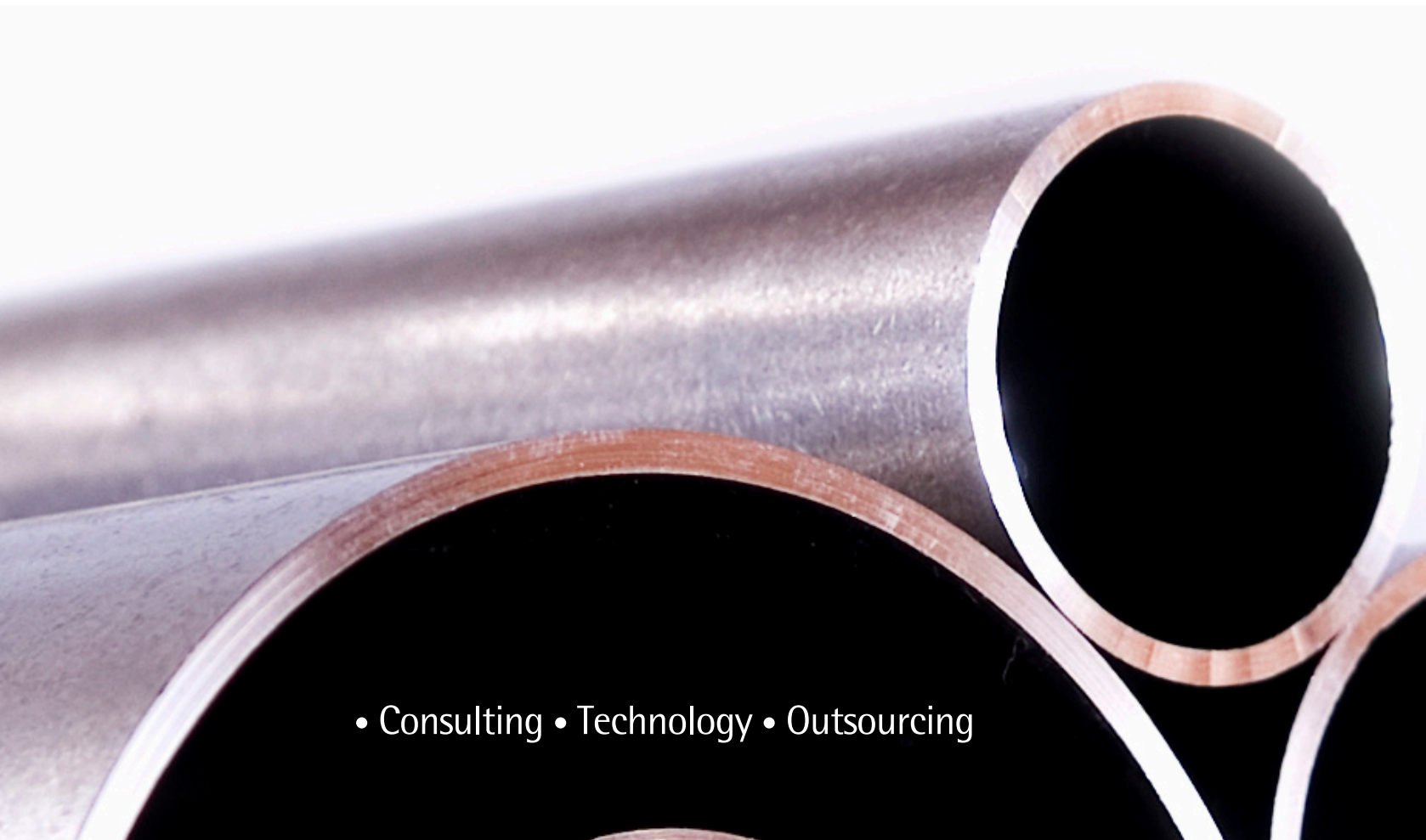
Adapting to New Market Volatility

Developing competitive pricing and trading risk management capabilities for high performance in the steel industry

accenture

High performance. Delivered.



The evolving landscape

Demand for steel in developing economies has created a seismic shift in global raw material markets, as deliveries to emerging markets have eclipsed shipments to the mature economies. This trend is set to continue, as the emerging economies continue their pace of rapid development while the mature economies struggle to regain growth. Indeed, global pricing dynamics for steel and its key raw materials are now largely determined outside of the European and North American regions where the industry was born.

This broad transformation has been accompanied by extended periods of increased price volatility for both raw materials and steel products. The shift to quarterly iron ore pricing, from annual pricing, was imposed on the steel industry by the mining industry in 2010 and is evidence of the increasing volatility of these markets. Regardless of the root cause, increased volatility across the entire ferrous value chain appears to be the new reality. This situation, combined with a dramatic shift in margins in favor of upstream (mining) companies has helped erode confidence in the ability of the global steel industry to manage the spreads between its input costs and selling prices to generate adequate shareholder returns in both the short and long term. This volatility has multiple impacts on steel producers.

New focus from outside the industry

Developing ferrous value chain dynamics are not going unnoticed. In response, there have been well-publicized launches of pricing references, indexes and, most importantly, concerted efforts from commodity exchanges and financial participants to establish tradable contracts that could serve as hedging platforms. Many seasoned commodity trading circles believe they can offer the steel industry sound advice and tools for managing volatility, much of it gained from having been involved with similar evolutions in other commodity markets such as base metals and crude oil. The challenge for the steel industry is to move beyond debating whether or not these platforms are desirable, to determining what tools they can use as a means of coping with volatility.

Accelerated commoditization

Steel companies have long battled against the commoditization of their products by stressing attribute uniqueness or differentiated service offerings. While these are legitimate commercial strategies, the reality is that new entrants into product niches or the ability of more players to match service offerings tends to undercut differentiation over time. Today's increased pricing volatility potentially accelerates the tendency toward commoditization by dominating commercial negotiations to the detriment of product or service differentiation.

Asynchronous pricing movements

The timing of changes in the market prices of raw materials and steel cannot always be synchronized. For example, an increase in the spot price or final quarterly price of iron ore does not imply that a corresponding increase in sales price for steel can be achieved. While in theory this volatility can benefit steelmakers (such as when steel prices rise faster than raw material costs), recent experience suggests these occurrences are shorter lived, certainly in a system of quarterly raw material price adjustments.

Structural margin squeeze

Steel producer earnings have been traditionally based on conversion margin between the cost of ore and other inputs and the selling price of finished coils and shapes. The high levels of volatility can erase this margin in the short time between when producers buy their raw materials and when they are able to sell product to their customers. Longer-term product pricing agreements with customers can further erode these margins.

Decreased forecasting visibility

The effect of price volatility on both sides of the mill conversion equation impacts stability of earnings. This impacts the enterprise's ability to secure financing from a sophisticated, risk-conscious investment community. Other commodity industries where earnings can be forecasted and even hedged from unfavorable market conditions are potentially more attractive investment opportunities.

With increased volatility, a traditional model of pricing steel output at cost-plus (and hoping it meets with a profitable outcome) is becoming an increasingly risky game.

Considering the case for change

First mover advantage

The fear or mistrust that outside speculation may drive a market's price movements is not a means of coping with already existing volatility. Adopting or adaptation of new pricing structures can be a means of solving the problem. Today producers are taking an "uncovered position" anytime they provide a contract price that is good for an extended time period. However slowly the uptake of reference or benchmark prices proceeds, however fragmented the regional price bases may be during the evolution of steel commodity markets, it is likely to be those enterprises that embrace the changes early on and develop their strategies and capabilities accordingly that stand to benefit their future businesses the most.

Flexibility of supply

Having options on when and where to deliver or receive materials can be a differentiator in serving customer needs and can be a decisive factor in contract negotiation. Flexibility is a powerful attribute in this area and commodity-based pricing is, in turn, an important enabler. Price is not the only key term in a steel contract, and increasingly customer options on delivery timings and volume will be an important facet.

Commodity markets, and particularly those in industrial metals, lend themselves well to facilitating supply chain flexibility. For example, there are methods by which material can be stored and financed at limited, manageable or even no cost—depending on market price structures. Also, flexing of volume off-takes at pre-agreed prices may be well facilitated when markets develop further instruments, such as traded options, that enable the risk in flexible contract volumes to be transferred between parties.

Opportunity to protect and enhance margins

Reshaping the terms on how steel producers fix prices by using commodity market pricing can enable opportunities to manage and improve margin through the very volatility that threatens traditional approaches.

Decisions enterprises make on the timing of fixing contract prices and the view of how prices will develop in the future are obviously crucial in any commercial activity, whatever the pricing method may be. Commodity market-based pricing, using widely available published references, introduces improved transparency in the market and can enhance confidence in those decisions. Furthermore, with increasing levels of participation in using such pricing methods, comes improved market liquidity and further enhanced transparency.

These tools can provide opportunities to lock in lower prices on the buy side or higher prices on the sell side and can be used to protect margins for industry participants. Furthermore, the attributes of global price transparency and liquidity enable a strategic and proactive approach to the areas of procurement and product sales.

This approach is enabled in that the relationship between future raw material costs and sales revenues can be largely fixed today, instead of one or both sides of the equation being left open and suffering the consequences of uncertain future price direction. This approach again is the same "spread" mechanism used to lock in a margin defensively, only on this occasion it may actually be a more opportunistic move.

Improving forecasting visibility

Such pricing methods introduce the concept of a price reference used not only for transactions but also for the wider capital markets to assess the potential future earnings of participants in the steel markets. This can enhance the steel enterprise's ability, through use of forward reference prices, to forecast earnings, budget for investment, justify its funding position and, ultimately, build the confidence of its investors when raising capital.

Responding to the new era of volatility

In response to both the increased volatility and the upstream shift in margin capture, many steelmakers are actively attempting to acquire mines. While this strategy makes good sense for some steelmakers, it is not feasible for others due to the extremely high valuations for established properties, huge investment costs and the inherent risks of developing new sites.

For these companies, and even for steel companies which do manage to achieve a measure of upstream protection, there are two paths available to respond to the new era of volatility. They are:

- **"Do nothing,"** or rather, continue to manage sales, purchasing and supply chain processes using the same approaches as in the past, perhaps with a bit more emphasis on attempting to forecast market price movements.
- **Counteract** it by adapting new business models and enabling new operational capabilities.

In the following sections, we present some concepts and suggested approaches for how steel companies might embark on this latter path through the use of pricing mechanisms and hedging.

Begin to build capabilities

In order to enter this new world, steel producers should begin to build trading capabilities. Business resilience not only enhances an existing enterprise risk management program, but includes building steel hedging, trading and price risk management capabilities that focus on the markets and prices most directly affecting margins and revenues.

Develop a trading function

To accomplish this type of hedging and price risk management, steel producers should introduce a new trading function within their main business. The function needs to be integral to the existing business and should serve as the interface between procurement, production and sales and marketing. Pricing raw material purchases, product sales and commodity market hedges become interlocked into a portfolio of varied positions along the value chain, with a core trading function tasked with its management.

Activities the trading unit could perform include:

- Controlling the pricing and timing of raw material purchases.
- Bringing innovation in product sales pricing and the decomposing of sales into commodity market transactions that may serve as hedges—to provide offsetting value should future sales prices move unfavorably.
- Introducing and managing flexibility of contract volumes or pricing—such as the incorporation of options.
- Affecting produce-versus-buy decisions wherever economic value can be enhanced or protected—effectively optimizing the portfolio.
- Recommending delivery to or from alternative sales channels such as cleared commodity exchanges. This can realize nearby value when traditional channels to the customer or production schedules are constrained.
- Recommending and executing medium- and long-term hedging strategies such as locking in raw material-to-product spreads where differentials are favorably wider than budgeted or forecasted.
- Disseminating valuable information gained from daily activities in globally linked markets that may greatly assist the short- and medium-term strategy of the enterprise.
- Enhancing enterprise risk management capabilities.
- Providing essential input to the enterprise's forecasting and budgeting plans.

Some or all of these activities will be applicable to a steel company depending upon the enterprise's level of integration through the steel value chain. Most organizations engaged in trading and risk management activity (where exposure to volatile commodity prices becomes a part of

the fundamental operations of the enterprise) at some point overhaul the entire landscape, framework and architecture of risk management. This overhaul may involve many challenges of shifts in business culture and general attitude to risk. Thus, the path to achieving a level of efficiency and high performance in commodity markets is not lightly trodden nor is any destination quickly reached.

Enable optimization and alternative sales channels

Some exchanges provide facilities for warehousing and delivery of the commodity. Producers can sell production into the exchange when lulls in demand occur or when customers request delayed delivery.

This activity already occurs on the London Metal Exchange (LME) with other metals and now extends to steel billet. It presents a distinct alternative sales channel for product and even provides improved cash flow and reduced payment delays or defaults as the exchanges are generally backed by financially sound cash clearing facilities.

Conversely, the same warehousing can provide a source of product to buy back when production outages occur or demand ramps up ahead of output schedules or raw material availability. In times of increased demand in base metals markets, exchange warehouse stocks on many occasions have been the source of material for the very producers who made it.

Extend and deepen the risk control function

Integrating activity based upon dynamic pricing, hedging and trading into the business generates a need to identify measure, monitor and control the inherent risks associated with those dynamic and volatile prices.

Early on, a company needs to assess its appetite for risk and establish a comprehensive risk management framework and policy. For example, is the enterprise content to engage in commodity trading purely to minimize risk of loss or eroded margin due to unfavorable market price movements (purely hedging)? Or is there a desire to take views on future price movements—or attempting to extend margins?

The risk appetite should not be classified according to the degree of speculation an enterprise wants to take. Rather, it should be based on an appraisal of the competitive landscape and the insights on how the markets for its raw materials and products are developing.

Ultimately, building a trading capability requires the introduction of a risk control function that is not incentivized by favorable market price movements, but is one that helps to ensure risks are being taken within boundaries and support the transparent pursuit of profit-enhancing opportunities.

Enable new operational capabilities

To facilitate the response to increasing volatility, put the desired strategy into action and achieve positive results that reduce the risk of loss or eroded margins, steel producers need to augment or enhance and sharpen how they purchase raw materials and sell finished products. This means developing capabilities that may require significant change to not only policy, strategy, capital allocations and operational funding, but also to the operational processes and supporting technology a modern commodity trading organization needs to maintain and improve the performance of its business.

In running an efficient trading portfolio composed of raw materials purchases, products sales and associated hedging contracts, the trading unit needs to be able to:

- View contractual commitments across materials in common units.
- Capture new types of contractual commitments with new pricing mechanisms.
- Interrogate contract and trade data.
- Capture, view and utilize market price data and information as timely as possible.
- Aggregate and roll up contract and trade data according to criteria such as delivery time periods and commodity pricing date positions.
- Quantify the exposures associated with those positions into clearly understood measures such as current value, unrealized profit/loss and risk measures such as value-at-risk (if in-policy).
- Review and re-value the positions and measures immediately as changes are recorded.
- Capture risk limits or constraints that must be applied to positions.
- Manipulate price and contract data to create scenarios or stress tests of how changes in the market could impact the trading portfolio.
- Report financial performance and reconcile with accounting standards.

These are examples of detailed capabilities required by a commodity trading and risk management function to effectively support a steel company in a more dynamic market. Making these capabilities a reality will require the pragmatic understanding of the current operation and its many processes—plus the vision of how it needs to operate in the future.

Conclusion

Steel companies and other industry participants have an opportunity to improve their overall performance by adapting to the new era of price volatility that has taken root in their markets. There are emerging market tools to help mitigate the problem, and companies need to begin developing the capabilities to use those tools.

Developing a capability that moves the enterprise forward from reliance on a traditional cost-plus-margin focus is the single most significant step to be taken now. This step can help protect producers' margins from intense and increasing global competition in both raw materials and finished product markets. Taking this path can also enhance future cash flow visibility, improving the ability to forecast earnings and helping to make more informed investment decisions.

Starting to engage with the pricing indexes and hedging platforms now, in their early developmental stages, affords the potential opportunity to help shape their future development. And it also can provide early, valuable learning experience for many parts of the organization. While integrating trading and risk management practices into the enterprise is market leading now, it will position steel companies for high performance when the capabilities have become the standard practice of the future.

Current status of iron ore and steels trading platforms and offerings

As of September 2011

Market platform	Commodity	Grade	Location/ region of platform	Contract product type	Contract size	Forward delivery intervals and horizon	Reference/ fixing price index at settlement	Region of delivery commodity	Settlement (physical delivery or financial)
ICE (OTC)	Iron ore	62% Fe fines	Global	OTC swap	1,000 MT	Monthly out to 24 months	Platt's Iron Ore 62% CFR China – month average	China	Cleared OTC financial
NYMEX CME	Iron ore	62% Fe fines	Global	OTC swap	1,000 MT	Monthly out to three calendar years	Platt's and/or TSI Iron Ore 62% CFR China - month average	China	Cleared OTC financial
SGX	Iron ore	62% Fe fines	Singapore	OTC swap	500 MT	Monthly out to 48 months	The Steel Index Iron Ore CFR China – month average	China	Cleared OTC financial
Cleartrade Exchange	Iron ore	62% Fe fines	Singapore	OTC swap	1,000 MT 500 MT	Monthly to three months, quarterly one year, annual to two years	The Steel Index Iron Ore CFR China – month average	China	Cleared via LCH Clearnet, SGX, NOS - OTC financial
MCX	Iron ore	62% Fe fines	Mumbai	Exchange cleared futures	1,000 MT (max trade size applies)	Monthly out to three months	MCX settlement price average of month	FOB Chennai	Physical delivery
Banks/brokers	Iron ore	62% Fe fines	Various	OTC swap	1,000 MT	Monthly	TSI, SBB, others	China	Cleared via LCH Clearnet OTC financial
LME	Long steel	Billet GOST 380-94	Global (London)	Exchange cleared futures	65 MT	Daily to three months, weekly to six months, monthly to 12 months	LME settlement price at expiry	Various across Europe, Far East, United States	Physical delivery on matured open positions
NYMEX CME	Flat steel	HRC	US	Exchange cleared swaps	20 MT	Monthly to 18 months	CRU US Midwest domestic HRC index	United States	Exchange cleared financial
NYMEX CME	Flat steel	HRC	Europe	OTC swap	50 MT	Monthly to 24 months	Platt's month average	Ex Works, Ruhr	Cleared OTC financial
NYMEX CME	Long steel	Billet	Europe	OTC swap	50 MT	Monthly to 24 months	Platt's month average	FOB Black Sea	Cleared OTC financial
DGCX	Long steel	Rebar BS 4449 W 460 B	Dubai UAE	Exchange cleared futures	10 MT	Monthly out to four months	DGCX settlement price at expiry	Dubai	Physical delivery on open matured positions
SHFE	Long steel	Rebar	Shanghai	Exchange cleared futures	10 MT	Monthly to 12 months	SHFE settlement price at expiry	China	Physical
SHFE	Long steel	Wire rod	Shanghai	Exchange cleared futures	10 MT	Monthly to 12 months	SHFE settlement price at expiry	China	Physical
NCDEX	Long steel	Ingot/ billet	Mumbai	Exchange cleared futures	10 MT	Monthly to five or six months	NCDEX settlement price at expiry	Ghaziabad, plus others	Physical delivery on open matured positions
MCX	Long steel	Ingot/ billet	Mumbai	Exchange cleared futures	10 MT (max trade size applies)	Monthly out to three/four months	MCX settlement price at expiry	Ghaziabad, plus others	Physical delivery on open matured positions
NYMEX CME	Steel scrap	HMS I & II 80:20	Europe	OTC swap	100 MT	Monthly to 24 months	Platt's month average	CFR Turkey	Cleared OTC financial
NYMEX CME	Met coal	Australian hard cooking	Global	OTC swap	1,000 MT	Monthly to 24 months	Platt's month average	Peak downs	Cleared OTC financial

Note: CME – Chicago Mercantile Exchange; Dubai Gold & Commodities Exchange; ICE – Intercontinental Exchange; LME – London Metal Exchange; MCX - Multi Commodity Exchange of India Ltd.; NCDEX - National Commodity & Derivatives Exchange Ltd.; NYMEX - New York Mercantile Exchange; SFX - Shanghai Futures Exchange; SGX – Singapore Exchange.

About the authors

James Ghazala is a senior manager in the Accenture Commodity Trading and Risk Management Services group. Based in London, he leads the offering globally for the metals and mining sector and is involved with client engagements in the energy space. Mr. Ghazala's experience spans 20 years in commodities commencing as a physical metals trader and marketer having daily dealings with industrial producers, consumers and merchants, as well as the metals futures and options markets. This experience has been followed by roles in consultancy and investment banking centered on enabling metals and energy businesses to expand, improve and adapt their trading portfolios and risk management capabilities through applying his firsthand understanding of commodities business strategies and market structures as well as the platforms on which the business is processed.

james.d.ghazala@accenture.com

John E. Lichtenstein is the managing director of the Accenture metals industry group. Mr. Lichtenstein has more than 20 years of experience as an industry executive and consultant to the global metals and mining industries. He works with leading companies in the areas of strategy, technology, mergers and acquisitions, globalization and business transformation. Mr. Lichtenstein is a recognized expert on industry issues and has written numerous articles for industry publications. He holds a Bachelor of Arts degree from Yale University and a master's degree in business administration from the Yale School of Organization and Management.

john.e.lichtenstein@accenture.com

Kinsley Sykes is a senior director in Accenture's North American Natural Resources Strategy group. His team works with companies in metals, mining, forest products and building materials. In his 15 years with Accenture, Mr. Sykes has worked across these industries on a variety of strategic consulting projects, including pre-merger due diligence, merger integration, growth strategy and operating model design. Before joining Accenture, Mr. Sykes spent 15 years as a marketing executive at two major North American forest products companies. He is based in Atlanta.

kinsley.sykes@accenture.com

About Accenture

Accenture is a global management consulting, technology services and outsourcing company, with approximately 236,000 people serving clients in more than 120 countries. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world's most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. The company generated net revenues of US$25.5 billion for the fiscal year ended Aug. 31, 2011. Its home page is www.accenture.com.

11-1909/11-3722