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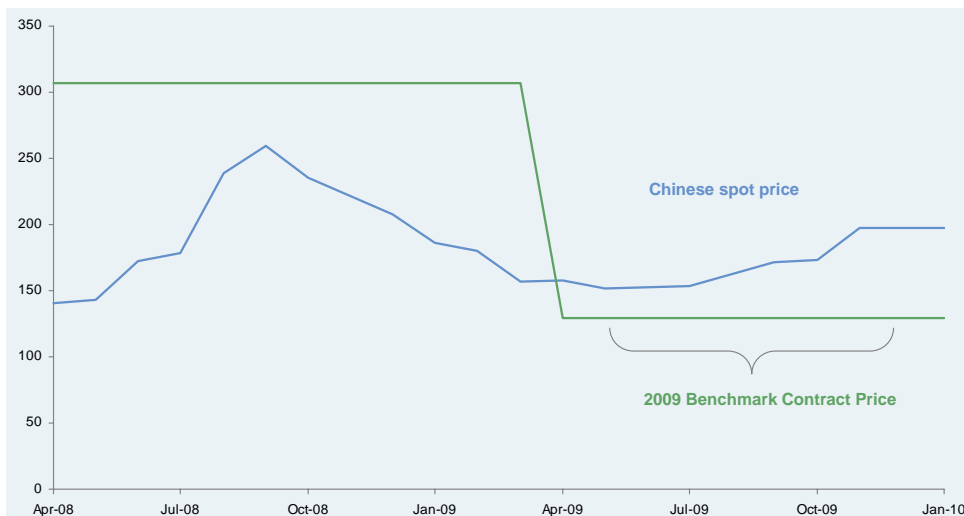
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## Chinese Steel Producers Face Jump in Coking Coal Prices

Steelmakers in China and worldwide must contend with the prospect of sharply higher raw material costs – not only in the form of benchmark iron ore price hikes – but also from substantially higher imported coking coal prices. Coking coal price negotiations for the 2010 contract year are currently underway, with BHP successfully negotiating a 55% price increase on a 3-month contract with Japan's JFE Holdings – the first time that a contract has been priced on a quarterly period. In part because wet weather conditions in Australia have disrupted rail deliveries, spot prices for coking coal have risen to \$220/MT, versus a 2009 benchmark coking-coal price of ~\$129/MT. As global steel demand returns to healthier levels, the seaborne coking coal market is likely to remain tight in the next several years, with China remaining a net-importer in the long-term.

In the near-term, however, rising international prices are eroding the cost advantage of imported coal (see Figure 1).

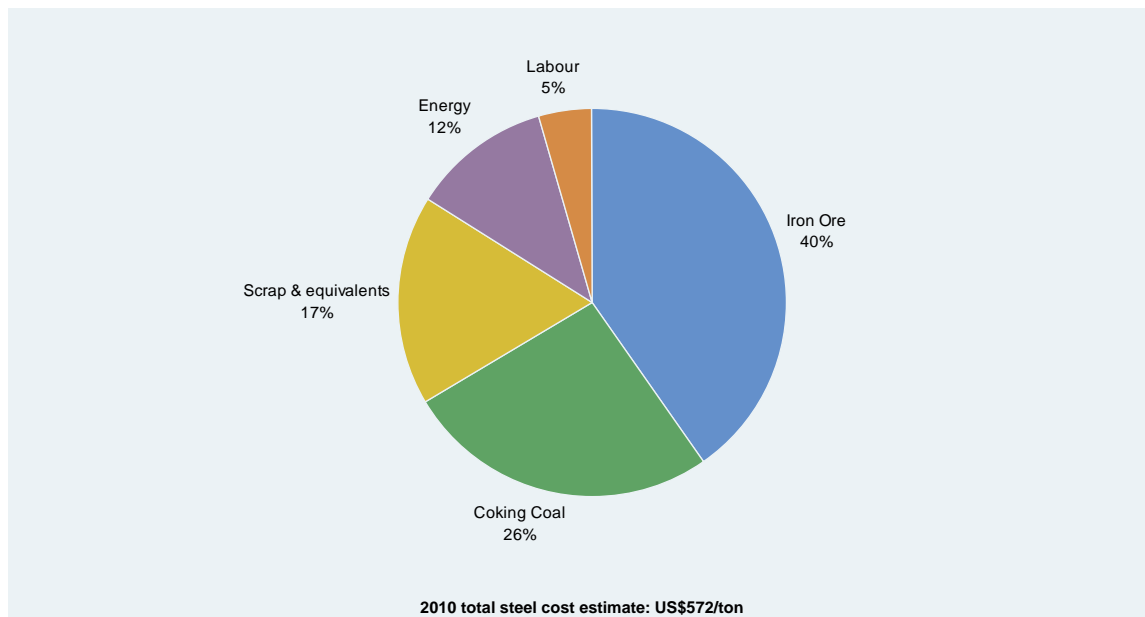
Figure 1: Coking coal prices – domestic vs. global contract benchmark (USD/MT)



Source: Bloomberg

- Steelmaking demand behind last year's surge in coal imports.** Coking coal accounts for about 26% of Chinese steel producers' costs (on an integrated cash cost basis – see Figure 2) as compared to iron ore's 40% share of costs. While China has vast reserves of thermal coal, the country faces a structural shortage in high quality coking coal and will increasingly rely on imports. Moreover, about 70% of new steel capacity being built in the country is expected to be situated in coastal regions, where railroad bottlenecks occasionally hamper the delivery of domestic coal. China's coking coal industry also features a higher concentration of relatively small private miners, as compared to the thermal industry, where large state-owned coal producers are more dominant.

Figure 2: China Steel Production Cost Breakdown (Integrated Cash Cost)

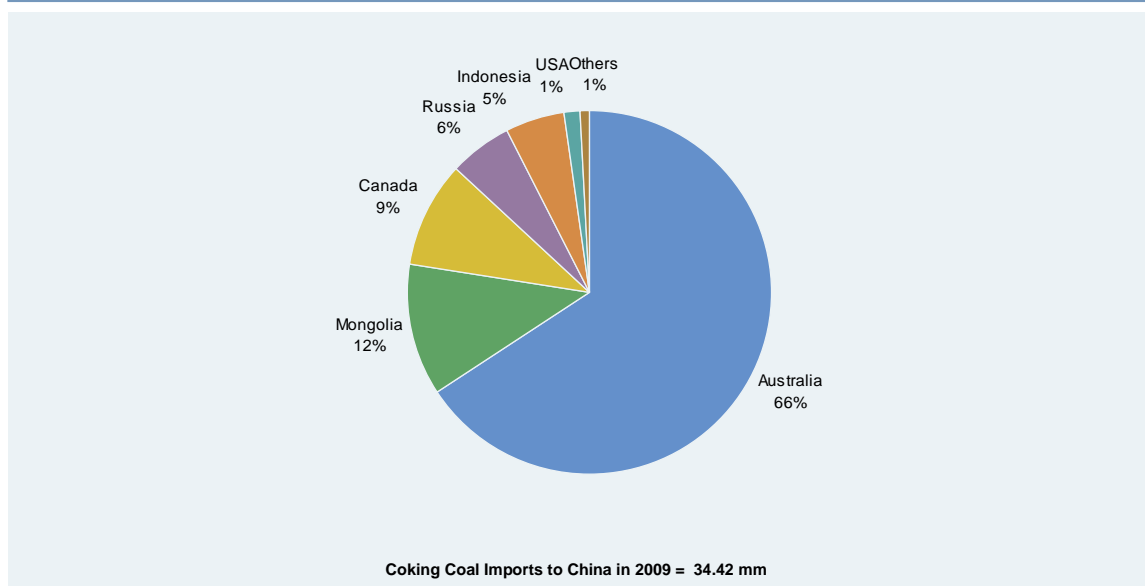


Source: J.P. Morgan research by Nathan Ziblich

Growth in coking coal production was subdued in 2009 due to aggressive consolidation in the major mining province of Shanxi, which in 2007 supplied 30% of China's coking coal. While China produced approximately 465 million tons of coking coal in 2009 (+1.4% YoY), crude steel production surged 13.8% during the year, driving domestic coking coal prices above the international contract price. During the year, coking coal imports surged 402% YoY to 34.4 million tons. Coking coal and anthracite (used for pulverized coal injection in the manufacture of steel and non-ferrous metals such as aluminum) accounted for 64% of China's coal imports in 2009. With the coking coal market likely to remain tight, we expect Chinese steel producers will increase investments in overseas coking coal assets.

As Figure 3 shows, Australia is by far the world's largest coking coal exporter. Mongolia possesses vast coking coal reserves situated close to China; however large scale improvements in infrastructure are still needed before the country can realize its potential as an exporter.

Figure 3: Sources of China's coking coal imports (2009)



Source: China General Administration of Customs

- **Domestic supply dynamics.** In 2010, domestic coking coal supply bottlenecks are expected to ease somewhat. According to Hidili, production volumes in Shanxi province should increase by 5-10% YoY. However, other major coal producing provinces, such as Henan (which accounts for 6% of China's coke production), plan to push forward with their own industry consolidation plans.
- **Shift to quarterly pricing?** Major suppliers of coking coal such as BHP Billiton and Teck Resources have been in talks with Asian steel producers about a potential shift to quarterly pricing. On March 5, BHP Billiton, the world's largest coking coal producer, won a 55% price increase from Japan's JFE Holdings for a three-month contract, starting April. A shift to quarterly pricing would lead to contract prices that more closely track the spot market and could also lead steel producers to favor shorter steel supply contracts in order to mitigate volatility and manage price risks. Alternatively, steel producers may use swaps to hedge the floating price with a fixed price for one year.

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