

## High speed steel play

## China Industrials

### Tiangong International (826 HK)

Not Rated

**Table 1: Offer statistics**

<b>Offer price range</b>	<b>HK\$5.40 - 6.36</b>
No. of share offered	130,000,000
Fully diluted offer P/E (FY2006)	13.0x - 15.3x
Fund raise	HK\$702.0m - 827.0m
IPO opens	13-Jul-07
IPO closes	18-Jul-07
Price determination	20-Jul-07
Listing	26-Jul-07

Source: SBI E2-Capital

**Company background.** Tiangong International (“TI”) is engaged in the manufacture and sale of high speed steel (HSS), HSS cutting tools and die steel. The company’s production facility is located in Danyang, Jiangsu province. HSS and die steel are types of “special steel”. HSS is superior to other common steels because it can withstand higher temperature without losing its temper (hardness). This property allows HSS to cut faster than regular carbon steel. While regular steel is used widely in the construction of buildings and infrastructure projects, special steel products are produced for specific applications such as aviation, automobile or machinery manufacturing.

**Business Overview.** TI’s business model can be divided into 3 segments – HSS, HSS cutting tools and die steel.

- **HSS.** TI began engaging in HSS business in 1992 initially to secure its own source of supply of HSS for its pre-existing HSS cutting tools manufacturing business, as HSS is one of the key materials for tools production. TI currently produces ten main specifications of HSS of varying alloy compositions under 2 categories – general use HSS and high performance HSS.
- **HSS cutting tools.** TI began producing and selling HSS cutting tools in 1987, this business has become the longest running of the company’s current businesses. Last year, TI produced c.366.0m units of HSS cutting tools, which over 80.0% were sold to over 30 countries and regions though out Europe, North America, Africa and Middle East. The company produces a wide range of HSS cutting tools products, which can be categorized into 4 types – twist drill bits, screw taps, end mills and turning tools.
- **Die steel.** This business is relatively new for TI as the company began producing die steel in end of 2005. Currently, TI produces 2 types of high-end die steel products – H13 hot-worked die steel and D2 cold-worked die steel.

**Table 2: Revenue breakdown by segments**

	2004		2005		2006	
	RMBm	%	RMBm	%	RMBm	%
HSS	408.9	48.6	522.7	47.7	667.6	51.2
HSS cutting tool	433.0	51.4	564.7	51.6	579.0	44.4
Die steel	-	-	7.3	0.7	57.3	4.4

Source: Company data, SBI E2-Capital

**Customer base.** The company sells its HSS and die steel primarily domestically and sells its HSS cutting tools primarily for export. Sale generated from the top’s five largest customers amounted to RMB212.4m, representing 16.3% of total revenue. Its customers include Techtronic Industries (699 HK) and Black and Decker (BDK US).

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- *HSS*. The main customers of HSS are the domestic HSS cutting tools manufacturers from Harbin, Chongqing, Guiyang, Shanghai, Zhejiang and Danyang. TI accounted c. 45.0% of total HSS market in China by volume in 2006. Besides from domestic sales, the company also exports HSS to leading tools manufacturers and retailer in Germany, Korea, India and Taiwan.

**Table 3: Revenue breakdown - HSS**

	2004			2005			2006		
	Tonnes	RMBm	%	Tonnes	RMBm	%	Tonnes	RMBm	%
Export	0.0	0.0	0.0	505.0	18.5	3.5	1,411.0	88.6	13.3
Domestic	19,685.0	408.9	100.0	18,751.0	504.3	96.5	23,105.0	579.0	86.7
Total	19,685.0	408.9	100.0	19,256.0	522.8	100.0	24,516.0	667.6	100.0

Source: Company data

- *HSS cutting tools*. TI produces HSS cutting tools products, targeting at 3 main markets: 1) OEM products for export to international tool manufacturers; 2) outsourced manufacturing for leading tools retailers and 3) sale domestically and internationally under the “TG” brand name.

**Table 4: Revenue breakdown – HSS cutting tools**

	2004		2005		2006	
	RMBm	%	RMBm	%	RMBm	%
Export	341.3	78.8	460.2	81.5	471.9	81.5
Domestic	91.7	21.2	104.5	18.5	107.1	18.5
Total	433.0	100.0	564.7	100.0	579.0	100.0

Source: Company data

- *Die steels*. The sales of die steels are mainly domestically.

**Table 5: Revenue breakdown – Die steels**

	2005			2006		
	Tonnes	RMBm	%	Tonnes	RMBm	%
Export	0.0	0.0	0.0	659.0	14.9	26.0
Domestic	301.0	7.3	100.0	1,933.0	42.4	74.0
Total	301.0	7.3	100.0	2,592.0	57.3	100.0

Source: Company data

### Raw materials.

- *HSS and die steels*. The key raw materials used in producing HSS are special steels (accounted for 74.0% of total HSS production cost) and scrap steel (20.0%). Special steels such as tungsten, molybdenum and vanadium are the metals used in the production of HSS. TI purchases scarp steel from third parties, including its own customers. The raw materials used in producing die steel are fundamentally similar to those uses in producing HSS. Last year, special steels accounted for 60.0% of the die steel production cost.
- *HSS cutting tools*. The company supplies all of the HSS required for the production of its HSS cutting tool internally. Last year, HSS cutting tools business consumed c.9,700 tonnes of HSS, representing c.30.0% of the HSS output. Since HSS cutting tools production does not consume much of the HSS output, TI does not need to reply on external supplies of HSS.

**Table 6: Gross margin**

(%)	2004	2005	2006
HSS	21.6	22.5	23.2
HSS cutting tool	14.8	13.5	15.6
Die steel	-	5.5	7.5

Source: Company data, SBI E2-Capital

### Our views.

- Last year, TI is the largest HSS manufacturer and is a leading HSS cutting tools manufacturer by volume in China. By leveraging its leading position in this industry, this gives the company greater purchasing power and economic of scale. The internal consumption of HSS for the production of HSS cutting tools allows the company to use its capacity more productively. Besides, some of the scarp HSS and other waste materials

produced by its HSS cutting tools production could be used as raw materials by its HSS business, this will drive down the company's overall manufacturing costs.

- China becomes the beneficiary from global outsourcing trend, due to its rich resources in raw materials and low production costs. Even though HSS and die steel are still niche special steel products in China, the demand and volume of HSS and die steel has grown rapidly in recent years. We think TI is in a well position to tap the growth of China's HSS and die steel market.
- For HSS and die steel business, the company competes mainly with the local Chinese HSS suppliers. Major top 3 suppliers, accounting for more than 77.0% of market share, dominate domestic HSS industry of which TI accounted for c.44.7% market share. In respect of its HSS cutting tools business, the competition is more intense as the company faces competition from both local manufacturers and international manufacturers.
- Fluctuation in the prices of raw materials such as tungsten, molybdenum and scrap steel can adversely affect the company's profitability. In the past, the prices of steel in China have been volatile and rise significantly and since the prices of scrap steel are greatly affected by the steel price, we think the prices of scrap steel may experience price fluctuation in the future.
- Reliance on limited number of raw materials suppliers can be risky. The company has to maintain a close relationship with its key suppliers to ensure the stable supply of key materials. Once the relationships have terminated, this will interrupt the operation of the business as finding a suitable substitute can be very time consuming.

**Valuation.** TI expects its net profit will increase by 64.0%, from RMB96.6m to RMB160.0m this year. The offer price of HK\$5.40 – HK\$6.36, representing a historical FY12/06A P/E of 13.0 – 15.3x, which is less demanding than comparable peers who traded at average historical P/E of 19.9x. China Molybdenum (3993 HK) IPO's offer price of HK\$5.00 – HK\$6.80, representing fully diluted FY12/06A P/E of 9.8 – 13.4x in April this year.

**Table 7: Use of proceeds**

Use of proceeds in relation to	HK\$m
Purchase, installation and implementation of various production equipment to produce HSS cutting tools and die steel products of larger specification and higher grade	350.0
Repayment of a portion of the bank loan	174.0
The remaining balance as the general working capital	

Source: SBI E2-Capital

**Table 8: P&L**

(RMBm)	2004	2005	2006	1Q06	1Q07
Revenue	841.9	1,094.7	1,303.9	248.9	384.0
Cost of sales	(689.7)	(900.3)	(1,054.1)	(197.8)	(309.4)
Gross profit	152.2	194.4	249.8	51.1	74.6
Other income	0.4	1.3	30.1	0.2	8.6
Distribution expenses	(21.8)	(26.7)	(30.9)	(4.8)	(8.7)
Administrative expenses	(25.1)	(29.6)	(42.7)	(8.3)	(14.2)
Other expenses	(3.7)	(6.2)	(8.5)	(2.7)	(0.7)
Operating profit	101.9	133.2	197.8	35.5	59.8
Finance income	2.7	3.6	5.7	1.4	0.6
Finance expense	(27.9)	(39.7)	(56.4)	(12.5)	(14.9)
Net finance cost	(25.2)	(36.1)	(50.7)	(11.1)	(14.3)
Share of loss of an associate	(1.5)	(4.8)	-	-	-
Before tax profit	75.1	92.1	147.1	24.4	45.4
Tax	(25.4)	(33.3)	(50.5)	(9.6)	(0.6)
Profit of the year	49.7	58.8	96.6	14.8	44.8
Attributable to:					
Equity holders of the company	40.9	47.9	91.7	12.3	44.5
Minority interests	8.8	10.9	4.9	2.5	0.3
Profit of the year	49.7	58.8	96.6	14.8	44.8

Source: Company data