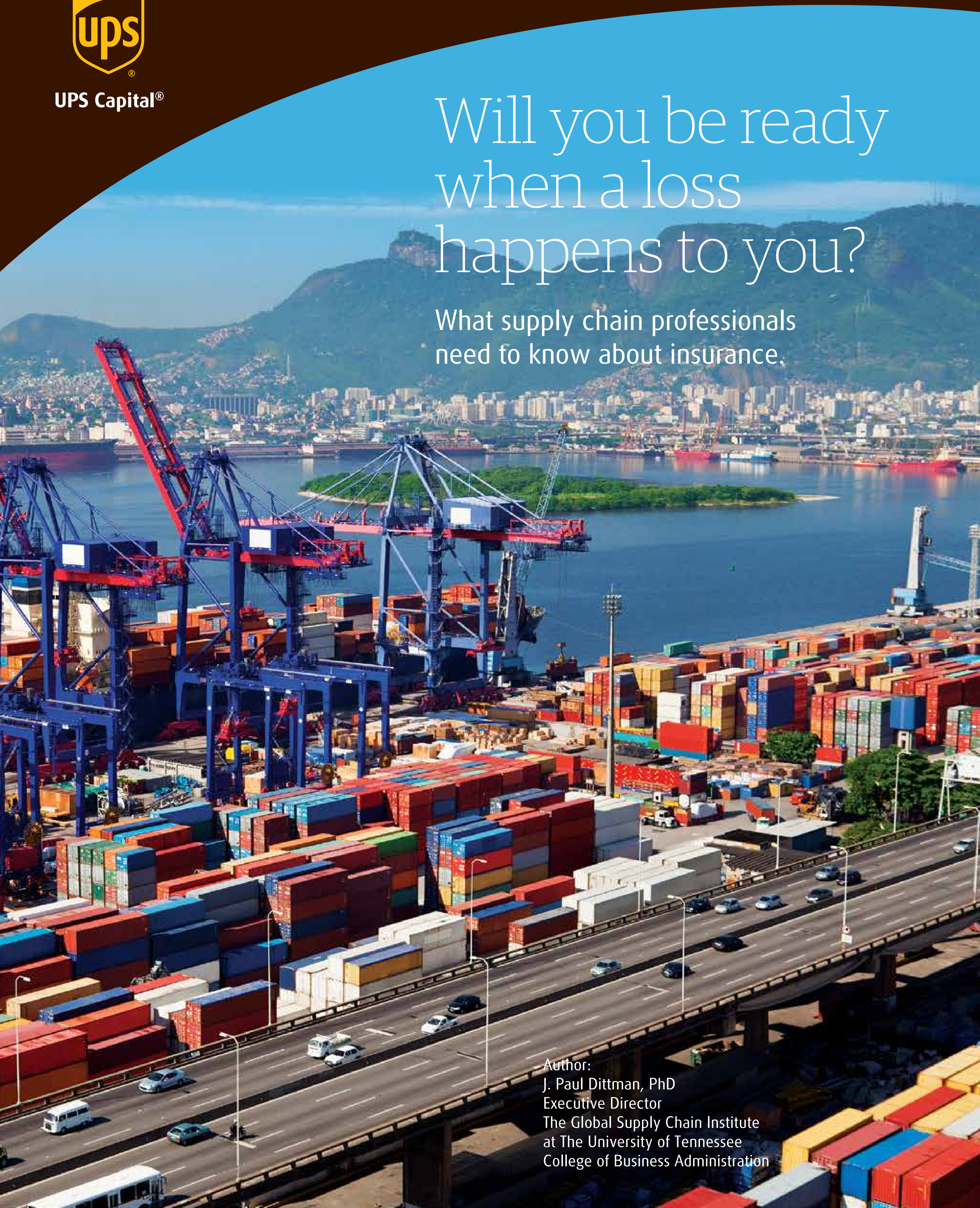
UPS Capital®

Will you be ready when a loss happens to you?

What supply chain professionals need to know about insurance.



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Annual global financial impact from cargo loss:
$50 billion

Introduction

Transportation risk can come from a myriad of sources and can be very hard, if not impossible, to predict. These events run the gamut and include weather extremes, theft, hijacked trailers, global crises, cargo lost at sea (maritime law allows a captain to jettison some containers to save the rest), catastrophic truck or rail accidents, truck fires, etc. In fact, there's an estimated $50 billion in annual global financial impact from cargo loss[1].

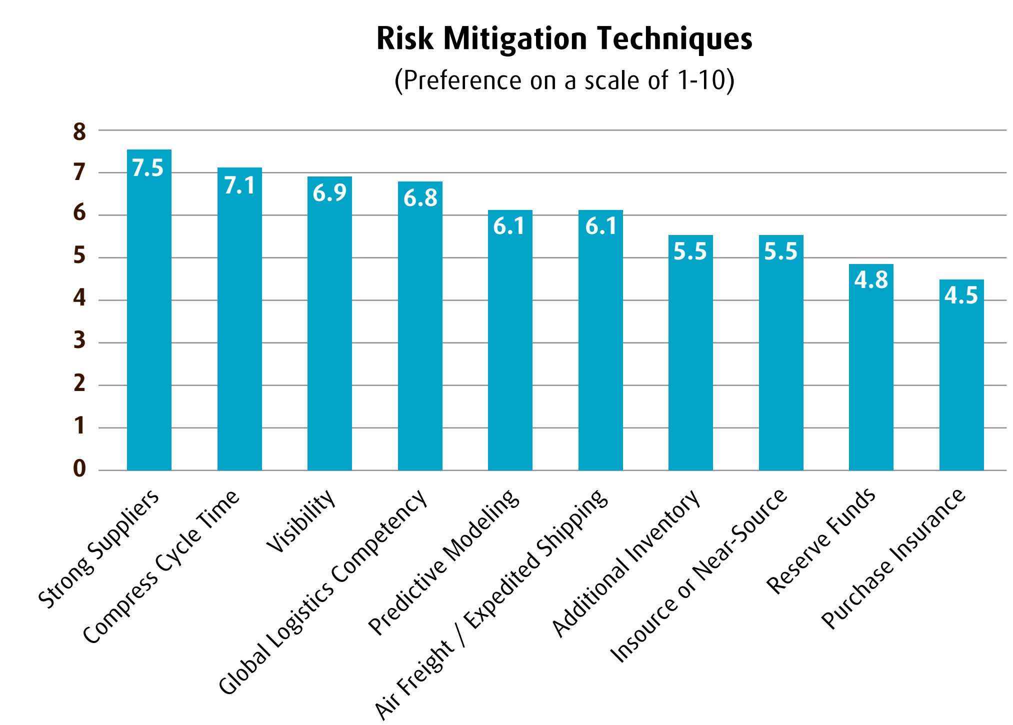
At the University of Tennessee, we work with hundreds of companies through our supply chain audits and Supply Chain Forum. These companies range from very large (over $400 billion in revenue) to smaller firms, and include retailers, manufacturers and logistics service providers. Most of the companies in our database (at least 80%) have experienced a supply chain disruption that caused a major spike in cost and/or a major loss in revenue and profit. Small businesses are especially at risk from a large loss event.

More and more companies value supply chain professionals that can anticipate and look for ways to mitigate risks, rather than those that deal with consequences as they happen. But if something does happen, the company's financial health must be protected, and that's where insurance comes in.

In 2014, the University of Tennessee Global Supply Chain Institute published a white paper titled *Managing Risk in the Global Supply Chain*. The most surprising finding in the research was that even though 100% of supply chain executives acknowledged insurance as a highly effective risk mitigation tool, it was simply not on their radar screen, nor in their purview.

The survey research in the data and graphics below show the range of risk mitigation techniques used by supply chain professionals.

Using insurance as a risk mitigation tool is ranked last! Given the amount of supply chain risk exposure, this is perplexing. Most of the supply chain professionals we talk to assume that insurance is the responsibility of other specialists in the corporation. In doing so, they miss a great opportunity to selectively use moderately-priced insurance to mitigate key risks.



Even after all other risk mitigation strategies have been considered, risk will still exist in critical areas of the supply chain, and those are prime candidates for selective use of insurance. An inexpensive insurance solution can mitigate a wide range of problems, from damaged to stolen to jettisoned cargo. Insurance providers offer solutions to circumvent, protect and ultimately help companies financially recover from many of these risks.

We strongly believe that supply chain professionals need to educate themselves on insurance as a means to minimize financial exposure. It's a mistake to assume others in the company are handling this critical area for the supply chain. For this paper, we will focus on loss of or damage to goods in transit, understanding key myths and often-overlooked opportunities.

Sometimes bad things happen to good cargo.

We often hear businesses say they don't worry much about risk in their supply chain; nothing bad has ever happened to them. While that may be true today, supply chains are becoming longer and increasingly complex. Companies rely on suppliers and buyers across the globe, most of whom they have never met. There are multiple modes of transport across multiple borders, with different currencies, laws, languages and carriers.

And sometimes, bad things happen to good cargo. Fifty-two containers are lost or damaged at sea each week[2]. Not bad...until one of them is your container. As ships increase in size, the risk of more costly incidents increases as well. Many importers and exporters are not familiar with the rule that governs coverage for cargo that is jettisoned to save the ship. The law of General Average (GA) is a legal principle of maritime law in which all parties in a sea venture proportionally share any losses resulting from a voluntary sacrifice of part of the ship or cargo to save the whole in an emergency. All the merchants whose cargo lands safely are called on to contribute, based upon a share or percentage, to the party whose goods are lost. In one event, a shipper had $7,000 of merchandise in a container, and thought the amount was low enough to avoid getting cargo insurance. But, some containers on the ship had to be jettisoned in extreme weather; the law of General Average was declared; and the company was hit with a $45,000 bill. Their container was held for a week until they were able to figure out how to post a GA bond. According to Lee Meyrick, the Global Marine Chief Underwriting Officer for Zurich Financial Services, "General average is the main driver of marine insurance claims."[3]

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containers are lost or damaged at sea each week

A cargo policy can cover this loss, and also prevent the container from being impounded to guarantee payment.

Truck, ship and air cargo are the most vulnerable to disruptions while in the supply chain and 84% of incidents involve these modes of transportation. Cargo moving by truck accounts for 43% of that.[4] In the U.S. alone, there are 2.2 reported cargo thefts each day; the average value of each is $232,924.[5] And, the threat of cargo theft continues to rise largely due to the sophistication of criminal groups and the relatively limited penalties associated with cargo crime. These challenges don't even take into account natural disasters. Consider the recent floods in the Midwest, the devastating storms in the northeast and prior hurricanes like Sandy.

76%

of companies reported at least one supply chain disruption in the past 12 months

But again, professionals say, "That won't happen to me." Yet, we find that 76% of companies reported at least one supply chain disruption in the past 12 months.[6] The supply chain is the lifeblood of a business and there can be devastating consequences if risk is not properly assessed and mitigated. As many as 20% of companies who experience a supply chain disruption go out of business within 18 months.[7] With these risks at stake, it is important for businesses to better understand the true impact of cargo loss, where their liability begins and ends and how they can mitigate some of those risks through insurance designed for supply chains.

The real cost of loss or damage

The real cost of cargo loss may be much larger than you think. There are three types of cargo risk to consider: complete loss, damage and delay. For complete loss and damage, many assume that the cost simply equals the invoice (for inbound goods) or perhaps retail value (for outbound goods). But there are other factors to consider. Goods lost or damaged in transit inevitably result in a reduction of inventory available to serve customers. This causes additional negative factors to come into play, such as lost sales, lost market share and the adverse impact to the brand image. A major delay in the arrival of goods can severely damage brand equity over time, and dwarf the loss due to the basic invoice or retail value of the cargo.

Setting aside brand image, some firms even fail to anticipate the revenue impact of cargo loss. Even if there is no long-term impact on market share or brand equity, a surprising amount of product needs to be sold to offset the loss and write-off and that could very easily amount to a 15:1 ratio. For example, let's assume a company makes a 6% profit margin on its goods and lost $233,000 in a recent cargo theft. It would take $3,833,333 in new sales to recover the cost of those goods. Replacing that much lost revenue may be a huge problem for some firms, especially small to medium-sized companies. In such cases, insurance provides peace of mind that allows business professionals to sleep a little easier at night. Needless to say, it's hard to put a monetary value on that.

Finally, whether a firm is large or small, shareholders and business owners greatly value the ability to forecast financial performance accurately. Insurance makes financial results more predictable, immunizing businesses from random extreme spikes that could have a huge negative financial impact.

Insurance, in effect, makes hard-to-forecast events very survivable, plus it can be budgeted for annually. That's much easier than trying to explain a large loss to a CEO or shareholders. And, some firms pass the cost of insurance through to their customers, as it can be a relatively minor fee when spread across all shipments.

What you don't know can hurt you

Carrier liability

When we speak with supply chain professionals, most of them mistakenly believe that standard carrier liability is insurance. As one supply chain professional for a large retailer said, "I assume the carrier is responsible for any loss and damage while they're in possession of my cargo." More often than not, busy supply chain professionals make that assumption and move on to the next challenge. More sophisticated supply chain professionals know better. One executive we talked to stated it well, "Carrier liability is not really insurance. It basically protects the carrier (from uncapped losses). Essentially you have to prove negligence on the part of the carrier to collect on a claim; and that's hard to do."

In this section, we'll explain the two major pitfalls associated with carrier liability, and then cover insurance options that provide a better alternative. The two carrier liability problems are:

1. A series of statutes that severely limit the liability of transportation carriers.
2. The coverage that exists is almost always inadequate.

Statutes limiting carrier liability

Governing statutes allow carriers to set their own limits and the statutes are specific to carrier type and mode of transport. Below is a list of the governing statutes by mode:

Mode	Governing Statute
Road and Rail	Carmack Amendment
Ocean – International	Carriage of Goods by Sea Act (COGSA)
Ocean – Domestic	Harter Act
Air – Domestic	No statute – only the carrier's tariff applies
Air – International	Montreal Convention

The statutes vary in their requirements for the carriers and they allow a carrier to limit their exposure as they see fit, including claim and lawsuit filing limitations and total claims exposure. They also provide the transportation carrier with defenses against claims including but not limited to:

1. Act of God-force majeure
2. Act of war
3. Fault of shipper, e.g. inadequate packaging
4. Defect in goods
5. Government actions

Numbers 3 and 4 can be interpreted widely, and are the source of a high percentage of claim denials (over 50%) for both domestic and international shipments. Force majeure events occur more often than most people think and include a wide range of events like earthquakes, hurricanes, floods, tornados, fires, wars, riots or other major upheavals. A similar situation exists for global shipments. Under the statutes, burden of proof falls to the shipper to prove that the loss or damage occurred while the goods were under the control of the carrier.

Carrier liability coverage is often inadequate

Generally, an ocean carrier is only responsible for up to $500 per container. FedEx® and UPS® limit standard coverage to $100/parcel. International air carriers generally have a minimal limit (e.g. $0.50 per pound). Trucking company carrier liability is also at very low rates per pound, sometimes as low as $5/pound but often up to $25/pound, as specified in the bill of lading and their tariff rules.

50%
of claims for both domestic and international shipments are denied

Most carriers don't pay
for consequential damages or up to the full invoice value of the sold goods

These weight-based limits can be detrimental to companies shipping high-value goods. For example, suppose a truck carrying a pallet of smartphones is hijacked. Each phone is worth $300 and each of the eight boxes weighs 50 pounds. That's 400 pounds of smartphones valued at $480,000. With standard carrier liability, the shipper would be reimbursed only $10,000, leaving the shipper on the hook for the other $470,000. (It is unlikely that the value of cargo is a function of weight, yet weight is one of the main variables used.)

Carriers often offer the ability to purchase additional declared value coverage. However, it is important to understand what is covered and how you are compensated in the event of a claim. In general, most carriers don't pay for consequential damages or up to the full invoice value of the sold goods.

Now, let's discuss some real insurance solutions available.

Insurance as a risk-mitigation tool

There are a number of insurance products available to protect your supply chain from the losses described above and it's important that you understand the basics and the pitfalls associated with each. The more common include:

1. Self-insurance
2. Business owner property and casualty
3. Cargo insurance

Before describing each of the three areas, it is important you first take stock of just how much liability you have.

Who has the liability: INCO terms

It is critical to understand who has the liability for goods in transit. The financial responsibility for the loss may be borne by the shipper, the carrier or the recipient. These are spelled out by INCO (International Commerce) terms. A few common examples of the 11 INCO terms are:

- FOB destination: Seller owns goods in transit and therefore has the risk in transit.[i]
- FOB origin: Buyer owns goods and therefore has the risk in transit.[ii]
- CIF: Seller is responsible for procuring and paying for some insurance coverage during the voyage to the named destination and has the risk to that destination. The buyer assumes risks from this destination onward.[iii]

In one recent conversation, a consumer packaged goods company executive told us that he believes it is a best practice to take control of inbound freight from his suppliers. We agreed with him, and knew of numerous examples where that practice saved millions of dollars through commanding better rates and eliminating inflated freight costs from sellers. But a major caveat is in order. When that's done, the firm must fully understand that it now has the liability for any loss or damage, where the supplier had assumed that responsibility in the past. Even in a CIF case, when the seller is responsible for the in-transit risk, one firm found that the insurer used by their Chinese supplier was a Chinese insurer, and could not get the claim resolved for more than nine months. The key here is to know your terms and your insurer.

It is important that you have expertise within your company regarding INCO terms, and understand exactly who has the liability at each stage of the supply chain. This can be a challenge as liability may change from supplier to supplier and buyer to buyer.

Now, let's consider each major type of insurance coverage for goods in transit.

1. Self-insurance
Self-insurance is a risk-management method in which a calculated amount of money is set aside to compensate for potential future loss. If self-insurance is approached as a serious risk management technique, an actuarial analysis is used to set aside enough money to cover the future uncertain loss; otherwise, you are effectively uninsured. Self-insurance makes more sense for risks that are more predictable and measurable based on a documented loss history. Normally, catastrophic risks are not self-insured, as they are highly unpredictable and high in loss impact. Self-insurance lacks the advantage of pooled risks for catastrophic losses that threaten the existence of your business.

Companies that self-insure must ponder a few critical business questions:

1. Is setting aside funds for loss or damage the best way to use free cash flow? Could we receive a better return on investment elsewhere?
2. What will happen in the event of a catastrophic loss and how will the company survive?

While self-insuring may make sense for some situations, it undoubtedly begs for assessment and further risk mitigation tactics. One tactic could be to combine self-insurance with a high-deductible insurance policy to cover specific events that would be highly damaging to a firm.

2. Business owner property and casualty
This is the standard property and casualty liability (P&C) insurance coverage held by all business owners covering property and accidents. Riders can be added to cover losses for inventory in transit. People who buy and sell these policies often have little sensitivity to supply chain issues.

Often these P&C policies have an in-transit piece included. But, this additional rider is rarely based on any real supply chain needs analysis. And it is almost never used for cargo loss, simply because a claim in this area could negatively impact the rate for the entire policy.

A business owners policy serves a purpose in that it simplifies the insurance-buying process and aggregates many risks into one policy. It can cover risks such as property insurance on owned buildings and warehouses, crime, vehicle coverage, liability coverage and flood insurance. However, these policies may come at a premium because they are covering so much and may not meet a specific need, such as in-transit inventory. Even with the rider, the coverage may not fully contemplate the complexities of your supply chain.

3. Cargo insurance
This is the oldest form of insurance going back almost 500 years, and can be provided as an add-on by the transportation carrier or from a third party. It can be transactional, i.e. purchased for each shipment where it is needed. Or, it can be an annualized blanket, all-risk policy covering all transportation carriers and all modes of global transportation (road, rail, air and ocean). Cargo insurance covers goods in transit, including the period when the vehicle is unattended or housed in a warehouse temporarily.

The process of evaluating and purchasing cargo insurance can itself be valuable, and can help a company think through the risks to its supply chain. The research done for our last white paper confirmed that most firms (nearly 90%) do not have a robust risk management process. A good insurance partner can help develop one. Unfortunately, the CFO or a risk management department in the company often buys this insurance without really understanding the supply chain as a supply chain professional would; and the opportunity to develop a comprehensive risk management strategy for the supply chain is lost.

Self-insurance lacks the advantage of pooled risks for catastrophic losses that threaten the existence of your business.

Nearly 90% of firms do not have a robust risk management process

Cargo insurance is very flexible
Cargo insurance can apply to ocean, land and air transportation modes. The policy can cover loss and damages, ocean General Average claims and even consequential coverage. Cargo insurance can also cover contingencies that may occur if the responsible party, according to the INCO terms, does not come through with the coverage they were required to have or if their carrier had an unknown exclusion. Also, it might cover a contingency situation where you sell goods FOB and don't have the legal liability, but your highly important customer has the clout to demand payment for damage anyway. The insurance can be for actual cash value, replacement cost or selling price.

Cargo insurance policies can be customized based on the type of goods, modes of transportation, desired coverage and risk tolerance. They can be written to cover high-value loads, including commodities within high tech, pharma and jewelry industries with some having been known to exceed $25 million in value. The policy will likely have some limit to the total coverage. These types of policies provide an affordable, predictable option to mitigate potentially large financial losses associated with loss or damage.

Cargo insurance can also bundle and consolidate risk under one cost-effective umbrella policy. An "all risks" policy will protect against most problems door-to-door, and even within the warehouse, but there can be exceptions like wars and strikes. Cargo insurance can cover risk for special events like trade shows, or unlikely situations including earthquakes, fire and water, if specified. It can also cover mundane situations like activity at the dock door during the loading and unloading process, where significant damage can occur.

Cargo insurance can cover your cost or replace your revenue stream
The insurance can be for replacement value, purchase cost or invoice value. Generally shippers want to recover their cost, but if that cost is rising rapidly, replacement cost may be considered. Perhaps it's important to protect the full revenue stream and profit, and therefore invoice value would be insured. It may be different if the load is being received (import) or shipped (export). Perhaps the firm would want to insure imports at cost, and exports at invoice. We recently had a discussion with a supply chain professional about how much of her firm's revenue might be at risk due to supply chain failures. After a lot of discussion and consideration, she estimated that it would be "only 1%" of their $200 million revenue stream. But then doing the math, we quickly realized that 1% of this firms' revenue ($2 million) was a major detrimental loss for a firm of this size.

The cargo insurance carrier should understand your supply chain
It's important to find a partner well versed in supply chains to help you develop a comprehensive supply chain risk management strategy, and customize a cargo insurance policy to your unique needs. UPS Capital Insurance Agency, Inc. is a good example of an insurance broker that does this naturally, given their close tie to a supply chain company, UPS®. The best companies actively collaborate with their customers, and have deep expertise in the global supply chain, thus reducing the likelihood of a loss and lowering the cost of the policy.

The cost of cargo insurance doesn't have to be a mystery
Luckily it's a buyer's market for cargo insurance. There is a lot of competition in the cargo insurance industry and new players are entering all the time. Some insurance carriers low-ball the price just to get the business, but in the long run you get what you pay for one way or the other. Your premium for cargo insurance depends on a number of variables. The list below can be daunting at first glance. That's why it's important to partner with an insurance professional that takes the time to understand your supply chain. Factors affecting the cost of cargo insurance include:

1. **Transactional coverage or umbrella coverage:** Transactional coverage for individual shipments can be expensive and can cost up to three times more per load than an umbrella policy covering all shipments all year; but this may be appropriate for your needs.
2. **Value insured:** How much of the total gross value of your shipments do you want to insure? You will need to specify both a maximum value to be covered, as well as an average value.
3. **Packaging:** Packaging clearly affects damage rates and therefore influences insurance rates. Some policies may even have certain packaging requirements or clauses that enable prompt claims payment. Many carriers, including UPS®, offer package testing services. A packaging evaluation performed by an expert will improve your loss history and minimize the risk of unpaid claims.
4. **Routing:** The routing of shipments is key, especially global shipments moving through high-risk areas. Mexico, for example, may have a 25% premium, or much higher deductibles, versus shipments in the U.S.
5. **INCO terms:** Insurance rates will depend on which party has the liability at each stage in the supply chain.
6. **Modes:** The various modes of transportation used affect insurance rates since each has a different risk profile.
7. **Loss history:** Loss history for the company and the product, or similar products in other companies, will affect insurance rates. Companies should know and track their loss history and take active steps to mitigate the causes.
8. **Policy limits:** The aggregate limits and deductible can be customized for your company's particular risk tolerance.
9. **Product type:** The type of product being shipped is clearly a consideration. High-risk goods, of course, are more expensive to insure (e.g. electronics, jewelry, beverages, precious metals, automotive parts, pharmaceutical, etc.). For example, tablets have a much higher risk and insurance cost than truck axles.
10. **Underwriter judgment:** Pricing models continue to improve as underwriters become more experienced with certain commodities and loss ratios. Therefore, it is incumbent for a shipper to understand their risks and be able to articulate their assessment and mitigation programs to give the underwriters a comfort level to price coverage appropriately.

Shippers should manage their insurance cost by optimizing and trading off the 10 factors above, with the help of a supply chain-savvy insurance professional.

Low probability/
high impact loss events
by definition are
unpredictable

How to evaluate insurance

Someone with a supply chain background should be involved in evaluating cargo insurance. Shippers who track loss history are likely to have a rich data set that will provide insurance underwriters with a clear picture of the shipper's loss history of high-probability/low-impact losses. This provides a benchmark for establishing appropriate deductible/risk retention levels. Higher deductibles supported by this data can reduce premiums significantly without exposing the shipper to any additional loss. Low probability/high impact loss events, by definition, are unpredictable. A simple calculation can be conducted to evaluate the benefit of having insurance protection for rare events.

Estimated loss = the perceived probability of occurrence X the perceived impact of the occurrence.

For example:
If the shipper typically has, on average, $5,000,000 worth of goods on an ocean carrier vessel and believes the likelihood of losing this cargo in an accident at sea is 2.0%, then:

$5,000,000 x .02 = a loss of $100,000.

A quoted annual premium for this coverage of $50,000 would clearly be justified. Since rare-but-devastating events can occur tomorrow or many years in the future, this calculation is used to spread the impact over time and help assess the cost of annual insurance premiums to protect against, in this case, a $5,000,000 loss.

Reasons companies don't buy cargo insurance

There are many reasons why firms do not use cargo insurance to protect their goods in transit. Below is a list of the six most common reasons.

1. **Current coverage is misunderstood:** Supply chain professionals may mistakenly believe they are already protected. Unfortunately, this is almost always carrier liability coverage, which has all the pitfalls and drawbacks enumerated above. They may also think the business property and casualty (P&C) policy covers them. The bottom line is that unless you have a cargo insurance policy, you are putting your business at risk.
2. **Inappropriate KPIs:** Many supply chain professionals are measured on cost, but not on transit losses. These can be charged to "another account." In such cases, these departments are not incentivized to manage transit losses closely.
3. **Lack of supply chain risk understanding:** Often there is confusion within a company about who has the responsibility for purchasing supply chain insurance, or there is an assumption that these risks are already covered.
4. **No major loss recently:** The current management team may have never suffered major transit losses. Although any one event may have a low probability of occurrence, when all possible loss events are taken together, the chance of something happening is surprisingly high.
5. **Loss invisibility:** Losses are not tracked over time or across different management regimes. Therefore, cargo loss becomes essentially invisible to the organization.
6. **Claims may not be paid:** There is the fear that submission of a claim will cause the premium to go way up, the policy to be canceled or the claim to be rejected outright as is often the case with carrier liability coverage. It is important to understand that insurance is different than carrier liability and can be customized to meet the risk tolerance profile of the company. These benefits should help minimize any negative connotations with insurance.

Future trends in insuring goods in transit

What does the future hold for insuring goods in transit? Below is a list of 10 megatrends for insuring goods in transit, some of which are already apparent in the marketplace today.

1. **Increased supply chain visibility.** More technology and carrier services will be available to provide round-the-clock, real-time, proactive monitoring and intervention. For example, UPS Proactive Response® Secure offers shipment monitoring 24/7, and if any critical milestone is not hit, alerts are sent to a global control tower. A team springs into action to retrieve the shipment and develop an alternative delivery strategy. With built-in insurance from UPS Capital Insurance Agency Inc., expenses incurred for intercepting, re-routing or expediting a shipment are covered.
2. **Fast claims processing, resolution and payment.** This will be a growing trend, and a real point of differentiation for insurance companies. More and more companies will realize that speed is needed to protect cash flow and their bottom line. Shippers should be aware of the insurance company's claims payout rate, and speed of claim resolution.
3. **Insurance provider as a partner.** Companies will want to partner with an insurance broker who can help them develop an overall strategy to manage supply chain risks, customize an insurance policy to fit their needs and also work with them to anticipate and avoid losses. And, some companies can bring packaging and security experts to the table to create a layered risk mitigation plan.
4. **Big data, business analytics and modeling.** The power of big data and business analytics will help firms better manage risk. Companies using this technology will be able to better anticipate risks before they happen and prevent losses. Loss history databases will evolve that show losses by commodity, route, customer, package type, etc. Sophisticated mathematical models will help firms optimize their risk profile.
5. **The omni-channel and its implications.** Power is shifting toward the end consumer as more people are using the Internet and their smartphones to shop online. Amazon®, with thousands of affiliated sellers, is revolutionizing retailing. Consumer-based insurance coverage designed for the home delivery market will become increasingly important.
6. **Business interruption coverage.** The Japanese tsunami and Thailand floods of 2011 brought the need for this front and center. Serious business interruptions due to supply chain failures are common, with over 80% of the firms in our database having one that caused a major cost spike, revenue/profit loss and/or stock market decline. Good insurance products that deal with business interruption caused by supply chain failures will be developed. To qualify for this coverage, companies will need to map their supply chains, rigorously identify risks and be able to provide insurers the information they need to underwrite such policies.
7. **A changing global landscape.** Global trade routes will continue to evolve. The risk profile by region of the world will dynamically shift. For example, at some point the Silk Road train (trans-Asia railway) will replace a portion of ocean and air transport from Asia to Europe. Even within a country, urban delivery will evolve to same-day delivery and delivery to access points (e.g. convenience stores, dry cleaners or florists) for consumer pickup. The global marketplace will continue to change with a range of different regulations by country. Insurance products will have to be customized by country and be sensitive to the changing regulations and political risks around the world.
8. **Growth of 3PLs (third-party logistics companies).** More and more firms are outsourcing the management of their logistics operation to a third party. It is important that firms closely manage the insurance aspects of their goods in transit. If the 3PL is empowered to handle the insurance and claims, they may create a hidden profit center around it. They cannot mark up the insurance itself, but they can add a service fee. One expert from a large consumer packaged goods company that we spoke with estimated that this gross insurance spread could be one of their freight forwarder's highest profit items. The lesson here is don't outsource your supply chain risk function.
9. **Larger loads.** More companies are getting adept at filling the cube of their transportation equipment. More cube means more product in a load with more value and more risk. Container ship capacity is increasing, and as a result, exposing more cargo to peril. Ships at 5,000 TEU were considered large for many decades, and 5,000 TEU is the capacity of the Panama Canal. With its expansion next year, the Panama Canal will accommodate 13,000-TEU ships. At 15,500 TEU, the Emma Maersk, built in 2006, was once considered the largest ship that would ever be built. But since then, 12 larger container vessels have been launched, culminating with the MCI Oscar this year at 19,200 TEU.
10. **More control of inbound freight.** More companies are taking control of the inbound freight management from their suppliers and, in the process, taking on more risk for cargo loss.

An insurance professional that takes the time to **understand** your business in depth can recommend the appropriate policy

Recommendations for you

1. **Educate yourself on insurance.** Reading this white paper is a good start.
2. **Understand INCO terms** and who has the liability for your shipments (inbound and outbound) at each stage of the supply chain. Work with your suppliers and buyers to make sure they are clearly delineated in the terms of sale. (For more information, see the book Mastering Import and Export, by Thomas Cook, 2012, American Management Association.)
3. **Design KPIs** to incentivize cargo loss avoidance behavior.
4. **Understand the corporate insurance** and risk management process in your company. A process for business continuity planning may already be in place. If so, you may be able to piggyback on that process and have a better chance of corporate buy-in for your supply chain insurance needs.
5. **Document how each of your shipments is insured.** Are they covered by carrier liability only or does other insurance exist which protects the shipment? Understand the limits of coverage, deductibles and the gaps in coverage.
6. **Assess your risk.** Understand the value of your shipments. One company found that they were putting $40 million in product in a single truck. The logistics organization was incentivized to fill the trailer cube, without considering the risk profile. Track losses and document amounts that have been recovered. Understand your global network and the high-risk countries included in it.
7. **Estimate the impact on corporate financials** due to losses in the supply chain. Large losses will increase working capital and depress cash flow. You will have to replace the inventory while your cash is tied up in the inventory that was lost. Understand that you may have to sell 10-15 times the loss to break even. And, there could be brand equity implications as well.
8. **Partner with an insurance professional** who understands supply chain issues and can help you develop a complete risk management plan. Work with an expert to understand the best options to cover gaps.
9. **Work to mitigate risk** by preventing losses from happening. Increase visibility of the end-to-end supply chain and integrate risk-management processes.
10. **Make a decision** on the right cargo insurance coverage for your firm. An insurance professional that takes the time to understand your business in depth can recommend the appropriate policy.

Summary and Conclusion

Over the last decade, many companies faced extreme supply chain challenges that stretched their capabilities to the breaking point. Both the preponderance of natural disasters and huge economic swings caused extreme challenges across the supply chain. These challenges have not diminished. Supply chains, which once functioned almost on autopilot, face many dangers today in both the global and domestic market.

In our research on risk in the global supply chain, 100% of supply chain executives acknowledged insurance as a highly effective risk mitigation tool, but in most cases it was not on their radar screen, nor in their purview. Clearly this calls for establishing a partnership with an insurance company that understands supply chain risk. Such companies possess readily available data on supply chain risk which can be invaluable in assessing and managing supply chain risk.

Insurance solutions providers such as UPS Capital are willing and eager to share best practices and have a vested interest in avoiding losses.* They can be key partners in working with firms to minimize the financial effects of both daily supply chain risks and catastrophic disruptions. They regularly see the best and worst of supply chain practices and need to be on the winning side of mitigating risk for their clients, and their own bottom lines. The types of specialized insurance services that come from diverse insurance industry providers can be an integral component of a company's risk mitigation approach.

Supply chain professionals we talk to assume that insurance is the responsibility of other specialists in the corporation. In doing so, they miss a great opportunity to selectively use insurance to manage key risks. Like most other supply chain decisions, this boils down to a cost-benefit analysis. Even after all of the other risk mitigation strategies have been considered, risk will still exist in critical areas of the supply chain, and those are prime candidates for selective use of insurance.

100%
of supply chain executives acknowledged insurance as a highly effective risk mitigation tool.

How effectively do you use supply chain insurance?

We have included a self-evaluation below that is intended to help you assess your understanding of supply chain insurance as well as your process for evaluating and purchasing it. After you complete the survey, note the recommendations at the bottom of the chart. We hope you will use this tool and the material in this white paper in the journey to transform your supply chain.

How Effectively Do You Use Supply Chain Insurance?
A Self-Evaluation

Question	Please rate on a scale of 1-10, where 10 is world class
1. How involved are you (the supply chain professional) in selecting insurance for your shipments?	
2. How well do your KPIs provide the proper incentives for you and others involved in the insurance selection process to properly manage the trade-offs?	
3. How complete is your documented loss and damage history, and claims recovery history?	
4. How well do you understand your INCO terms and who has liability at each stage of your global supply chain?	
5. How much knowledge do you have regarding the limits of your carrier liability coverage versus the value of your shipments?	
6. How well do you understand the shipment coverage in the company's property and casualty insurance?	
7. How robust is your claims submission and re-submission process?	
8. How complete is your action plan to avoid loss and damage including packaging?	
9. How involved are you in monitoring and managing the insurance of your 3PL provider?	
10. How extensively do you partner with an insurance professional to select the right coverage for your global and domestic shipments?	

How did you do?

0–40 points: Your process is deficient. You should benchmark best in class, and partner with a supply chain insurance expert to develop a multi-year plan. And, you quickly need to get good cargo insurance in place.

40-60 points: You have an average process. You are in a solid position on which to build. You now need a multi-year plan to improve your risk management process. Partner with a supply chain expert in the insurance field.

60-80 points: You have a good to excellent supply chain risk management process for your cargo shipments. Build on your strengths. But also honestly assess and address your weaknesses, continuously.

80-100 points: You have an outstanding, approaching world-class, process to managing cargo risk. Make sure you keep it that way. Everyone is raising the bar every day. Keep challenging yourself to remain at the top.

[1] The National Cargo Security Council

[2] The World Shipping Council, The Survey Results for Containers Lost at Sea – 2014 Update

[3] Marine Insurance – Care and Protection of Supply Chain Cargo at Sea, May 1, 2011

[4] Risk and Loss Prevention in the Supply Chain – Skorna, Bode, Weiss (Presented to the 29th Annual Conference on Management of Technology)

[5] FreightWatch International, Supply Chain Intelligence Center: Cargo Theft USA 2014

[6] Business Continuity Institute and Zurich Insurance Group, 2014 Supply Chain Resilience Survey

[7] Supply Chain Brain, Supply Chain Risk Awareness, Assessment & Benchmarking, March 18, 2015

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[i] FOB destination: The seller pays and bears the freight charges and owns the goods while they are in transit. Title passes at the buyer's location.

[ii] FOB origin: The buyer takes ownership at the seller's location and is responsible at that point. Therefore, the sale is complete once the product is picked up by the buyer. The buyer has the liability.

[iii] CIF (cost, insurance and freight): The seller has the risk and responsibility for the cost of the goods in transit, providing minimum insurance and paying freight charges to move the goods to a destination chosen by the buyer, such as a port. From the point of delivery at the destination, the buyer assumes the risk and responsibility for unloading charges and any further shipping costs to a final destination.

About the University of Tennessee
The highly ranked supply chain management program at the University of Tennessee is housed in the college of business administration. It provides undergraduate, MBA and doctoral student education, with 30 faculty members. The supply chain management faculty at the University of Tennessee is ranked No. 1 for academic supply chain research productivity.

About the author
J. Paul Dittmann, PhD, is the Executive Director of The Global Supply Chain Institute at the University of Tennessee. He teaches supply chain courses in the business school and lectures in the school's executive education programs. He has a 32-year career at Fortune 150 companies, holding positions like Vice President, Logistics for North America and Vice President, Global Logistics Systems. Most recently he served as Vice President, Supply Chain Strategy, Projects, and Systems for the Whirlpool Corporation. He has consulted or done executive education for numerous public, private and government organizations. He co-authored a recent Harvard Business Review article: *Are You the Weakest Link in Your Supply Chain?* He also co-authored the book, *The New Supply Chain Agenda*, published by Harvard Business Publishing. And he wrote the book *Supply Chain Transformation: Building and Executing an Integrated Supply Chain Strategy*, published by McGraw Hill in 2012.

*Insurance is underwritten by an authorized insurance company and issued through licensed insurance producers affiliated with UPS Capital Insurance Agency, Inc. and other affiliated insurance agencies. UPS Capital Insurance Agency, Inc. and its licensed affiliates are wholly owned subsidiaries of UPS Capital Corporation. Insurance coverage is not available in all jurisdictions.