Managing Business Risk in
Building Materials & Supply

Executive Brief - First Quarter 2008

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The building materials and supply industry has its own rhythm, oscillating up and down with changes in seasons, economic turns, and the boom and bust cycles of housing starts and commercial construction periods. These business highs and lows compound the risks of expanding into new regions and product lines, going after larger business opportunities, and being a one-stop full service supplier for a demanding customer base.

This industry is made up of mid-size businesses that have persevered for decades through many hardships and survived because of their entrepreneurial spirit, niche focus, measured growth, and local business relationships. As these businesses have grown to serve multiple regions, bigger jobs, more customers, and additional products, they put themselves at greater risk.

The risks building materials and supply companies face include:

- Losing business to other regional competitors who are more proactive in meeting customer needs and their changing requirements
- Carrying excess inventory to ensure on-time and complete deliveries of materials and supplies on a moment’s notice during fast and slow periods
- An inability to accurately and profitably quote jobs that are larger, more complex and unique, in a price sensitive and competitive market
- Failing to stay in compliance with regulations used to govern construction industries

The majority of businesses in this industry grew from sole proprietor or partnership roots and relied on manual systems. Many of them have grown into sizable operations without a common business system across every department. An enterprise-wide system provides controls and visibility throughout the business. Companies lacking this common and real-time information source find it difficult to see and mitigate risks as they arise.

Proactive Customer Services

The building materials industry is inherently customer driven, where the customer is always right. Its roots started and continue to be local and face-to-face with property owners, contractors, landscapers, interior designers, and architects where the materials and supply are part of a customized solution for a specific application. As companies get larger, they also work closely with dealers and distributors and serve both commercial and residential markets.

Customers look for companies they can rely on and are easy to do business with, and they quickly spread negative impressions of any company that fails to meet promises, sells poor quality materials, or costs them money. The criteria customers look for are businesses with wide product mix, design customization, lowest price, highest craftsmanship, immediate availability, on time delivery, and excellent service responsiveness. More recently they began requesting innovative designs, use of new types of materials, and green credits - specifically Leadership in Energy & Environmental Design (LEED) credits.

To assure positive customer experiences, building material manufacturers, and distributors are becoming more proactive. They are stocking and reselling complementary products to round out their niche areas of specialty, adding showrooms and design services, and offering project management from initial consultation and onsite measuring to material specifications and final
installation, as shown in Figure 1. Many are also moving quickly to offer green products and demonstrate leadership in environmental design to maximize market opportunities.

![Figure 1: Competitive building material & supply companies are staying ahead of customers to meet and exceed their expectations by expanding product lines and materials, offering design and site installation services, and going green.](image)

In an attempt to meet and exceed customer expectations, these companies put themselves at greater risk of damaging profitability on products and projects. They are carrying higher levels of inventory that may be externally sourced, trendy, slow moving, or dependent on the sale of their flagship product lines. When the market suddenly changes, they may be forced to write off a portion of these inventories. Leading building materials and supply companies are addressing this with advanced demand planning and inventory management systems that take regions, seasonality, building cycles, design trends, product families, and planned projects into account. Many companies have also implemented Internet-based supplier networks to increase demand and supply visibility, vendor managed inventories (VMI), and restocking on an as-needed basis.

The greater challenge, however, is profitable project management. More companies are choosing to take on project responsibility in exchange for the high margin potential. However, that responsibility includes the risk of being held financially liable for delays, cost overruns, errors, or problems. Building projects are fraught with misunderstandings, design changes, and specification inaccuracies along the project lifecycle. Material suppliers have their own problems that need to be factored into the risk of project management. These include inaccuracies in estimating and order conversions, sourcing delays, poor visibility of material status and location, production backorders, and customers backing out of jobs.

Proactive companies have upgraded their business systems to support cross-functional collaboration, decision making, and process execution. They are integrating systems to enable those in sales, design, engineering, production, sourcing, warehousing, project management, and site management to work as a cohesive and informed team. Together they are more involved in design and site planning, can spot problems faster, and have greater visibility and control over the lifecycle of a project or client engagement. To minimize the risk of low margins or financial losses, companies are relying on advances in their enterprise systems to assist them in better managing customer relationships, sales estimating and promising, contracts, projects, and delivery performance of materials (see Figure 2).
Just in Time Fulfillment Reliability

Builders, contractors, landscapers, and property owners rely on building material suppliers to fulfill orders as promised in order to keep projects on time, on budget, and on spec. Accuracy and reliability are key fulfillment performance measures. So is the ability to meet requests on short notice. Those that can’t respond quickly and reliably lose their competitive advantage to those that can.

Accuracy is crucial, and the best way to assure it is by getting directly involved with customers to design and detail a project. More companies now send pre-sales designers and post-sales field technicians out to customer sites with mobile application devices to provide technical advice, detail the material specifications, and oversee the final installations. This limits the risk of inaccurate layout measurements, bad designs, and installation problems that could lead to a damaged reputation, or force absorption of additional costs.

Product availability is equally critical, as shown in Figure 3, whether it is for a walk-in request, short order fill-in, or custom produced item. Today, most building supply companies strive to be a one-stop source for their area of specialty, so they are investing a significant portion of working capital to stock enough inventories to ensure they don’t lose sales to a competitor. The risk is overstocking items that don’t sell, but this industry has to weigh that risk against long sourcing lead-times and paying a higher price for buying raw or milled materials in smaller quantities or off contract.

In some cases, companies own the raw materials needed to mill and fabricate their products, and for them the issue is planning and scheduling the right product mix. Most, however, source materials from select suppliers in other parts of the country or world. These are produced and sold seasonally, so they are inclined to over stock.
The most reliable material and supply manufacturers and distributors have turned to demand, inventory, and production planning systems to balance the need for high product availability with minimal stocked inventory. There are still risks, because forecasts are inevitably wrong and the industry model is to produce to capacity or to forecast. To further reduce those risks, there is increasing interest in producing to demand by applying Lean manufacturing principles to shorten supply chain lead times and fabrication cycle times.

The final factor in reliable fulfillment is scheduling the mills or fabrication plants in coordination with site project schedules, field service technicians, and transportation providers. Everything has to line up or companies risk financial penalties and expediting costs when schedules are delayed or material and supply deliveries show up at the wrong time.

This is even more complex for companies overseeing site projects or operating their own vehicles. They must carefully synchronize resources across their organization and third parties, and this is most easily done with a system that fully integrates order promising, production scheduling, project management, and transportation scheduling. Others must figure out how to determine a promise date that isn’t too early or too late to the site. This takes a system designed to coordinate many line items and attribute specifications of an order. It also takes efficient and streamlined warehousing and transportation capabilities to ship on time as promised (see Figure 4).

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Cost Controls for Competitive Profitability

The building materials and supply industry is asset-intensive and in many cases vertically integrated, which carries a high cost. On the one hand, these firms have greater control of their raw materials and supply chain costs by owning and overseeing their own supply sources, mills, production, distribution, and installations. On the other hand, these assets can turn quickly into a liability when the economy or housing market changes. Companies in this industry very often carry a yard full of material and vehicles, high levels of inventory, buildings, and storefronts. Most also have either a milling or fabrication operation, and some have their own mines for sourcing raw materials.
The risk of carrying such high assets is even greater as companies in this industry expand into new regions and find themselves dealing with more competition. In the past, building materials manufacturers and distributors had few competitors and consumers were less sensitive to price. Today the industry competes on price, which cuts into margins and profitability. To remain both competitive and profitable, companies are beefing up their customer services and focusing on cost reduction and controls, as shown in Figure 5.

Profitable building material suppliers have learned that cost controls are needed in both good times and bad. This is a change in thinking from previous years, when housing upswings meant loosening the reins on costs. More companies are getting a better view of their costs by capturing and analyzing data from specific areas of the business, and they are discovering considerable waste, process redundancies, conversion errors, transaction and estimate inaccuracies, and poor decision making that is impacting their profitability. They are also facing higher costs for energy, transit, and raw materials. Unlike the past when profits where more easily attained, few companies can risk runaway costs.

The way building supply companies are getting a handle on costs and keeping them in control is with integrated operational and financial systems that provide comprehensive cost accounting oversight specific to jobs and project management, along with exception reporting, performance monitoring, expense tracking, and inventory management (see Figure 6). They also need the ability to fully capture actual job, engineering activity, and resource costs to more accurately estimate jobs and make a profitable bid. Those that source and resell materials and supplies can further reduce costs by closely monitoring supplier performance, negotiating contracts, locking in commodity prices, replacing manual processes with electronic procurement, and on-line connectivity.
Adopting Standards to Comply with Government Regulations

The construction industry is heavily regulated and it is the duty of contractors and designers to appraise hazards and their associated risks in order to minimize them. This includes material manufacturers and supply distributors when they are taking an active role on a commercial or residential site. Worker safety is a primary issue on and off the site, and the Occupational Safety and Health Administration (OSHA) has created Local Emphasis Programs to increase their enforcement of safety regulations in the building trades at the local level. Of particular interest to OSHA are companies selling concrete, stone products, landscaping services, roof trusses, sawmills and lumber products, from which workers have suffered considerable injuries.

Failing to comply with OSHA regulations leads to large fines and penalties, and puts companies at greater risk of being more closely scrutinized in the future. The Environmental Protection Agency (EPA) has also stepped up efforts to monitor this industry. The EPA is tightening the emission regulations for carbon dioxide, which impacts mills and fabricators across the building materials industry. They are also monitoring the use, discharge, and disposal of hazardous substances that result from operating facilities or formerly owned sites.

To reduce the risk of non-compliance and improve the bottom line, more companies are strategically implementing programs to proactively protect the environment and their workers. Many building materials and supply companies are adopting environmental standards from the International Organization for Standardization, known as ISO 14000, as shown in Figure 7.

Companies use ISO 14000 as a management tool to identify and control the environmental impact of their operations, improve their environmental performance and drive a systemic approach using their business systems to manage environmental performance goals and measures. Most – if not all – monitor and report on emissions, energy efficiency, worker health and safety, as well as chemicals and hazardous substances. Companies that track compliance as part of their integrated enterprise system can automate the process for faster reporting, as well as receive immediate workflow notification to implement appropriate change procedures (see Figure 8).

### Figure 8:
System functions necessary to comply with government regulations and support ISO 14000.
Reducing Risks in a One-Stop Full Service Industry

Building material and supply companies serving the construction and building renovation markets have expanded beyond their roots as small shops and yards into multi-regional organizations. With this expansion have come greater financial risks that are challenging to address.

Customers are no longer content with limited selections and standard lead times. They have more choices and are turning to suppliers that have the best price, selection, flexibility, and services. This puts traditional local suppliers at risk of losing their customers, and gives growth-oriented companies an opportunity to proactively gain market share by expanding heavily with larger inventories, greater capabilities, and more services. Such growth, however, puts these larger operations at high risk when the construction market or economy slumps. They are also more likely to take riskier projects that offer higher margins. Those who make these moves without an integrated system may struggle to accurately cost their bids for assured profitability or stay in regulatory compliance.

This is why leading companies in the building materials and supply industry are turning to next-generation information technologies and enterprise systems to increase control over their processes and costs. They are implementing systems that can support vertically integrated businesses, regulatory monitoring, cost controls, industry specific functionality, and operational scalability.

About Industry Directions

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