Supply and Demand Risk Management in Turbulent Times
With consumer confidence shaken and spending curtailed, businesses are facing some of the most challenging operating environments in modern history. Companies are realizing that the traditional tools used to counteract a downturn are not enough. To deliver the desired results, executives now need to focus on the more difficult tasks of managing complexity throughout the supply chain and improving the linkage between finance and operations.
Managing Complexity

Although these issues are important at all times, current conditions have made the alignment of financial and operational planning, along with rigorous scenario-based supply chain evaluation, more important than ever.

Many of the more easily addressed operational inefficiencies have already been tackled with some level of success. These opportunities were predominantly focused on improving single functions and independent departments, shutting down facilities, and reducing headcount. Such efforts were typically enough in the past, but not now.

Financial pressures are prompting companies to closely manage their operations to reap the greatest benefit from their cash and liquidity. With cash-to-cash improvements and total cost management a major focus, companies are striving to improve their metrics and financial accountability and better manage complex operations.

Managers seeking a greater level of cost reduction and cash conservation have begun to address processes that span multiple functions, departments, entities, or facilities. These processes are more complex but can result in substantially higher levels of cost reduction.

As a starting point, executives can focus on improving efficiencies in three critical supply chain areas: integrated planning, supply risk management, and demand risk management (see Figure 1).

These three areas not only require a high degree of internal coordination and closely aligned metrics but also can consume a high level of cash and unplanned investments closely tied to fluctuating supply and demand from external suppliers and customers.
Key activities, such as sales and operations planning, supplier risk management, and customer/portfolio management, should be revisited to adapt them to the pressing needs of cash availability (see chart below).

Following is an in-depth look at the three critical supply chain areas and how managers can change their processes to address turbulent conditions.

### Integrated Planning

To better align financial and operational plans, leading companies have relied on a top-down sales and operations planning (S&OP) process driven by sales and marketing groups working closely with the operations and finance team to disaggregate the financial plan. The cross-functional information is then used to drive consensus and create the unconstrained and constrained supply plans.

The ability to execute this process effectively has been challenging to companies because of the misalignment of metrics or competing priorities, particularly in today’s dynamic environment. This inability to effectively integrate assumptions, expectations, and requirements in a single forecast has contributed to a slow response to the crisis and a rapid build-up of raw materials, components, work-in-process, and finished goods inventory. As demand dramatically decreased, many companies were not able to effectively manage their inventories, leading to excess, and in some cases obsolete, inventory.

Today’s difficult times have exposed inadequacies in enterprise-wide planning in areas such as speed, accuracy, accountability, and control. The finance team needs to be more involved in driving the integrated planning process with financial data. The result of this process should no longer be a production plan but rather a more comprehensive financial plan and cash flow projection that accounts for the risk associated with the suppliers and customers. To drive this level of financial and operational integration, some companies are addressing pricing and operational planning priorities in an integrated fashion across

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<th>Process</th>
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<td><strong>Alignment of financial and operational planning</strong></td>
<td>Monthly executive reviews leading to weekly operations plans focusing on customer demand</td>
<td>Participants in the planning process should include finance, sales, operations, and engineering. Focus should be on enterprise-wide cash flow and a defined process to plan, execute, compare, and adjust plans, while requiring organizational accountability.</td>
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<td><strong>Supply risk management</strong></td>
<td>Contract-based performance management and strategic supplier reviews completed periodically</td>
<td>Defined review process should be integrated in the overall planning process, which should include cash-based scenarios and risk-mitigation strategies.</td>
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<td><strong>Demand risk management</strong></td>
<td>Market- and sales-driven forecasts, evaluation of customer demographics, shelf-space optimization, and product synergies</td>
<td>The best possible demand signals (point of sale, customer forecast, etc.) should be leveraged. Scenario-based planning should be focused on product and channel optimization to enhance cash flow from sales and operations.</td>
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Source: KPMG LLP (U.S.), 2009
business units. As a result, cash flow planning decisions around marketing expenditures and discounts, as well as the impact of variable expenses, should become more tightly controlled.

Over time, this shift will affect supporting enabling technologies. Traditionally, master planning system horizons have been shorter than those associated with the S&OP processes, which drove decoupling of the plans to a certain extent. As the need for cash and operational management has increased and leading companies are striving to conduct more accurate scenario planning, an integrated and frequently updated business and operating plan is required.

**Supply Risk Management**

The disruptions to a company’s operations and cash position due to supplier shutdowns or key-customer bankruptcies can be disastrous. These risks introduce heightened levels of uncertainty throughout the value chain. And when suppliers or third-party providers experience financial difficulties that impact operational performance and cause slowdowns, it is difficult to understand portfolio and channel margins to appropriately manage capacity requirements while focusing on cash-positive production. Furthermore, customer instability can result in the need to reorder allocation priorities and credit terms (i.e., the traditional “best” customer may no longer be the “best”).

When looking at the entire value chain, any substantial delay of parts or components availability can lead to plant closures or even bankruptcy. Consequently, it is critical for companies to monitor and work closely with their suppliers to develop contingency and risk-mitigation plans to offset a potential major disruption of critical procured parts or components as well as inbound material.

These contingency plans should contain at least three major areas of focus:

- **Better identification of critical suppliers or vendors.** Companies need to revisit who their critical suppliers and vendors are in light of changing customer buying trends. For example, tooling, once considered critical, may no longer be required; or the shift in commodity prices and excess capacity have provided the opportunity to use other material or suppliers that previously would not have been an option.

- **Better understanding of key suppliers’ and vendors’ challenges and major issues.** Providing production plans and anticipated-demand schedules is no longer enough; companies need to understand the viability of critical suppliers and the impact on operations if they fail. In working with suppliers and carriers, managers should evaluate their performance from these perspectives: **operational performance**, focusing on quality, on-time delivery, capacity issues, and flexibility, and **economic performance**, focusing on financial statements and cash position. This performance assessment should result in an overall rating of suppliers and carriers and the risks the company bears by working with each of these organizations.
Increasing awareness of current market and industry forces. This is critical because it enables a company to have better visibility into pressures and stresses, not only within its own organization but also within its suppliers and vendors. Elements such as competitiveness, market characteristics, trends, emerging technologies, and availability of substitutes provide insight into the positioning of current suppliers and carriers compared with other players in the market.

The mitigation plan in combination with the risk profile of the company should enable a quick and comprehensive response should a major supplier, vendor, or carrier fail. The result of this exercise could be consolidating suppliers, leveraging suppliers across the enterprise, or seeking new companies that can step in when and if needed.

Another element of supply risk management on a more tactical level is improving internal cross-functional coordination, as well as external collaboration with the supplier or carrier, by redefining and enhancing certain processes and structures.

Such improvements could include:

- More frequent communication among the enterprise’s stakeholders to identify potential issues early, allowing for the integration of response plans and a faster reaction throughout the supply chain. Rapid response teams can be assigned to specific cross-functional processes or resources to expedite this process.

- Enhanced operating reports, which provide input but also dramatically enhance monitoring and communication (e.g., purchase order delivery or placement status, past-due manufacturing, inventory balances, and capacity/load balancing). Comprehensive reports can also provide engineering/technical status (e.g., drawing release status, engineering/construction/operations status, and test status) and benefit both supplier and customer organizations as well as cash position.

- Financial status summaries (e.g., receivables, payables, working capital, and overall company financial health), used with operational data, provide high-level information to facilitate better decision making and risk mitigation.
Demand Risk Management

The dynamic economic environment has increased the difficulty of achieving reliable demand forecasts. Reviewing historical sales or seasonal demands does not offer guidance. To deal with this type of uncertainty, companies can turn to scenario-based forecasting, in which managers define alternative scenarios and identify a range of possible outcomes. Companies develop various forecasts and plans based on these scenarios, which will enable them to act quickly by pulling the alternative that best matches the circumstances they are experiencing.

Figure 2: Alternative Possible Outcomes

Scenario-based planning better positions an organization to react to fluctuations in demand and could at times compensate for inflexibility in operations. Some of the key steps of the scenario-based planning process are to:

- Determine the focus of the evaluation and the key factors and events affecting the focal area
- Identify the driving forces behind the key factors (credit, competitiveness, cost structure, infrastructure capabilities, environmental trends, etc.)
- Rank critical uncertainties and begin to develop different outcome scenarios
- Identify early indicators (observable variables, factors, or events that suggest a particular scenario is unfolding) of a probable outcome
- Integrate the results of the developed scenario, which is currently evolving, into the planning cycle.

To respond to uncertain environments, companies can establish scenario-based process playbooks that enable them to effectively react to varying external pressures and challenges. A great level of flexibility is obtained by tailoring the approach to the specific needs of the company and involving a cross-functional team, as in the S&OP process.
Conclusion

No one can accurately predict when the economy will turn around. But what is certain is that when the dust settles there will be winners and losers, and those companies that can effectively manage demand and supply chain risk will be in a better position. Breaking down silos with a keen focus on enterprise planning and managing supply risk will be critical.

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