Resolving pressure points and building towards resilience

COVID-19 supply chain and finance stress testing
Strategy & Operations

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kpmg.ch
From one day to the next, the COVID-19 pandemic caused the largest quarantine in human history. Its impact on businesses in all sectors is unparalleled. Markets are experiencing rapidly changing demand patterns driven by COVID-19. At the same time, many businesses struggle to maintain their end-to-end supply chains as quarantine measures and governmental restrictions cause disruptions in operations and supply chains. These impacts on the day-to-day business cause top and bottom line effects in companies’ P&Ls, which in turn adversely influences the cash situation of many businesses.

Below, we have summarized the key business areas impacted by COVID-19, also giving an idea on what pandemic crisis management should focus on the most.

COVID-19 impact areas – Where to focus?

Disruptions and changes in demand
- Look at multiple demand scenarios to evaluate high-risk areas and potential level of exposure
- Create scenarios over the short, mid and long terms on customer demand to enable planning for current and potential future disruptive scenarios
- Balance global inventories better in order to increase efficiency

Disruptions in supply chain and operations
- Determine the exposure level in the supply chain for products regarding:
  - Sourcing from suppliers and extended SC up to tier 2 suppliers
  - Production sites
  - Packaging Sites
  - Distribution Network
- Evaluate substitutions for sourcing, production capacities and distribution network
- Evaluate inventory (safety stock buffers, prioritization and increase of levels)

Financial impact forecasting
- Fully integrate financial and supply chain data to ensure full supply chain control and cost transparency
- Make visible financial impacts and forecasts based on changes in demand and supply immediately
- Identify highest financial exposure based on high-risk demand and supply scenarios
- Outline cash requirements and networking capital effects of the different scenarios

KPMG has been involved in the supply chain and finance testing approaches in view of COVID-19 from the very beginning, which is why we have experience in handling situations called forth by the pandemic. We found that the best way is to address the areas in demand and supply planning most impacted, while maintaining transparency and better understanding how this will change financials going forward.

We support our customers in identifying the areas that need to be addressed immediately, while implementing the tools they need to build more supply chain resilience over the medium to long terms. While it may seem somewhat counterintuitive to look at the mid and long-term impacts on finance and the supply chain in view of what is going on, this in fact enables planning for potential future disruptive scenarios.

Acting fast in rapidly changing times is imperative to get ready for the future. This will help your company to not only outperform your competitors during the COVID-19 crisis, but will also allow you to build resilience in the future, most likely coming out stronger than before.

Immediate action is required to reap your COVID-19 supply chain and finance stress testing solution benefits, such as:
- Immediate visibility in the P&L based on the different supply and demand forecast scenarios
- Best-in-class resources to help create financial models and demonstrate the “Economic Contribution” of the supply chain
- Access to our global markets insights database, AI algorithms and extensive research team, which provide you with short, medium and long-term market perspectives and innovations during COVID-19
- Extensive commercial and supply chain expertise provides you with fit-for-purpose recommendations on the future supply chain and network design principles
Following a four-step approach to assess pressure points and build towards more resilience

KPMG supports demand and supply stress testing throughout COVID-19 and beyond forecasting transparently resulting P&L effects.

KPMG has a proven framework for supply chain and finance stress testing and simulation divided into four phases. It starts off with scenario building, followed by network analysis and simulation. The output is visualized in tools such as Tableau, giving management tailored cockpits to enable transparent and risk-adjusted planning. This is unlikely to remain the last disruption businesses have seen in today’s fast changing times. Hence, taking a forward-looking approach is of utmost importance. KPMG will help you leverage your current experiences for the future, improving your resilience. Together, we will have a look at the end-to-end supply chain considering key global production sites, brands and products, supply chain distribution networks, suppliers as well as transport lanes in simulations. Below, find the detailed approach including illustrative examples of deliverables for each phase.

COVID-19 supply chain and finance stress testing

Analysis

Develop potential COVID-19 risk scenarios based on shifts in demand or supply disruptions

- Scenario analysis approach with a clear recommendation on additional data and signals
  - Baseline demand, supply and financial forecasting
  - Explore internal data and external signals
  - Align COVID-19 high-risk areas
  - Define the to-be-simulated scenarios

Simulation

Stress test the SC end-to-end, transparently linking it to financial implications

- Realize rapid diagnostics of high-risk areas along the supply chain
  - Simulate supply chain areas impacted by COVID-19 based on established scenarios
  - Map supply and demand forecast scenarios to financial implications
  - Develop financial models and P&L effects

Development

Develop a management cockpit enabling transparent and risk-adjusted scenario planning

- Create a Management Cockpit (MC) tailored to your requirements
  - Create MC based on model scenario input and linked to the financial implications/model
  - Align MC with user teams/key stakeholders
  - Implement final SC and financial risk management dashboards

Execution

Outlook on future supply chain and network design principles for advanced risk mitigation

- Executive summary, including overview on SC and financial impact forecasts for each scenario
  - Determine tangible levers and clear action plans, cost savings for each scenario
  - Hand-over the dynamic cockpit
  - Continuously mitigate risk of no supply and financial exposure

Figure 2: KPMG’s COVID-19 supply chain and finance stress testing approach
Supply chain and finance stress testing and simulation in practice

Almost all companies in all industries are affected by the COVID-19 crisis and need to carefully monitor their supply chains and financials to avoid shocks and disruptions, while planning for future resilience.

We would like to show you how we helped two well-known companies improve their supply chain performance and increase profits by combining advanced simulation and in-depth end-to-end supply chain transformation and optimization expertise.

Company challenge
The company faced a declining profitability due to increased operations and supply chain costs resulting from multiple integration projects.

Analysis: Merged and purged more than 75 files of unstructured data from multiple, disparate data sources to create a baseline. Developed viable supply chain scenarios for testing and financial modeling.

Simulation: KPMG leveraged its dual approach by simulating various scenarios of the end-to-end supply chain, mapping these to an extensive economic analytic engine by allocating all end-to-end supply chain costs at the levels of the SKU, the business unit and the production site.

Development: Established a top and bottom line P&L forecast for each scenario in a management dashboard (see figure 3). This dashboard displays the cost and revenue changes for each P&L line and filters for different optimization scenarios by country, business unit, product and production site.

Execution: Provided a detailed action plan linked to concrete savings potential, benefits and identified transformation costs for the future EMEA setup. Used data and analytics to uncover root causes for blocks and hidden opportunities – including rationalization at the SKU, streamlining customer trade terms and distribution networks, adjusting trade spend and inventory stocking policies.

Outcome and benefit
KPMG enabled the company to use its new view on the economic contribution of its supply chain to make value-driven decisions regarding its future setup and design principles. Phase 1 short-term opportunities were estimated to increase economic profit by nearly USD 30 million.
Company challenge
The client, an international top 3 pharmaceutical firm, with ever increasing SKUs and resulting complexity in their supply chain and operations, asked KPMG’s support to:

1) lay the groundwork for the future strategic vision by defining a sustainable position in the corporate supply network and
2) reduce unrewarded complexity in their network.

Analysis: Assessed product and network profile, incl. evaluation of available demand, supply and financial data. Simulated scenarios based on previously defined internal and external impact factors.

Simulation: Created an in-depth supply chain and financial model at the level of production sites and SKUs. Evaluated the supply chain and operations complexity by assessing the manufacturing technologies based on market trends and product/equipment fit.

Development: Got an understanding of the company’s supply network by conducting multiple workshops, holding interviews with SMEs and conducting large surveys to be able to challenge the quantitative data obtained and to display the supply chain and finance insights in tailored cockpits.

Execution: Identified improved business cases to make supply chain more resilient going forward by focusing on the elimination of unrewarded complexity in the end-to-end supply chain, optimizing the product portfolio and infrastructure, whilst also keeping in mind manufacturing technology.

Outcome and benefit
KPMG identified and quantified three business scenarios and a tangible roadmap to save cost equivalent to 15% of net sales. Using an agile methodology, the client constantly received updates on the progress and was able to co-design the project.

Rapidly changing times require the continuous monitoring of the supply chain and financial performance as well as active ownership
Embedding resilience in your supply chain is of major importance if you want to withstand shocks. Our approach can do this whilst closely monitoring the resulting financial performance, preparing your company for emerging opportunities by implementing value-driven supply chain and network design principles for advanced risk mitigation and limitation of financial exposure over the short, medium and long terms.

KPMG supports you on this journey by working shoulder to shoulder with your team to ensure that building more supply chain resilience becomes an integral part of your company’s strategy and day-to-day operations.

"The output gave us the opportunity to optimize our product portfolio by understanding the profitability of individual SKUs, address the product/equipment fit, improve operations and highlight the steps necessary to strengthen our position in a changing market environment. The results of the study were highly appreciated by management and subject matter experts alike."

Top 3 Global Pharmaceutical Company – Project Lead for Simplification and Strategy 2025
About KPMG Strategy & Operations

KPMG Strategy and Operations works with private, public and not-for-profit organizations to transform businesses and improve performance, helping clients achieve their goals and objectives. Our professionals develop insights, as well as tangible and executable business plans, including roadmaps, to help address organizational challenges, such as supply chain and finance crisis management, complexity management, growth, operating strategy, cost, integrated business planning and transformation.

Why KPMG?

Value-driven solutions with an agile management approach
KPMG drives innovative changes to business and operating models, using a value-based and metric-driven approach. Agile management is embedded to manage change more rapidly within the organization.

Data-driven and technology-enabled approach
KPMG’s team of experienced data scientists is unparalleled in creating meaningful and leading insights by leveraging data transformation and design of interactive data visualization.

Supply chain and financial modelling expertise
We are extremely proud to have best-in-class resources to help create financial models to demonstrate the economic contribution of the supply chain.

Highly knowledgeable commercialization Industry specialist teams
We advise leading multinational companies on product commercialization, and routinely support clients in commercial negotiations and in determining their go-to-market strategies with a focus on the pharmaceutical, chemical and diversified industrials industries.

Global network and access to market intelligence
Access to our global network provides you with the latest market perspectives from our globally maintained markets insight database, artificial intelligence algorithms and an extensive research team.
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