In many organizations, increased volatility in supply and demand has created new challenges for the chief financial officer. Genpact research shows that commodity swings, unpredictable shortages, and demand fluctuations can tie up working capital, reduce revenue, constrain cash flow, and cut profit, all while complicating the budgeting process. These conditions also raise risks of delivery failures, customer dissatisfaction, and even regulatory noncompliance. Not surprisingly, finding new ways to manage volatility has become a priority for CFOs. Inventory optimization lies at the heart of a data-driven, operational solution that analytics centers of excellence (COEs) and global business service (GBS) organizations can foster with the CFO’s sponsorship.

Previously, volatility in the global value chain was often triggered by episodic events—natural disasters, military conflicts, or other unexpected events. Today, volatility is the “new normal,” the result of a wide range of factors including global population growth, climate change, technology-enabled disruptive business models, and lingering uncertainties stemming from the 2008 financial crisis.

These conditions make inventory a more complex supply-chain issue, and turn it into a material financial challenge with the potential to significantly impact company valuation (see Fig. 1).

**Ultimately, suboptimal inventory levels hit company value**

- **Poor win rates** due to inaccurate costing and bid management
- **Lost revenue** due to poor terms and conditions compliance and sub-optimal projections
- **Cost creep, mainly due to sub optimal failure forecasting**, erodes margins under fixed pricing models
- **Scope creep** due to non-compliance of terms and conditions directly adds to cost
- **Higher cost of short-term finance** due to volatile working capital requirements

**Opportunity cost:** Unlocked working capital could fuel growth

- **Inflated working-capital** levels due to suboptimal and volatile inventory levels of critical spares
- **Annual contracts and pay-per-period billing** puts further pressure on working-capital in capital equipment/high-value critical equipment industry
- **Revenue/contract risk due to premature contract termination**
- **Contract penalty clauses, counterparty risk, forex risk, geopolitical risk, etc.** for global service organizations

*Figure 1. Poor inventory practices can affect a company’s cash flow, revenue, cost structure, and valuation.*
Given these high stakes, CFOs are starting to carefully scrutinize the role of inventory as a stabilizer against volatility – as well as a potential material threat if left unmonitored. The financial view, and the role of the CFO, are a useful complement to the supply chain and demand forecast. In our experience, the CFO should focus on three macro areas: cash and P&L; budgeting and planning; and risk management.

**Cash and P&L management:** Suboptimal inventory levels are especially damaging during volatile periods because they amplify swings in financial performance and make it much more “noisy” and difficult to manage. Genpact’s research has found that inefficient inventory practices can drive up working capital needs by 5-10 percent. Excess inventories can reduce cash flow by 4-5 percent, while frequent stock-outs can reduce sales 2-3 percent. All of these effects can cut profit materially and are accentuated by volatility.

**Budgeting and planning:** Increased volatility leads to ineffective or inaccurate pricing and inconsistent availability of goods, leading to incorrect forecasting and budgeting. The combination of fluctuating demand, shorter product cycles, and changes in commodity markets can force companies to make frequent—even monthly—changes in sales, operations, and resource-allocation plans. Systematic stock-outs or write-offs of obsolete inventory are another cause of large swings in actual performance compared to plan. Finally, incorrect assumptions regarding working capital needs (stock, replenishment, obsolescence) cause suboptimal investment in other areas.

**Risk management:** While supply chain managers must ensure goods are shipped or delivered on schedule, it is in the CFO’s interest to reduce the risk of these shipments translating into revenue at different times — or prices—than expected. The role of inventory in fulfilling demand is well understood, but the magnitude of the challenge is now such that CFOs pay greater attention.

Being caught with too much or too little inventory creates many different risks. As product lifecycles shorten in many industries, excess inventory can quickly become obsolete, forcing profit-killing write-offs. Genpact estimates that companies with poor management in this area risk regularly writing off 5-10 percent of inventory as obsolete. Conversely, organizations can also incur penalty payments to customers if they are late with —or unable to fulfill —contractual orders due to supply shortages. Again, volatility makes the practice of inventory management more difficult – and critically important.

And then there are regulatory and compliance risks. In industries such as chemicals and pharmaceuticals, companies can face regulatory action if they are left with obsolete inventory that creates environmental or waste-disposal risks.

**The CFO’s role in orchestrating defences against volatility includes new thinking around inventory optimization**

As discussed, increased volatility requires companies to take a more proactive approach toward managing its associated risks. CFOs should encourage supply-chain leaders to rethink inventory management and optimization by applying data-rich analytics. CFOs are well-positioned to do so for two reasons.

First, inventory management affects many functions, including finance, procurement, sales, and supply-chain operations (see Fig. 3). The CFO’s organization can become an effective orchestrator by focusing holistically on the determinants of company value (revenue, profit, asset intensity, and financial risk) as opposed to narrower views such as units or volume sold, or even revenue alone.

Second, the CFO has historically spearheaded the consolidation of support functions into COEs and shared services, more recently triggering the move toward multi-function decision and processing support organizations (GBS), both internal and those managed by partners. These are excellent delivery engines for the “heavy lifting” that inventory optimization data analytics require.

**Inventory planning sits at a critical intersection of finance, supply chain, procurement, and sales**

![Figure 2. Inventory planning sits at a critical junction of finance, procurement, sales and supply-chain operations.](image-url)
An industrialized, data-driven solution

As a consequence, the CFO’s organization can play a dual role in facilitating strategy and execution around inventory in times of volatility.

First, foster the adoption of scientific, data-driven practices. CFOs can show the way toward the adoption of financially savvy, data-driven business practices as mature as the ones that the best FP&A uses. The key typically rests in combining experience in business-process and supply-chain management with tools and analytics. In our experience, five modules are necessary to address the most critical issues: visibility management, inventory segmentation, inventory planning and optimization, demand forecasting, and obsolescence management. These modules can be deployed individually or sequentially, since they use the same IT platform and tools.

Secondly, transform to an appropriate target operating model. The CFO must ensure that such practices are scalable and cost-effective so that they can be viable in the long term. CFOs are typically well aware of the power of shared services for the right type of data-intensive work, and should use that experience to help colleagues innovate their own business support operations. Given the material bearing of such work on financial performance, it is also likely that the CFO’s organization is heavily involved in running it as part of a finance-driven SSC or GBS.

Our experience at your service

Our inventory optimization solution leverages the extensive skills and resources developed during our years as a subsidiary of GE. We combine custom analytics and our proprietary inventory optimizer tool, as well as experience in business process management, supply chain management, six sigma, and Lean disciplines to develop actionable solutions for clients.

As a leader in inventory optimization, we have helped clients that manage more than $5 billion in inventories and 500,000 different SKUs generate a combined $250 million in savings. Our solutions help clients segment inventories by customer, cost, product line, and other categories. This enables them to plan and optimize inventories across multiple sites, build demand forecasts and simulations that predict future inventory needs, and create strategies to reduce the risk of inventory obsolescence.

We employ more than 250 experts in supply chain analytics and more than 150 inventory specialists across three locations. Our global delivery model provides cost efficiencies and enables Genpact to leverage local market insights. Most specialists have advanced degrees, possess experience in multiple industries, and have experience leading third-party applications including FGS, Servigistics, and i2.

We also bring to each assignment proprietary tools that are modular, configurable, and technologically unobtrusive to supplement current ERP and IT infrastructures. This includes our integrated forecasting application - PRODE - and our proprietary inventory optimizer tool.

We provide inventory optimization services one-time or long-term engagements. Using a modular approach and flexible cloud delivery, we can deploy solution modules in as little as two months. That, in turn, can enable clients to generate results as early as four months—with little to no upfront investment.

For more information, visit our website dedicated to inventory optimization. Our experts are also ready to help you diagnose your situation.
About Genpact

Genpact Limited (NYSE: G), a global leader in business process management and technology services, leverages the power of smarter processes, smarter analytics and smarter technology to help its clients drive intelligence across the enterprise. Genpact’s Smart Enterprise Processes (SEPM®) framework, its unique science of process combined with deep domain expertise in multiple industry verticals, leads to superior business outcomes. Genpact’s Smart Decision Services deliver valuable business insights to its clients through targeted analytics, reengineering expertise, and advanced risk management. Making technology more intelligent by embedding it with process and data insights, Genpact also offers a wide variety of technology solutions for better business outcomes.

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