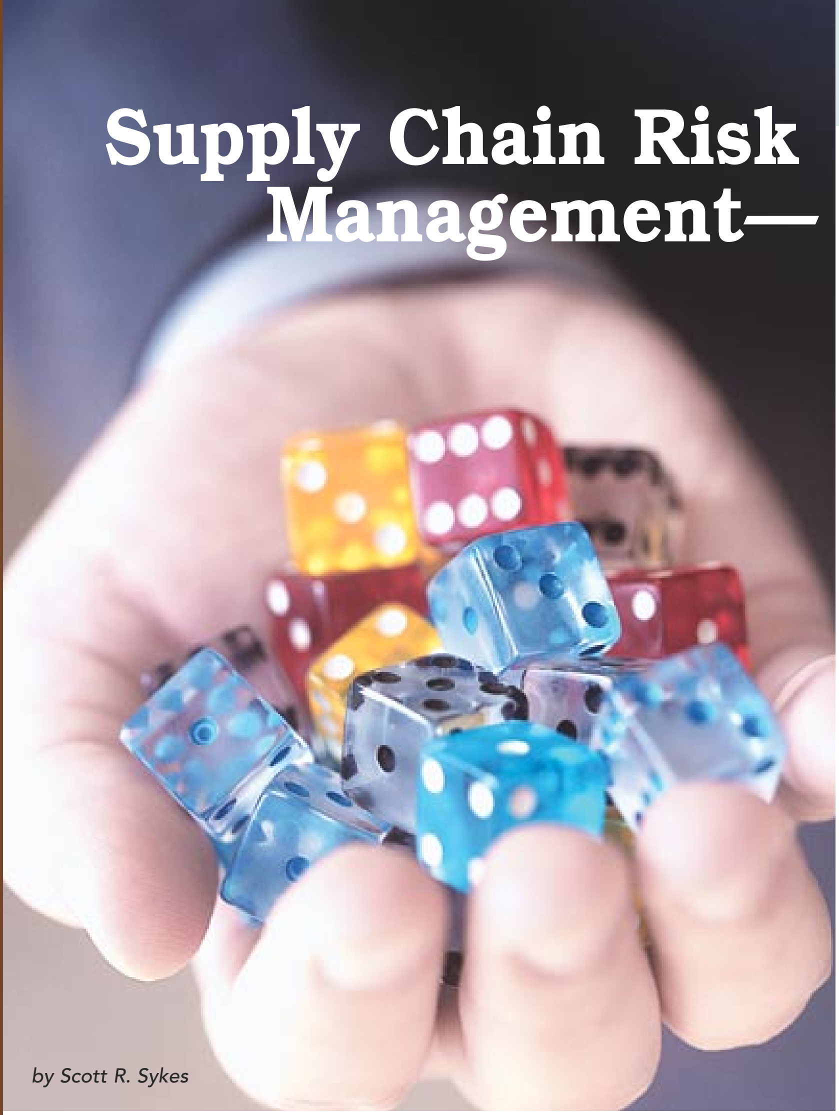


Supply Chain Risk Management—Gaining a Baseline Grasp on an Increasingly Important Challenge

by Scott R. Sykes

This is Part One of a two-part series addressing supply chain risk management in a global business context.

IN PART ONE of this edition of *Supply Chain Comment,* we want to address a subject that has risen to the forefront of our profession—supply chain risk management.

In the area of risk management, the adoption and use of technology tools can aid in performing the risk management role, but it should not be turned to as a panacea. That said, the proper application of technology can help us be more aware of what risks we face, from where those risks emanate, and it can serve as a critical weapon in managing and mitigating those risk factors.

We'll begin by defining risk, and then address how to profile and manage it. Finally, we'll share recommendations for making the discipline and skill of risk management part of the supply chain management profession. Let's start with a definition of risk.

DEFINING RISK

Ask an insurance professional to define risk, and he'll characterize it (in the abstract) as a condition of the real world in which there is a possibility of loss. In insurance professionals' lingo, the term "risk" is also used as a noun to refer to physical property to be protected by an insurance contract, or to refer to the entity (an individual or a company) for whom or which an insurance contract is written.

Ask a financial or investment advisor to define risk, and you'll be given a litany of risk categories to define and understand risk and risk management. At the highest level, all types of risk can be separated into two categories—systematic risk and unsystematic risk. Systematic risk refers to the unique risk attributes that belong to an individual company. Unsystematic risk refers to the broad macro factors that affect all businesses.

This article appeared in the Council of Supply Chain Management Professional's newsletter, *Supply Chain Comment*, Volume 40, Jan./Feb. 2006. *Supply Chain Comment* is published six times a year by CSCMP.

Unsystematic risk is also sometimes referred to as market risk by financial professionals, and the most consistently recommended approach for mitigating market risk is the principal of diversification (or the idea of not putting all your "eggs in one basket," to put it in Grandpa's lingo).

Ask a supply chain professional to define risk…and you will either get a layman's twist on the above two risk definitions, or you'll get a disoriented, blank stare. The subject of supply chain risk is coming to the forefront of our profession today, and it has not adopted the mathematical and statistically-driven methods of our professional counterparts in the fields of finance and insurance.

With highly visible incidents that call attention to the risk exposure our supply chains face, we must now acknowledge, respect, and quantify these risks, and then develop supply chain risk management strategies to manage them. It is in the task of understanding, documenting, and quantifying supply chain risk that the use of existing technology assets must be applied. The data that describes our supply chains exists. It must now be extracted, analyzed, and used for business risk mitigation.

QUANTIFYING AND PROFILING RISK

So where should a supply chain practitioner begin? Start by gathering information on your business as it exists today, and begin building your baseline risk profile.

SUPPLY-SIDE RISK (PROFILING YOUR SUPPLIER BASE)

Begin by building a "supply base" profile. How many suppliers does your company use today? Where are they located (not their headquarters' location, but their production and warehousing "ship-from" nodes)? Do they have the capacity to produce your items at more than one location?

Your completed task here is to have a visual image of your inbound supply chain. Chances are, you'll discover that you source products from far more geographic locations than you suspected. You'll probably also uncover specific items or instances where a critical part or input to your business comes to you from only one source location where there is no planned "back-up source." It is in the identification of these "weak points," or vulnerabilities in the supply chain, that your contribution to risk management begins to bear fruit.

Scott R. Sykes is a CSCMP member, and a Principal of Supply Chain Solutions at SAP America in Charlotte, North Carolina. He was a speaker at CSCMP's 2005 Annual Conference in San Diego, California, co-presenting Dr. C. John Langley's '10th Annual Third Party Logistics Study' findings in the Current Research and Surveys Track. Scott authored the 'Technology Enablement' section of the report, which you can download at www.3plstudy.com.

DEMAND-SIDE RISK (PROFILING YOUR CUSTOMER BASE)

Similarly, work to create and document a "demand base" profile. How many customers does your company have? Where are they located (not their headquarters' location, but their "ship-to" points of consumption)? Your completed task here is to have a visual image of your outbound supply chain. What you are looking to discover is how dependent your business is on a few customers, or on a few "ship-to" locales for your business's success.

While you cannot move your customers to new locations, you can point out to your executives that your business is not diversified on the demand side, and bring their attention to the risks that such a situation poses. One need only look to businesses that had a customer base heavily concentrated in the New Orleans area to understand the impact of a heavily concentrated, or undiversified, demand-side profile.

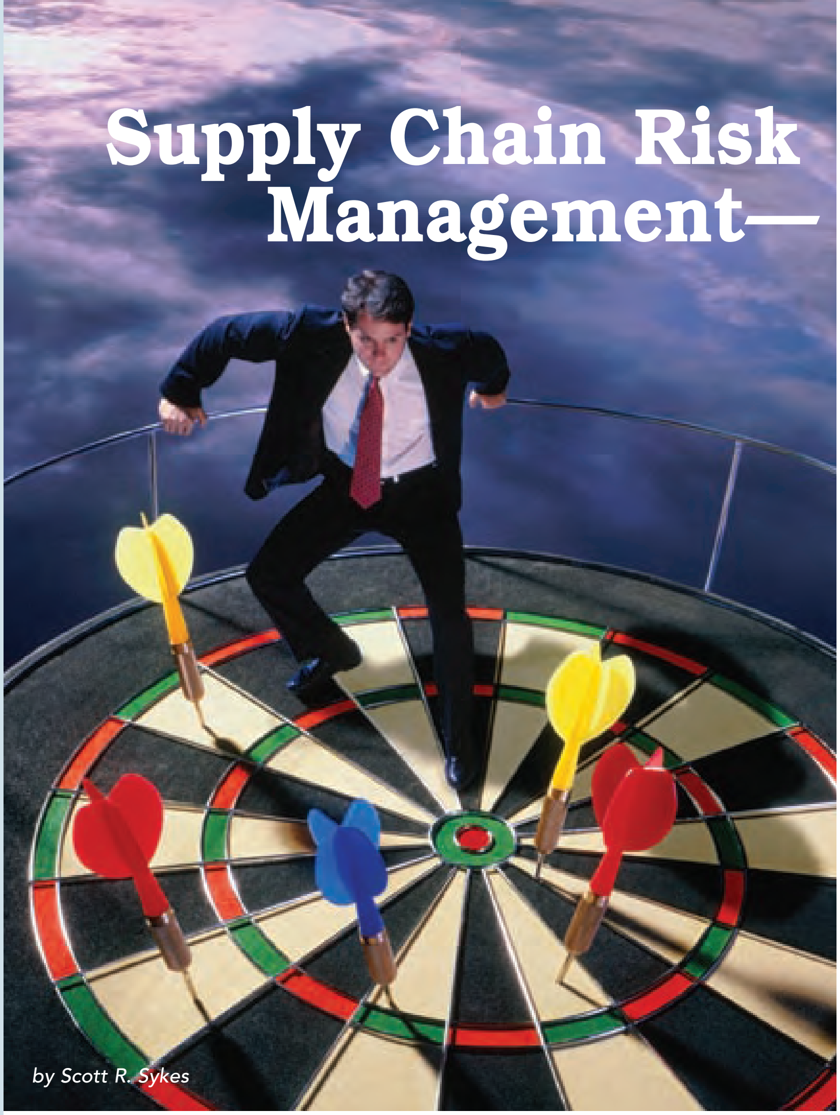
SUPPLY CHAIN NETWORK RISK (PROFILING YOUR PRODUCTION AND FULFILLMENT NETWORK)

Finally, create a profile of your existing finished goods and customer fulfillment network. To use a finance analogy, how concentrated are your holdings? Is your overall "portfolio" well-diversified? Do you have a good mix of products and a geographically-diverse inventory deployment? If so, your risk quotient will naturally be lower than if you make only a few products, and fulfill all demand from one central location.

In such a scenario, if your one "ship-from" node is destroyed by a natural disaster, your customers may be doing business with new suppliers who will have earned the right to keep the business by the time you recover from your loss and are ready to serve them again.

With a baseline risk profile for your supply network, your demand network, and your company infrastructure, you now have three portraits that need to be combined into one and assessed in the aggregate. ▮

In the March/April 2006 issue of 'Supply Chain Comment', in the TechKnowledge section, we'll talk about managing risk as well as offer some recommendations for supply chain professionals.



Supply Chain Risk Management— Gaining a Baseline Grasp on an Increasingly Important Challenge

by Scott R. Sykes

This is Part Two in a two-part series addressing supply chain risk management in a global business context.

IN PART TWO of this edition of *Supply Chain Comment,* we will continue our discussion on supply chain risk management where we left off from in the last issue of the newsletter (January/February 2006). We'll start with the finer points of managing risk.

MANAGING RISK

A recently published research study titled *Taking Risk on Board* (conducted by Lloyd's of London and the Economist Intelligence Unit),[1] provides good summary statistics on where industry currently stands on this important topic. Surveyed corporate board members provided the following key insights:

- One in five companies suffered significant damage from a failure to manage risk adequately last year; and over half reported having at least one "near-miss."
- The amount of time company boards spend on risk management has risen four-fold in the past three years.
- Only 14% of board members are confident that their organizations' boards understand (and will respond correctly to) risks facing their globalized operations.
- Only half have company-wide systems to identify and monitor risk.
- Only one-quarter of companies include the term "risk management" in staff job descriptions.

In a subsequent interview on the topic, David Foreman, chief underwriting officer at Wellington (a Lloyd's insurer) said, "This valuable new research shows that risk management in firms is still being driven almost grudgingly by a need to meet regulatory demands rather than realizing the full benefits it can bring…until boards start to tackle these issues, risk management is likely to be [treated] by senior management as a constraint on their business, rather than the source of competitiveness that it should be."

[1] *The report is available at no charge on www.lloyds.com.*

Scott R. Sykes is a CSCMP member and a Principal of Supply Chain Solutions at SAP America in Charlotte, North Carolina. He was a speaker at CSCMP's 2005 Annual Conference in San Diego, California, co-presenting Dr. C. John Langley's '10th Annual Third Party Logistics Study' findings in the Current Research and Surveys Track. Scott authored the 'Technology Enablement' section of the report, which you can download at www.3plstudy.com.

To build on Mr. Foreman's observation, the risks facing many of these management teams and boards are increasingly disbursed "beyond the company's four walls" and into their extended supply chains. To ensure that they are performing their fiduciary responsibilities to their shareholders properly, not only do they need to have a better grasp of the discipline of risk management itself, but also a better grasp of and appreciation for the discipline of extended supply chain management.

To begin narrowing the gap between our current state of risk management capability and the desired level of competence, supply chain leaders can assist their executive suites by pursuing the following actions:

1. Establish a comprehensive global supply chain process model that captures your business's operations and the key supply chain operations of your primary suppliers and customers.
2. Perform a risk analysis against this global model and identify structural risks that can be mitigated with either business strategy or process changes (e.g., not having 100% of your supply coming from one supplier that produces from one plant which is located in a high-risk area).
3. Develop and deploy IT systems that "connect the dots" in your extended supply chain model to ensure visibility to planned events and to enable alerting of unplanned events for proactive exception management.
4. Develop a culture of committed contingency planning and risk management. Include risk management in the job descriptions and objectives of key personnel (supply chain, procurement, and customer fulfillment).
5. Conduct annual "supply chain fire drills" to identify weaknesses, blind spots, and risk management/contingency plan enhancements.

CONCLUDING THOUGHTS

Risk management is an emerging topic in company boardrooms today. More and more time is being allocated to this issue, and in the coming quarters and years, more resources (time, people, and money) will be allocated as well. As these investments and management decisions are being formed in the C-suite, take advantage of the topic's timeliness to document and highlight the centrality of supply chain management as a key dimension of risk management success.

As our supply chains have extended beyond continental boundaries in the pursuit of new markets for our goods and new sources of supply for our product components, the supply chain has grown more complex. As a consequence, today we have more potential "failure points" in the supply chain.

Along with the known challenges (regulatory requirements, port congestion, etc.), we must also work to gain a better understanding of those prospective failure points that do not make their presence felt until after a failure has transpired (such as a supplier's plant burning down, and learning after the event that it was the only source of supply for you to rely upon).

As supply chain practitioners, we have much to learn about the topic of risk management, and even more to learn about the proper use of process design and technology tools to quantify, monitor, and manage those risks. Fortunately, we have other management disciplines from which to draw lessons, counsel, and insight. Finance and insurance professionals are two primary sources for seeking additional information. To that purpose, included below are recommended additional sources of information.

RECOMMENDED RESOURCES

1. WEB SITES

URL	OBSERVATIONS
www.contingencyplanning.com	The homepage of the CPM Group. An organization whose mission within the global business continuity profession is similar to that of CSCMP's mission in supply chain management. A number of excellent resource guides and an articles archive are available at no charge.
www.irmi.com	The homepage of the International Risk Management Institute. While this site's content is more focused on business risks that can be insured against (as opposed to mitigated through better strategy and design), it affords a great deal of free educational information, and should be a "bookmarked" reference for any firm seeking to make risk management an additional management discipline in its business.
www.lloyds.com	Lloyd's of London's home page. Lloyd's is the infamous marketplace for quantifying and "putting a risk premium" on almost any new innovative area – from a truck fleet that hauls hazardous material, to Peyton Manning's right arm, to Celene Dion's vocal cords. In terms of gaining an appreciation for developing a mindset for "putting a number" on a previously unquantified business risk, Lloyd's is a good source for background education and research.

2. BOOKS

- *End of the Line* by Barry C. Lynn
- *The Resilient Enterprise: Overcoming Vulnerability for Competitive Advantage* by Yossi Sheffi

Consider picking up both of these recently published books that deal with the subject of managing risk in the supply chain. Each author provides current examples of risks that exist, and each has done significant and detailed background research on the topic. Their observations, findings, and recommendations will prove directly relevant to you and your firm as you seek to craft your own supply chain risk management strategy. ▮