to supply mechanical excavators to the mining industry in 1955, and introduced crawler cranes from Hitachi in 1980s. However, with the rigid management of the state-owned enterprise, the manufacturer suffered a severe financial loss and became bankrupt in 2003, when it was transferred to the current owner, Mr. Xu Jianyuan. Since then the company has significantly improved its management and has achieved substantial growth. It is now a leading domestic supplier of crawler cranes, while its traditional business of mining excavators has been largely ignored. In 2007 its total production of crawler cranes amounted to 413 units, of which 40 per cent were exported.

With its success in crawler cranes, Fushun Excavators has been seeking opportunities to invest in a broader range of products. The acquisition of Jinzhou in the same province was a natural outcome, as it has been a traditional manufacturer of truck-mounted cranes. However, as the ability of Jinzhou is limited to the smaller ranges up to 32 tonnes, it is questionable how much it could contribute to the future growth of the current owner in this highly competitive market. One certain advantage it may bring to Fushun Excavator is that it holds those manufacturing licenses that are required for truck-mounted cranes, and so is able to assist in Fushun offering a new range of mobile cranes to its customers.

Table 4. Jinzhou: Turnover, 2003-2007

	2003	2004	2005	2006	2007
RMB Mns	160	130	110	18	56

Source: Off-Highway Research

Jinzhou Huayuan Heavy Machinery is the new name of the old Jinzhou Heavy Machinery after it was acquired by Huayuan Machinery and Electric Engineering in 2006. Jinzhou Heavy Machinery began life in the late 1960s and has since specialised in the production of truck-mounted cranes. It is located in the outskirts of Jinzhou City, and has comprehensive facilities for its employees, apart from the factory itself, a feature of the traditional SOEs. However, it has not seen any development in its products at a time when the total market demand has been particularly buoyant, and indeed, it has been losing market share rapidly in the recent past.

Production was 246 units in 2007, or only 45 per cent of the volume five years ago, and with its very limited product range, the company has continued to make a financial loss. While the restructuring of the company was proposed a few years ago, the investment of Huayuan, which specialises in directional drilling works for gas and oil transmission and is based in Langfang of Hebei Province, has not helped Jinzhou improve its weak performance.

After the acquisition, the new company will be called **Liaoning Fuwa Jinzhong Machinery Co. Ltd.**

HYUNDAI TO PRODUCE WHEELED LOADERS IN TAI'AN

After a number of negotiations with Longtec (see Off-Highway Research's Market Report issued November 2007), Hyundai has reached an acquisition agreement with this domestic manufacturer, and it is understood that the deal will be completed by October 2008.

Longtec is a privately owned company based in Shandong Province. It has three manufacturing operations: a factory in Tai'an for compact loaders (40-60 horsepower), and two in Feicheng for 80-220 horsepower wheeled loaders and axles. The company began life in 1997, as a component trader, and the four individuals who started the business were from the original Tai'an Axle Factory. In 1999, they purchased Tai'an Mining Machinery Works and changed production to manufacture 120 horsepower wheeled loaders. The factory has a covered area of 5,000 m² and now focuses on the production of compact loaders.

In 2002, Longtec built two new factories in Feicheng, which is about 40 kilometres to the west of Tai'an City. The Feicheng operation occupies land of 19 hectares, on which there are two factories each having a covered area of 12,000 m², together with a 4,000 m² office building.

Table 5. Longtec: Production of Wheeled Loaders, 2003-2007

(Units)

	2003	2004	2005	2006	2007
Wheeled Loaders	1,500	1,354	1,387	1,350	800

Source: Off-Highway Research

Longtec's production of wheeled loaders peaked at 1,500 units in 2003, and since then has been largely stagnant in the region of 1,300-1,400 units a year. Since it contacted Hyundai and the latter expressed its interest in an acquisition, Longtec started to control sales and limited the

offering of installment payments to its customers in a bid to get rid of bad debt and improve the financial performance of the company. This resulted in a sharp downturn in volumes in 2007, at a time when the market itself was growing fast. The output in the first six months of 2008 was 400 units, equally split between domestic sales and exports, and at the same time it began to demobilise the existing employees and prepare for the acquisition.

Longtec's most important product is the 125 horsepower ZL35, which offers higher power than the popular ZL30 but is priced similarly, about RMB140,000 per unit, and has therefore established itself strongly in the market. In addition, its compact range of 40-80 horsepower wheeled loaders, priced at RM50,000-110,000 per unit, has also enjoyed considerable success among local customers. Significantly, it has intentionally avoided the acute competition in the ZL50 sector that is dominated by the leading manufacturers.

Longtec manufactures its own axles, steel fabrications, hydraulic pipes and cabs. The engines are from Yuchai (for the ZL35 model) and a number of tractor engine suppliers for the compact range. Transmissions are mostly sourced from Yantai Yuhua. This is a specialist manufacturer of torque converters and gearboxes aimed principally at wheeled loader applications, but it also had a modest production of wheeled loaders. In 2007 Yuhua sold the wheeled loader business to Doosan, but it retains its transmission business.

Longtec's distribution network lies mainly in North China and is supported by 17 dealers, while in Shandong it relies on direct sales. However, since it has become even more cautious about payments, a number of these dealers have gradually deserted the company. At the same time, Longtec has actively developed its export business through Chinese trading houses, local exhibitions, as well as generating business through the internet.

The negotiations between Longtec and Hyundai started in 2006. Hyundai originally intended to form a joint venture with Longtec, but finally decided to take full control of the company, and its three operations. In addition, it will build a new factory in the development zone of Tai'an, for which it has already acquired development land of 33 hectares. The construction of this may take up to two years and during this period it may start production in Longtec's existing facilities. Longtec now has about 350 employees in total, including workers on temporary contract. Hyundai will keep 130 of them for setting up the new operation, and then recruit new employees.

Longtec's role to Hyundai will be to contribute its current product lines and manufacturing capabilities. The strategy of Hyundai is to develop a localised range of wheeled loaders for this highly competitive market, similar to what Volvo has done with Lingong, and Caterpillar with

SEM. The main target of the competition is Liugong, in that Hyundai will launch a product line at a similar level of quality and performance to Liugong, but at a cheaper price. This is similar to the strategy of Doosan, which is developing a new wheeled loader factory in Muping, Shandong Province.

Table 6. China: Penetration of International Manufacturers into the Domestic Wheeled Loader Industry

International Manufacturers	Chinese Manufacturers Under Acquisition or JV	Year of Formation	% Ownership of Foreign Company	Location of Current Operation
Komatsu	Changlin	1995	92	Changzhou, Jiangsu
Kobelco	Chenggong	2003	39	Chengdu, Sichuan
Caterpillar	SEM	2005	100	Qingzhou, Shandong
	-	2007	100	Suzhou, Jiangsu
Volvo	Lingong	2006	70	Linyi, Shandong
Doosan	Yuhua	2007	100	Muping, Shandong
Hyundai	Longtec	Late 2008	100	Tai'an, Shandong

Source: Off-Highway Research

Including Hyundai, there are now six domestic wheeled loader OEMs that are owned by foreign companies. It is interesting to note the unique procedure used by the two Korean manufacturers, that is to acquire a small local company, and then to eliminate its existing operation and build a new factory. The reason for this process is thought to be partly due to current government policy that does not encourage additional foreign investment into this already crowded industry, except for the co-operation between an international manufacturer and a domestic company.

NHL INVESTS IN A NEW DUMP TRUCK FACTORY

In a bid to increase its production capacity in August 2008 **North Hauler Limited (NHL)** announced its plans to build a new dump truck factory in Baotou's Rare-Earth Development Zone.

Table 7. NHL: Production of Dump Trucks, 2003-2007

(Units)

	2003	2004	2005	2006	2007
Production of Dump Trucks	182	180	190	238	418
% Growth	+26	-1	+6	+25	+76

Source: Off-Highway Research

NHL is a joint venture between the Inner Mongolia North Heavy Industry Group (35 per cent) and Terex (25 per cent), with the rest of the shares being publicly traded. The company was formed in 1988, and specialises in the production of Terex rigid dump trucks. Although the company has since diversified its product range by adding Atlas excavators, and rotary drill rigs, the Terex rigid dump truck range continues to dominate the company's sales. Revenues of the dump truck business amounted to RMB930.6 million in 2007, more than treble what it achieved in 2003, and this sector accounted for 73 per cent of the company's total turnover in 2007.

Production surged to 418 units in 2007, thanks to buoyant domestic demand but also to growing export business. In the domestic market, NHL is the leading supplier of rigid dump trucks, and has nearly a 40 per cent share of the market. This includes sales of Terex-Unit Rig heavy dump trucks, which NHL supports by supplying steel fabrications and on-site service. Exports made up 35 per cent of the company's production in 2007, and were mainly shipped to neighbouring countries as well as to the Middle East and Africa.

Production currently takes place at two locations: the main 47,800 m² factory is situated in the old premises of Baotou No.2 Machinery Plant, which makes steel fabrications and assembly, while the head office of NHL is based in the Rare-Earth Development Zone of Baotou, together with a cylinder workshop for dump trucks. The installed capacity is currently 500 dump trucks a year, so there is an urgent requirement for expansion very soon.

The plan to build a new factory has been agreed by the Board, and the budget for the programme is estimated to be RMB479 million which will be met with internal funds and bank loans. It includes the acquisition of 24.3 hectares of land in the Baotou Rare-Earth Development Zone, and the new premises will be close to the factory of Atlas Construction Machinery that produces hydraulic excavators.

To speed up the increase in production, the new factory is set to open by 2009 and will have a nominal capacity of 1,000 units a year, based on the TR50. At present the 45 tonne trucks account for 40 per cent of the company's total production. In the meantime, the production of components and spare parts will also be improved.

Although the domestic market for rigid dump trucks has seen consecutive annual growth since 2000 and reached 804 units in 2007, Off-Highway Research forecasts that its rate of growth will flatten out. However, NHL is looking to further improve its share in the domestic market, and to enhance its export business. In addition, to take advantage of its increased capacity, it will begin production of articulated dump trucks in the new factory.

WEIMENG: A LOCAL MANUFACTURER IN QINGZHOU

Shandong Weimeng Construction Machinery Co. Ltd used to be a division of Shandong Engineering Machinery (SEM) and became an independent operation in March 2008, after Caterpillar completed the full acquisition of SEM in January 2008. Weimeng is a privately owned company and owned by its management, but some previous SEM employees who have transferred to this company also have a shareholding.

Weimeng was formed in 1999, to supply steel fabrications to SEM’s main factory. In addition, it also took responsibility for the production of SEMs compact loaders and backhoe loaders. After SEM was transferred to Caterpillar, the management of Weimeng decided to go independent. It stopped supplying to SEM, but continues to produce wheeled loaders and backhoe loaders, and started the production of industrial forklift trucks.

The Weimeng factory is located to the west of SEM’s premises, and occupies a total land area of 200,000 m² at the foot of a hill. The existing facility has a covered area of 25,000 m² and incorporates steel fabrication, machining, hydraulic pipe fabrication, painting and assembly. It still has plenty of room for further expansion. There are 360 employees, and about 100 of them have a background in SEM, while others have been recently recruited. The current annual production capacity is 2,500-3,000 units of various machines, with an annual turnover in the region of RMB150-200 million.

Table 8. Weimeng: Product Range, 2008

Product Type	Model	Diesel Engines	
		HP	Manufacturer
Wheeled Loaders	ZL16D/F	61	Weichai
	ZL20F	75	Weichai
	ZL50G	220	Weichai
Backhoe Loaders	SEM3025	90	Weichai
Industrial Forklift Trucks	SM30	55	Xinchang

Source: Company Information

Wheeled loaders are the most important products being produced. While keeping the traditional range of compact loaders, in 2008 it introduced a larger ZL50G model, which is comparable to SEM’s ZL50F’s model. The sales in 2007 amounted to 460 compact loaders, but currently it

gives more priority to the promotion of the ZL50G model, in a hope to improve its presence in this sector where it sees great potential growth.

Backhoe loaders are another traditional product of Weimeng, but the model currently in production still uses a model name branded as SEM. The SEM3025 was developed from a design of John Deere, and features a side shift on the backhoe. Sales in 2007 were only 30 units, with 20 being exported. The manufacturer intends to introduce powershift transmission to replace the hydraulic motor in the original design, which is thought to be more acceptable to local customers as it is popularly used in the wheeled loaders. In addition, Weimeng had another model, the WZY30-25 powered by a 75 horsepower engine from a Yituo engine, but this was abandoned after the prototype was launched.

Forklift trucks were introduced in 2007, and the current production focuses on the SM30 model, which is in the most popular 3 tonne class in the domestic market, although the company offers a range of 2.0-3.5 tonne machines in its brochure. Output reached 750 units in 2007.

Weimeng's distribution structure comprises a nationwide network of 60 local offices and over 100 dealers, which to a certain extent is integrated with that of SEM. With regard to exports, the company now relies on local trading houses operating international sales. As the management of Weimeng all come from SEM, the company is naturally making use of the existing resources and distribution forces of the company that is now under the control of Caterpillar.

XCMG MAKES STRUCTURAL CHANGES TO XUZHOU HEAVY MACHINERY

A full 33 months after it reached an acquisition agreement with Carlyle, XCMG has finally turned its back on the proposed deal, and its intention to float additional public shares on the stock market. It has decided instead to merge the other operations under its control into XuGong Science and Technology, a company that is listed on the Shenzhen Stock Exchange.

The original intention of XCMG was to introduce investment from Carlyle and to change its status as a state-owned enterprise, thus opening its doors to the international industry. However, the deal was held back by the government's argument that key industries had to be protected from international investment. Although the two sides revised the ownership structure in the acquisition agreement a number of times, and reduced the share of Carlyle to only 45 per cent, the government had not approved the deal by the time the agreement expired by the end of June 2008. Thus, on 22 July 2008 XCMG announced that it would terminate current relations with

Carlyle, and instead would transfer Xuzhou Heavy Machinery and other operations into XuGong Science and Technology, a company that is listed on the Shenzhen Stock Exchange.

XuGong Science and Technology's businesses include wheeled loaders, compaction equipment, asphalt finishers and other more modest volume products like road maintenance equipment. It occupies a leading position in the industry, but is challenged by other local manufacturers that offer a similar product range and compete heavily on price. As a result, the company suffered a financial loss in 2005; although it returned to a modest profit in 2006 and 2007, it is unlikely to be able to improve the performance of the existing businesses with the currently stagnant demand for compaction equipment and asphalt finishers, and the rising steel prices that erode the already slim margins of wheeled loaders.

In contrast Xuzhou Heavy Machinery, the largest manufacturer of mobile cranes in the world, has maintained excellent growth for the last 10 years and accounts for 50 per cent of domestic production. With a pre-tax gross profit of RMB1 billion in 2007, it is now the main source of profit for the group. After the failure of the deal with Carlyle, therefore, the natural option appears to be to merge this business and other operations into XuGong Science and Technology in order to facilitate the Group's future development as a whole.

XCMG Machinery controls the various manufacturing operations of XCMG, and was formed between XCMG and four state-asset management organizations. After XCMG entered into the initial agreement with Carlyle, it bought back the shares from other shareholders; as a result, XCMG Machinery is now owned 100 per cent by XCMG. The current consolidation plan is to merge Xuzhou Heavy Machinery, XCMG Compact, Lorry Loaders, Special Vehicles, the Import and Export Company and the newly formed Excavator Company into XuGong Science and Technology. Upon the completion of this restructuring, the share of XCMG in the listed company will be increased from the current 34 per cent to 59 per cent. As sales of XuGong Science and Technology are likely to see growth, its share price increased substantially after the plan was released.

Sales of the various manufacturing operations under the control of XCMG Machinery totaled RMB15,180 million in 2007, which could amount to around RMB11,600 million if one subtracts the internal transactions from those of Special-Purpose Vehicle and Hydraulic Component companies. It is not known why the Road Machinery Company, which has experienced a buoyant growth in sales, is not included in the current consolidation plan.

Table 9. XCMG: Company Structure Before Consolidation, 2008

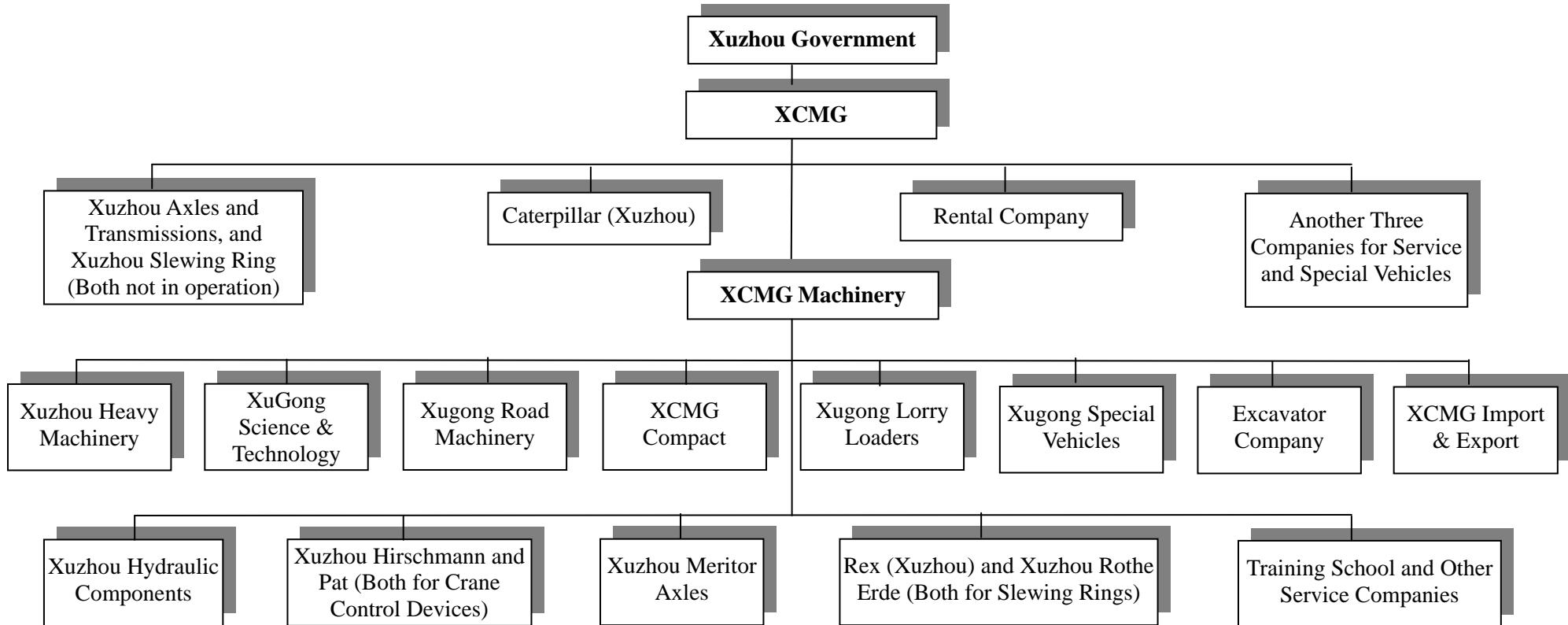


Table 10. XCMG Machinery: Statistical Highlight of its Various Manufacturing Operations, 2006-2007

Company Name	Key Products	Production (Units)	Sales (RMB Mns)	
		2007	2006	2007
Xuzhou Heavy Machinery	Mobile cranes*	10,225	4,577	7,496
	Truck-mounted concrete pumps	129		
	Truck-mounted firefighting access*	71		
Xuzhou Xugong Special-Purpose Vehicle	Truck-chasses	n/a	1,953	3,304
XuGong Science & Technology	Wheeled loaders	10,290	2,375	2,979
	Compaction equipment	2,061		
	Asphalt finishers*	182		
Xuzhou Xugong Road Machinery	Motor graders*	1,210	418	602
	Cold planers	37		
	Rotary rigs	28		
	Soil stabilisers			
	Centralised mixing plants	27		
	Mobile	26		
	Directional drill drills	24		
Xuzhou Xugong Hydraulic Component	Hydraulic cylinders	102,400	224	383
	Hydraulic system	2,560		
Xuzhou Xugong Lorry Loaders	Lorry loaders*	1,466	134	216
	Special purpose vehicles	70		
XCMG Compact	Compact wheeled loaders	1,050	116	200
	Backhoe loaders*	260		
Total			9,797	15,180

* Domestic market leader

Source: Off-Highway Research

Apart from the contribution of sales and profits, the companies to be merged into the listed companies will bring in huge assets of manufacturing facilities that have been updated in recent years (see Off-Highway Research's Market Report issued January 2008). XuGong Science and Technology will become the largest single company in the domestic construction equipment industry, and well ahead of Sany and Zoomlion that are more specialised in concrete machinery, or Liugong that is struggling to diversify its product lines.

In addition, XCMG Import and Export Company is the largest trading unit of its kind in the industry. Its turnover amounted to RMB3,430 million in 2007, which principally represented the scale of the export sales of XCMG. In the first six months of 2008 its exports were valued at RMB2,925 million, which implies year-on-year growth of 60 per cent.

Apart from its existing businesses, XuGong Science and Technology plans to further broaden its product lines, with the aim of raising sales to around RMB100 billion in the foreseeable future.

The **Excavator Company** of XCMG Machinery is developing a range of mini excavators that do not conflict with any agreements that it has with Caterpillar. The models were launched in 2007, and production is now taking place in a new facility built for compaction equipment and asphalt finishers; however it has decided to make an additional investment in the building of a specialised factory for this new product in which it has placed great faith. As XCMG has expressed its intention to terminate the joint venture with Caterpillar (see Off-Highway Research's Market Report issued July 2008), it will now also be able to enter the hydraulic excavator sector on its own.

In July 2008 XuGong Science and Technology signed an agreement with **Nanjing Chunlan Automobile**, to purchase 60 per cent of its shares. Chunlan Automobile is based in Nanjing, Jiangsu Province, and specialises in the manufacture of on-highway trucks in the 10-15 tonne payload class. With production of 1,300 trucks in 2007, Chunlan is not seen as much of a competitive business in the truck industry, but to penetrate this sector has been an ambition of XCMG for a number of years, so this has enabled it to make a swift market entry.

XCMG now also intends to produce **diesel engines**. In the agreement with Carlyle, the investor was required to help it to establish an engine capability, and although co-operation with Carlyle is now ended, its engine ambitions are still alive.

So, the largest Chinese manufacturer is now looking to develop in the domestic context, instead of through international co-operation. However, this large conglomerate has too many problems concerning internal management, which drags down the performance of the group as a whole. As a result, it expects to improve through consolidation, although the first attempt with Carlyle failed. Will this be a new life for the manufacturer, or is it just a start of another SOE story? To really benefit from the current changes, the manufacturer still needs to raise additional funds, either from the stock market or from new investors. What can be certain is, with such a massive consolidation, it will significantly improve its credit and eligibility to do so.

FINANCIAL RESULTS

HALF YEAR

CHANGLIN

Table 11. Changlin: Financial Highlights, First Half, 2007-2008

(RMB Millions)

	6 Months Ending June		% Change
	2007	2008	
<u>Turnover</u>			
– Wheeled Loaders	591.9	652.4	10
– Motor Graders	80.5	127.2	58
– Compaction Equipment	52.0	61.3	18
– Steel Fabrications	222.6	251.6	13
– Other Products	40.4	51.0	26
– Others	28.3	44.4	57
Total	1,015.6	1,188.0	17
<u>Operating Income</u>			
– Wheeled Loaders	58.8	41.4	-30
– Motor Graders	26.4	37.3	41
– Compaction Equipment	5.2	4.4	-15
– Steel Fabrications	28.1	23.8	-15
– Other Products	6.2	9.2	48
– Others	1.1	1.5	36
Tax, Costs and Depreciation	(115.9)	(114.9)	-1
Investment Earnings	52.5	100.2	91
Total	62.3	102.9	65
Net Profit	59.5	102.5	72

Source: Company Information

Changlin reported an increase in turnover of 17 per cent growth in the first half of 2008, with improved performance in all product areas. Export sales grew year-on-year by 95 per cent to RMB268.7 million, representing 23 per cent of company turnover. While in the domestic market the company's performance remained flat, exports supported the growth of sales in the first six months. Net profit improved by 72 per cent, but similar to earlier years, much of which was accounted for by earnings from investment of its joint ventures.

Wheeled loaders saw total sales of 4,660 units in the first six months, a modest growth of four per cent over the same period last year; their revenues, partly due to increased prices, improved

by 10 per cent to RMB652.4 million, representing 55 per cent of total company revenues. However, operating income deteriorated by 30 per cent, implying a significant loss in the sector. Due to the substantial escalation in the price of raw materials and energy, production costs increased significantly, and at a rate that could not be recovered by increased prices.

Motor graders, with sales amounting to 300 units, accounted for 11 per cent of company revenues, and this sector saw buoyant growth in operating income, thanks to dynamic growth in exports.

Compaction equipment, with a total volume of 265 units, was steady but the profitability of this sector continued to deteriorate.

Steel fabrications, which are supplied to its joint venture partners and overseas customers, now make up 21 per cent of company turnover. However, due to rising production costs, operating costs of this sector fell, while the company kept it as strategically important business to support its overall profitability.

On the other hand, the company's joint ventures with Hyundai and Komatsu continued to grow in both sales and profits, boosted by the buoyant domestic market, and so continued to make an important contribution to Changlin's overall earnings.

NHL

NHL reported a 33 per cent year-on-year growth in sales, largely due to the substantial gains in dump truck sales. Exports moved up by 79 per cent to RMB271.6 million, representing 37 per cent of turnover during the period. Operating income improved by 46 per cent, principally because of the contribution of dump trucks, and this resulted in a surge of net profit.

Dump trucks increased their contribution to company sales to over 70 per cent. Compared with the previous year the company obtained a large volume of new orders from both domestic and overseas customers, and so production surged. It is now in the process constructing a new manufacturing facility for dump trucks, in order to match production with demand.

Hydraulic excavators are produced by the joint venture with Terex Atlas. Sales in the first half were reduced to 72 units, but their revenues were almost same as for the same period in 2007. This is because the improved volume of sales in the previous year was largely attributed to policy

of reducing prices to clear stock. Although the business finally made an operating profit in 2008, the joint venture company continued to operate at a loss.

Rotary rigs saw a drop in sales by 50 per cent, and as a result there has been a reduced role in company turnover and this has affected the company's strategy of diversification.

Table 12. NHL: Financial Highlights, First Half, 2007-2008
(RMB Millions)

	6 Months Ending June		% Change
	2007	2008	
<u>Turnover</u>			
– Dump Trucks	341.2	521.0	53
– Hydraulic Excavators	86.3	87.4	1
– Rotary Rigs	63.2	31.4	-50
– Spare Parts	56.5	84.0	49
– Others	3.0	6.4	113
Total	550.1	730.2	33
<u>Operating Income (Loss)</u>			
– Dump Trucks	93.0	111.2	20
– Hydraulic Excavators	(0.4)	12.0	-
– Rotary Rigs	19.9	9.5	-52
– Spare Parts	20.6	24.2	17
– Others	1.5	1.5	-
– Tax, Costs and Depreciation	(121.6)	(144.9)	19
– Adjustment Due to Fair Value	0.2	-	-
– Investment Earnings	(1.9)	2.9	-
Total	11.2	16.4	46
Net Profit	7.2	13.8	92

Source: Company Information

SHANTUI

Shantui continued its rapid growth in sales with six months' turnover reaching RMB3,633.4 million, with progress being powered by strong growth in crawler dozers, compaction equipment and component business. Overseas sales amounted to RMB943.5 million, representing 26 per cent of company turnover. Operating income moved ahead by 68 per cent principally due to improved margins in the component business, and the effective control of various costs. The growth of net profit, however, was relatively modest due to increased income tax.

Table 13. Shantui: Financial Highlights, First Half, 2007-2008

(RMB Millions)

	6 Months Ending June		% Change
	2007	2008	
Turnover			
– Crawler Dozers	953.7	1,558.5	63
– Komatsu Excavator Distribution	318.1	461.5	45
– Compaction Equipment	49.7	98.7	99
– Components	647.4	1,136.0	75
– Others	267.4	108.7	-59
Total	2,236.3	3,633.4	62
Operating Income (Loss)			
– Crawler Dozers	248.7	389.9	57
– Komatsu Excavator Distribution	15.2	26.9	77
– Compaction Equipment	1.7	3.5	106
– Components	107.7	201.0	87
– Others	15.9	55.4	248
– Tax, Costs and Depreciation	(213.3)	(331.6)	55
– Adjustment Due to Fair Value	-	-	-
– Investment Earnings	107.1	130.6	22
Total	283.0	475.7	68
Net Profit	264.8	350.1	32

Source: Company Information

Crawler dozer sales moved ahead by 63 per cent to RMB1,558.5 million, which represented 43 per cent of turnover. Volumes amounted to 2,600 units, which now puts it amongst the world's largest manufacturers of this product. To improve production capacity, the company is making a major investment in a new facility in its industrial park, which is currently under construction.

Revenues from the distribution of **Komatsu hydraulic excavators** rose by 45 per cent, with improved operating income. **Compaction equipment** saw sales of 330 units, and here revenues improved by 99 per cent.

Component manufacturing, the second most important business of the company, accounted for 31 per cent of revenues, and this sector improved its contribution to the company's operating income.

Table 14. Komatsu Shantui: Financial Highlights, First Half, 2007-2008

(RMB Millions)

	6 Months		% Change
	Ending June		
	2007	2008	
Sales	2,717.2	4,332.7	59
Net Profit	296.1	350.1	18

Source: Company Information

Komatsu Shantui, in which Shantui has a 30 per cent shareholding, enjoyed 59 per cent growth in sales. Net profit, however, grew much slower but continued to make a significant contribution to Shantui's overall profit.

To broaden its product range, Shantui acquired Hubei Chutian Construction Machinery that specialises in concrete machinery. In addition, it decided to invest in a new operation called Shantui Heavy Industry, for developing industrial forklift trucks and compact equipment.

SUNWARD

Sunward continued strong growth in the first six months of 2008, with turnover reaching RMB820.2 million, moving up year-on-year by 55 per cent. A change in the source of sales was that the domestic market contributed the major part of the growth, while exports continued to grow by 28 per cent; as a result, the proportion of exports fell to 17 per cent of total revenues during the period. Operating income remained buoyant, mostly because of the excellent performance in the businesses of piling machinery and compact equipment, but the rate of growth was offset by increased costs. Net profit improved by 43 per cent to RMB84.3 million.

Piling machinery comprises static pile drivers and rotary rigs, and traditionally has been the most important sector. Here sales increased by 72 per cent to RMB396.3 million, or 48 per cent of total company revenues. On the other hand, the recently developed **rock drills** suffered a fall in sales.

Compact equipment, namely small excavators and skid-steer loaders, is another important element of the business. Sales improved by 45 per cent to RMB392.1 million, representing another 48 per cent of company revenues. Volumes increased to about 2,100 units, of which 30 per cent were exported.

Table 15. Sunward: Financial Highlights, First Half, 2007-2008

(RMB Millions)

	6 Months Ending June		% Change
	2007	2008	
Turnover			
– Piling Machinery	230.6	396.3	72
– Compact Equipment	270.1	392.1	45
– Rock Drills	23.7	11.1	-53
– Other Products	-	0.2	-
– Spare Parts	6.2	18.3	195
– Others	-	2.2	-
Total	530.7	820.2	55
Operating Income			
– Piling Machinery	65.4	125.4	92
– Compact Equipment	57.7	87.6	52
– Rock Drills	8.7	4.3	-51
– Other Products	-	-	-
– Spare Parts	1.7	6.8	300
– Others	-	0.7	-
Tax, Costs and Depreciation	(65.2)	(127.7)	96
Investment Earnings	-	(0.1)	-
Total	68.5	97.0	42
Net Profit	59.0	84.3	43

Source: Company Information

Despite continued growth in the first six months, the company expects that the full year's performance might not meet the original plan that was set up at the beginning of the year. As a result, it has revised goal of full year sales to RMB1,646 million, a reduction of some 80 per cent against the original plan.

XIAGONG

Xiagong reported sales growth of 34 per cent in the first half of 2008, with revenues of RMB3,910.3 million. Export sales improved to RMB152.3 million, representing four per cent of revenues. During the same time gross margins of machine sales were improved, but the ratio of operating income remained unchanged because of surging costs.

Table 16. Xiangong: Financial Highlights, Second Quarter, 2007-2008

(RMB Millions)

	6 Months Ending June		% Change
	2007	2008	
Turnover			
– Machine Sales	2,743.3	3,550.6	29
– Spare Parts	59.5	91.7	54
– Material Trading	112.4	246.4	119
– Rental	1.1	0.3	-71
– Others	7.5	21.3	183
Total	2,923.9	3,910.3	34
Operating Income			
– Machine Sales	424.9	589.9	39
– Spare Parts	7.2	9.1	27
– Material Trading	1.3	19.9	1,455
– Rental	0.2	0.1	-40
– Others	2.1	7.5	263
Tax, Costs and Depreciation	(316.9)	(466.7)	47
Adjustment Due to Fair Value	0.1	(0.2)	-
Investment Earnings	2.8	2.9	1
Total	121.6	162.5	34
Net Profit	108.3	141.2	30

Source: Company Information

Machine sales include wheeled loaders, crawler excavators, mini excavators and industrial forklift trucks. Although the company does not disclose a breakdown between different product lines, wheeled loaders saw sales of 16,300 units in the first six months, and they made up the major portion of the total. Sales of other products remain very modest.

With a new factory in operation in Jiaozuo of Henan and the institution of a smart pricing policy, the manufacturer significantly improved its domestic sales of wheeled loaders by 16 per cent. Its other businesses have so far only made a modest contribution to total revenues. To assist future sales, the company is now planning to establish a financial leasing entity. In addition, the second phase of the Jiaozuo factory, which now offers an annual capacity of 5,000 units, has been put into operation.

ZOOMLION

Zoomlion reported a substantial growth of 72 per cent in its first half turnover, which reached RMB6,216.2 million. Its crane business remained strong, and substantial growth was seen in

concrete machinery, environmental sanitary equipment and road machinery. Export sales doubled to RMB1,017.8 million and made up 13 per cent of revenues. In addition, the company began to develop financial leasing through its local company in Beijing, and this is to replace its traditional rental operation. Operating income doubled, and net profit surged to RMB908.7 million.

Table 17. Zoomlion: Financial Highlights, First Half, 2007-2008

(RMB Millions)

	6 Months Ending June		% Change
	2007	2008	
Turnover			
– Lifting Machinery	1,393.4	2,181.2	57
– Concrete Machinery	1,672.4	3,138.0	88
– Environmental Sanitary Machinery	227.8	429.9	89
– Road Machinery	187.9	341.3	82
– Rental	18.5	1.1	-94
– Financial Leasing	-	32.8	-
– Others*	104.5	91.7	-12
Total	3,604.5	6,216.2	72
Operating Income			
– Lifting Machinery	444.2	693.4	56
– Concrete Machinery	420.8	860.2	104
– Environmental Sanitary Machinery	70.9	134.0	89
– Road Machinery	31.8	120.5	278
– Rental	2.1	(1.8)	-
– Financial Leasing	-	26.6	-
– Others*	24.1	20.3	-16
Tax, Costs and Depreciation	(476.9)	(806.1)	69
Investment Earnings (Loss)	(4.0)	3.0	-
Total	513.0	1,050.1	105
Net Profit	514.6	908.7	77

* Electronics, satellite and navigation, machining tools, etc

Source: Company Information

Lifting machinery, where the mobile crane range dominates, accounted for 35 per cent of turnover. Mobile cranes recorded sales of 2,900 units (15 per cent of which were exported) and grew by 55 per cent over the same period in 2007, thanks to the completion of the new manufacturing facility in Quantang Park.

Concrete machinery rose by 88 per cent, and accounted for 50 per cent of company turnover. To intensify its occupation in this industry, Zoomlion reached a remarkable deal through the acquisition of the Italian manufacturer CIFA, a transaction that has yet to be completed.

Road machinery, namely compaction equipment, asphalt finishers and motor graders, registered strong growth, thanks to improved sales in both its domestic and overseas markets, and here margins improved.

Zoomlion has continued its process of acquisition activities in 2008. Apart from the on-going deal with CIFA, it completed the acquisition of **Xin Huanggong** in Shaanxi, which may help the company penetrate into the earthmoving sectors, **Hunan Vehicle Axles**, and **Huatai Heavy Industry** that specialises in bulk material handling equipment.