

BALANCE SHEET MANAGEMENT AT OLYMPIC STEEL

How the company survived volatility in the steel service industry and came out ahead using good management accounting practices.

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Consider a business that traditionally buys steel for \$200 to \$300 per ton, cuts and processes it, and then sells the steel for roughly \$300 to \$400 per ton. This relatively calm scenario describes the long-term business environment that most steel service centers operated in prior to 2004. Now assume the cost of the unprocessed steel suddenly becomes volatile. For example, the cost of steel rises dramatically by more than 250% to approximately \$750 per ton and then falls sharply by 40% to around \$450 per ton—all within a 24-month period. The relatively quiet ocean the company has been operating in has now been hit with a tidal wave whose ripples have far-reaching impacts throughout the world's economy. This describes the steel service industry over the last three years, an environment that requires effective inventory management.

We'll identify and discuss effective inventory and working capital management practices during a period of significant price volatility using Olympic Steel (NASDAQ: ZEUS) as a case study. In fact, the company managed the storm so well that its stock price increased dramatically during 2004. Discussing its practices should help management accountants who face similar financial pressures regardless of their industry.

COMPANY PROFILE

Olympic Steel is a North American steel service center with a primary focus on the direct distribution of processed carbon, coated and stainless flat-rolled sheet, and coil and plate steel. Incorporated in 1954 by two brothers, Olympic Steel initially operated out of a rented building in Cleveland, Ohio. The business focused on hot and cold-rolled steel, which expanded to include hot-rolled plate and sheet by 1980. The 1980s and early 1990s brought a number of acquisitions and expansions in the East, Midwest, and Southeast United States, and the company eventually went public in 1994. By the end of 2004, the 50th year of its founding, the company's annual revenues had increased to nearly \$900 million, and total employment reached 825 people. In 2006, the company had approximately 1,000 employees and the second most profitable year in its 52-year history. Olympic focuses on national and regional customers primarily in the Midwestern, Eastern, and Southern U.S.

A PERFECT STORM—THE 2004 STEEL INDUSTRY

The price of hot-rolled steel increased significantly in 2004 due to a complex array of factors, which Table 1 summarizes.

The primary factor for the steel price increase was the growth in the global demand for steel with China leading the way. The impact of China on global steel prices was indirect because the country didn't have the raw materials necessary to meet production requirements and therefore had to purchase increasing amounts of scrap steel, ore, and other raw materials necessary for steel production. The increased level of raw material acquisitions and the resulting swamping effects on shipping lanes drove up the raw materials prices on a global basis.

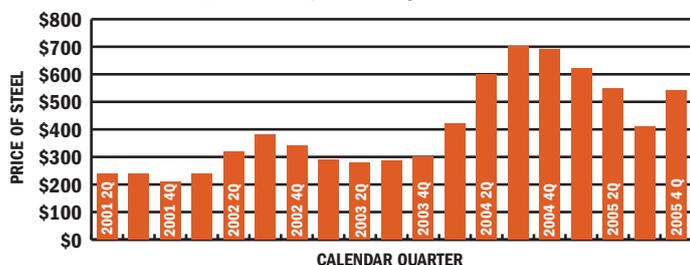
The second factor driving up the price of hot-rolled steel in 2004 was the consolidation of the steel production industry that occurred over the previous five-year period. In 2001, the U.S. steel production industry consisted of a large number of relatively small producers, and many of them were in financial distress. Approximately 40% of the 19 U.S. flat-rolled steel producers were either in bankruptcy or in serious financial condition. The three largest producers accounted for 38% of capacity. The weaker mills kept driving the price of steel downward to keep the cash rolling in to cover operations. By the end of 2004, producers were consolidated to 12, with three companies turning out more than 70% of domestic steel production capacity. Well-managed and better disciplined, these three companies could better maintain prices by slowing production at mills with excess capacity, yet these large producers also could require longer production lead times.

Third, the mills faced a shortage of raw materials. Since steel prices had been depressed for several years, there was little incentive to invest in the mining of iron ore and other steel-producing elements or the production of coke. The lack of investment by U.S. steel producers in

Table 1: Factors Creating the Perfect Storm

FACTORS	PRIMARY CAUSES
1. Increased demand for steel.	China's policy of strong growth since the turn of the century.
2. Consolidation of steel production industry.	Fewer producers in stronger financial condition so no weak competitors undercutting the market.
3. Increased cost of raw materials for the mills.	Decades of limited investment in raw material mining and related infrastructure.
4. Increased activity in nontraditional markets by foreign producers.	Weak dollar in international markets.
5. Low levels of production inventory at the beginning of 2004.	U.S. recession in 2003.
6. Increased prices of scrap steel.	Low domestic generation, a lack of scrap steel in China, and constraints on the export of scrap steel by major scrap steel exporters.
7. Increased shipping costs.	Higher demand for shipping lanes (China, in particular).

Figure 1: Quarterly Steel Prices



raw material assets such as new mines and coke ovens caused the U.S. to depend on South America for its iron ore and China for coke. At the same time, the production demands of China and the rest of the world increased the competition to acquire scarce resources. The result? The escalated global demand coupled with scarce supplies drove up raw material prices, causing producers to pass on raw material surcharges to their customers.

A fourth factor causing the price upsurge was the weak dollar in international markets. Since the U.S. consumes more steel than it produces, it relies on imported steel. The weak dollar made it more advantageous for foreign producers to sell outside the U.S. and thus had an inflationary effect on domestic prices, so the restricted supply of steel from foreign producers pushed domestic pricing even higher.

A fifth factor was the relatively low levels of production inventories at the end of 2003. The U.S. economy was coming out of a recession, and both manufacturing and retail were on the uptick in the fourth quarter. Supply was constrained as manufacturers increased their demand for steel, and the mills could rapidly boost their prices.

A sixth factor was sharply rising prices of scrap steel, which is a primary raw material for mini mills and, to a lesser extent, for integrated mills. The U.S., Western Europe, and, to a lesser extent, Eastern Europe are traditional sources of scrap steel. The price of scrap steel had fallen to historic lows in 2001, and, accordingly, the generation of scrap steel was significantly depressed. When the demand for steel soared a few years later, the demand for scrap also soared. Further, export restrictions

constrained scrap materials from Eastern Europe. Overall, the low supply of scrap coupled with the increased demand caused the prices of scrap materials to double.

A seventh factor driving the price of steel was sharply increased shipping costs. The capacity of bulk carriers to handle the ore and container ships to ship the scrap steel was insufficient, especially given the effect of China's demand on the shipping lanes outside of steel. The excess demand over supply caused shipping costs to soar.

These factors combined to produce the perfect storm for the steel industry in 2004. As Figure 1 shows, the restriction in supply coupled with the increase in demand shot hot-rolled steel prices through the roof.

The dramatic price increases in 2004 were followed by a softening in 2005. After falling to below \$450 per ton in mid-2005, hot-rolled steel prices stabilized in the \$530-per-ton range by the end of 2005. An entire pricing cycle, which is present in the data, significantly impacted Olympic's financial statements.

FINANCIAL EFFECTS

The volatile price environment appears in Olympic's financial results in 2004: While tons shipped increased by 15% over 2003, revenues and gross profits increased by a whopping 89% and 143%, respectively. Net losses of \$5.8 million and \$3.3 million in 2002 and 2003 turned to an all-time record profit of \$60 million in 2004.

Table 2 summarizes Olympic Steel's financial state-

Table 2: Selected Financial Data

(All amounts are in thousands except tonnage)

YEAR	2002	2003	2004	2005
Tons sold	1,158	1,181	1,355	1,280
Sales	\$ 459,384	\$ 472,548	\$ 894,157	\$ 939,210
Cost of sales	\$ 349,608	\$ 372,692	\$ 651,787	\$ 772,739
Gross profit	\$ 109,776	\$ 99,856	\$ 242,370	\$ 166,471
Other expenses	\$ 115,535	\$ 103,116	\$ 182,292	\$ 144,379
Net income (loss)	\$ (5,759)	\$ (3,260)	\$ 60,078	\$ 22,092
Gross profit %	23.9%	21.1%	27.1%	17.7%
Selling price per ton	\$ 397	\$ 400	\$ 660	\$ 734
Gross profit per ton	\$ 95	\$ 85	\$ 179	\$ 130
Accounts receivable	\$ 48,877	\$ 56,501	\$ 93,336	\$ 80,131
Inventory	\$ 101,837	\$ 92,775	\$ 186,124	\$ 134,236
Accounts payable	\$ 28,665	\$ 31,345	\$ 63,680	\$ 77,412
Working capital	\$ 118,724	\$ 113,220	\$ 191,619	\$ 133,052
Long-term debt	\$ 99,820	\$ 92,920	\$ 91,130	\$ 0

ments and includes years other than 2004 for comparative purposes. The effects of the steel price volatility are evident in both the 2004 and 2005 annual financial data.

Perhaps the most notable observation with respect to the 2004 data is the increases in both inventory and working capital, which increased by \$93 million (101%) and \$78 million (69%), respectively, while total debt remained essentially flat (in 2004, the largest increase in working capital occurred in the fourth quarter [31%]). By the end of 2005, Olympic significantly decreased its working capital and eliminated its long-term debt. These results demonstrate how Olympic financed its working capital expansion through operations, a strategy that we'll discuss later.

MANAGEMENT ACTIONS

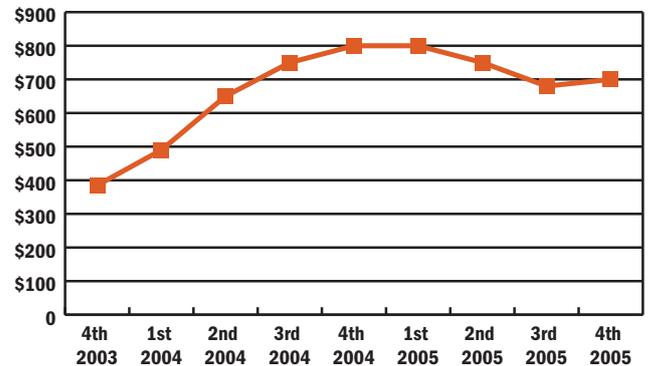
While the level of profitability in 2004 was at a record high, not identifiable in the aggregate numbers is the significant pressure that the volatile environment placed on the company's management, who reacted to the price volatility in four ways.

First, price escalations could have caused existing sales arrangements to be unprofitable. As a result, management had to renegotiate customer-pricing arrangements. Typically, sales to significant customers are backed by pre-arranged pricing agreements with the mills ranging in length from one to 12 months. At the end of 2003, the mills announced a new concept—surcharges. The following are excerpts from a letter written by a major U.S. steel producer:

Beginning with shipments January 1, 2004... (we) will be implementing a raw materials surcharge. The surcharge will be adjusted on the third Monday of each month, based on raw material cost changes from the previous month, and applied to shipments on the first day of the following month. The unprecedented increase in the cost of raw materials used by the world's steel producers (scrap, coke, iron ore, freight, alloys, and energy) can no longer be absorbed through normal price increases. We regret the need to apply this raw material surcharge, and we will remove it as soon as conditions allow.

The price of steel began escalating in 2004, and the mills further increased surcharges and continued to do so for most of that year, backing out of prearranged pricing agreements. As a result, Olympic needed to renegotiate pricing arrangements with its customers. Prior to the start of 2004, Olympic met face-to-face with its customers and explained the situation with the mills. With the exception of only a few customers, Olympic passed

Figure 2: Selling Price per Ton



on the surcharges to them. Olympic's approach wasn't the same as others in that Olympic believed the surcharges would remain in effect for an extended period of time. Some in the industry believed the surcharges were temporary and didn't approach the marketplace as aggressively. Figure 2 illustrates the Olympic price increases. As you can see, Olympic's selling price per ton increased rapidly in the first three quarters of 2004.

Second, management was successful in a very restrictive market of purchasing inventories early in the year and then profiting on the increase in selling price. Forecasts of price increases in the fourth quarter of 2003 and first quarter of 2004 positioned the company to profit from the price increases. Of course, no one could forecast the sheer magnitude of what happened.

Third, the higher prices strained existing credit limits, causing management to renegotiate these limits with both vendors and customers. As Table 2 shows, both accounts receivable and accounts payable nearly doubled in 2004. The swelling of the receivables and payables resulted from the company obtaining increases in credit from vendors and extending additional credit to its customers. Olympic may have had an easier time negotiating higher credit limits with its vendors because it had maintained their discount payer status during the previous downtimes. Conversely, Olympic made it clear to its customers who were paying somewhat slower that they needed to pay within terms to receive a higher credit limit.

Steel prices decreased from September 2004 through August 2005, and competitive pressures forced Olympic to pass these declines to its customers. In addition, inventoried cost was high because of the price run-up in 2004. As a result, profit margins were squeezed in 2005. Table 2 shows that Olympic's 2005 gross profit per ton, while lower than 2004, is at higher levels than 2002 and 2003. In the fourth quarter of 2005, steel service center invento-

ries were at seven-year lows, and imports hadn't increased substantially.

Fourth, management took decisive action to improve cash flow. They shortened the cash cycle and used the improved cash flow to eliminate debt on the balance sheet. Next, we'll discuss the rather unfavorable cash cycle Olympic faced in 2004 and some actions management took to improve the company's financial position.

CASH CYCLE

The consolidation of steel producers forced Olympic to purchase approximately 50% of its steel from three domestic producers. Olympic's customer base is diversified, with sales to the top three customers approximating only 15% of sales. These customers require short lead times, and many are on a just-in-time delivery basis. Accordingly, Olympic must carry significant levels of inventory, and, in the tight 2004 market, Olympic had to buy inventory at rapidly escalating prices. Further, given the relative size and leverage of Olympic's suppliers as compared to customers, the time period for accounts payable is shorter than for accounts receivable. This created a rather ironic situation—a record year in terms of profitability coupled with a severe cash drain on operations. Even though profits increased by more than \$63 million, cash from operations as reported on Olympic's cash flow statement decreased by \$6 million in 2004.

Olympic identified three sources of potential improvement with respect to this relatively unfavorable cash cycle:

- ◆ Lengthening the accounts payable period,
- ◆ Increasing inventory turnover, and
- ◆ Shortening the accounts receivable period.

Olympic traditionally took advantage of a 10-day cash discount period from the steel producers. During the tough steel markets of 1999 to 2003, Olympic negotiated favorable discount terms with cash-strapped producers. As prices escalated in early 2004, however, most steel producers eliminated cash discount offers, and Olympic began paying on 30-day terms. Lengthening the accounts payable period decreased the financing period by 20 days. Conversely, during the tough steel markets of 1999 to 2003, many other steel service centers weren't paying promptly. When the mills began strictly enforcing the 30-day payment period, these companies faced a cash crunch because of the escalating inventory costs and a narrowing payment period.

The second component in improving the cash cycle

Table 3: Cash Cycle

CASH CYCLE	RECEIVE STEEL FROM MILL	PAY MILL FOR STEEL	SELL TO CUSTOMERS	CUSTOMER PAYS	DAYS FINANCED
Historical	Day 1	Day 10	Day 75	Day 120	110 days
2004	Day 1	Day 30	Day 68	Day 109	79 days
2005	Day 1	Day 30	Day 63	Day 104	74 days

was the company's ability to increase inventory turnover. Prior to 2004, Olympic carried steel for approximately 75 calendar days, but by carefully planning purchases it increased inventory turns and shaved approximately seven days off inventory carrying time. The result: By increasing inventory turnover, Olympic effectively reduced the days that inventory had to be financed prior to shipment.

The third component in improving the cash cycle represents relations with Olympic's customers. The company worked with its customer base to narrow the time period for payment by reducing the days' sales outstanding from 45 to 41 days. As Table 3 shows, Olympic reduced its cash cycle by approximately 32% from 110 to 74 days by implementing three improvements: forgoing the cash discount, increasing inventory turnover, and narrowing the time period for payment.

COMPARISON TO INDUSTRY PEERS

A comparison of Olympic's balance sheet to that of other companies in the steel service industry provides a measure of the company's success in implementing the cash management policies. Olympic Steel identified six industry peers in its public filings, all of which discuss the importance of cash cycle management in their public filings. Figure 3 compares the relative leverage of Olympic Steel with the leverage reported by the peer group.

You can observe several items from Figure 3. First, on

Figure 3: Debt as Percentage of Working Capital

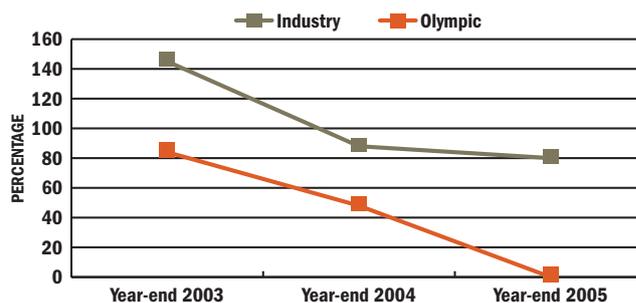
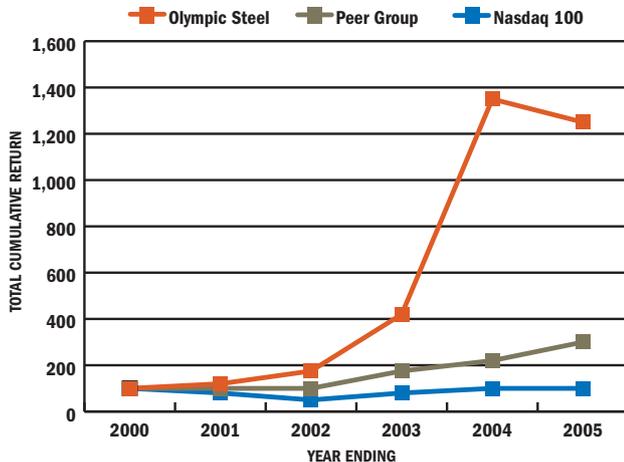


Figure 4: Total Return Analysis



average, all companies reduced their long-term debt as a percentage of working capital during 2004. Thus, all companies benefited from the run-up in steel prices during the period. Second, compared to other companies in the industry, Olympic Steel had relatively less debt on December 31, 2003. The third and perhaps the best demonstration of the effectiveness of the company's working capital-management practices is that Olympic Steel continued to eliminate debt during 2005, a period where debt levels were relatively level for the industry.

As Figure 4 illustrates, the shareholders at Olympic Steel were certainly rewarded in 2004, the focus period of this study. The Total Cumulative Return (X axis) represents total returns from a \$100 investment on January 1, 2000. While the stock price of the peer group also did well in 2004, Olympic Steel's stock price increased dramatically.

LESSONS LEARNED

Steel service centers such as Olympic Steel operate in a very competitive market. Steel is purchased for inventory at the prevailing market price at the time of order. When the price of steel increases, the service centers may or may not be able to pass on the increases to their customers. On the other hand, when prices decline, depending on how competitors react, customers may demand lower prices resulting in lower margins on inventory sold.

Steel price volatility in 2004 and 2005 was extreme, and management interviewed indicated that there was no effective way to financially hedge such price volatility using third parties. There are several initiatives in place to create a steel futures market, but they're in their infancy, so Olympic must turn to other means to protect its profit margins.

Other businesses can learn from Olympic Steel's experience. First, a company's ability to accurately forecast industry demand is critical when substantial inventories are a practical necessity. Late in 2003 and early in 2004, a number of macroeconomic factors fell together to create the perfect storm where steel prices nearly doubled. A company must identify these macroeconomic factors by getting to know suppliers, other competitors, customer demands—and evaluate these factors on a global basis. If these factors indicate a substantial increase on the horizon, then an advance purchase can substantially increase profit margins. On the other hand, a company should attempt to limit purchases at the pricing cycle's high point. The cost of inventory purchased at the cycle's high point will decrease profit margins in subsequent periods.

Second, a company must have a sufficient credit facility in place to finance short-term increases in inventory cost, so it must develop strong relationships with banks. In addition, at the initial signs of price increases, management must meet with suppliers to discuss increasing credit limits and terms. Similarly, resources must be available to meet customer receivable needs. As we illustrated, significant inventory price increases severely strain a company's financial resources, even when the company can pass such price increases to its customers.

Finally, working capital management is a critical factor in managing inventory price increases. Companies must evaluate their policies with respect to purchase discounts, maintain quantities at levels that will increase inventory turnover, and apply pressure to customers to decrease days outstanding.

The extreme volatility of steel prices created a dynamic environment for the steel industry where the relatively basic process of cutting and distributing steel has become much more challenging. By successfully forecasting price increases and effectively managing inventory and working capital, Olympic Steel clearly flourished during this tumultuous period. ■

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