

MOODY'S

Once temporary, now structural: supply chain risks that are here to stay

- **Sapna Amlani**
Senior Director – Supply Chain Risk Management

Who is Moody's?

MOODY'S

RATINGS

MOODY'S RATINGS

We provide forward-looking opinions of the relative credit risks of financial obligations issued by non-financial corporates, financial institutions, structured finance vehicles, project finance vehicles, and public sector entities.

ANALYTICS

MOODY'S

We provide rich data, expert analysis, robust tools supported by groundbreaking technologies, and a view of the future to enable our customers to unlock opportunity, advance their business, and act decisively.

PHILANTHROPY

MOODY'S FOUNDATION

We direct resources, tools, and services to support social and economic equality in the areas where we can make the most impact: helping entrepreneurs to scale their small businesses and restoring ecosystems in emerging markets.

MOODY'S

DATA ESTATE

600M

Companies

476M

People



The Era of Exponential Risk

Risk has evolved and become more interconnected



The structural shift in SCRM



Financial / supplier
performance risk



Geopolitical risk



Cyber risk



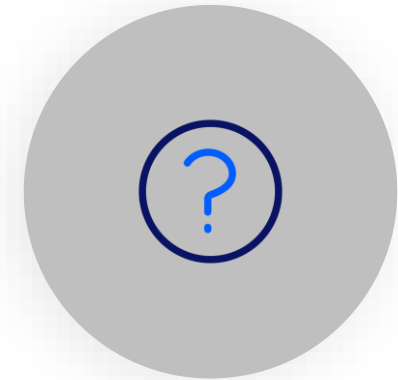
Regulatory /
compliance risk



The episodic risk
model has collapsed



Disruption is now a permanent
operating condition



The question is which risks
are structurally embedded



ESG /
sustainability risk



Operational risk



Reputational risk



Natural
disasters risk

Our attention has shifted from individual strategic suppliers to the entire supplier network.

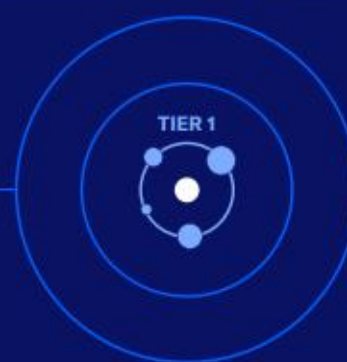
1. INTERCONNECTED SUPPLY CHAIN

Based on a supplier's closeness to your business or your final product, there are likely multiple tiers of suppliers within your supply chain.



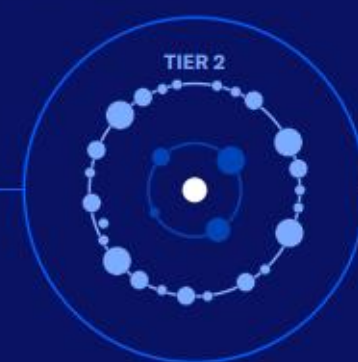
2. TIER 1 SUPPLIERS

These are your closest partners that directly conduct business with you, including contracted manufacturing facilities or production partners.



3. TIER 2 SUPPLIERS

The next layer of suppliers or subcontractors serve as a source for where your Tier 1 suppliers get their materials.



4. TIER 3 AND BEYOND

Additional tiers — further removed from your organization — are still connected to your business and can expose you to risk.



5. VALUE CHAIN RISK

Knowing your supply base is fundamental to minimizing risks, which can occur further down the supply chain where they might not be immediately apparent.



6. RISK^N – EXPONENTIAL RISK

Each organization in the value chain has a unique risk factors – from cybersecurity to human rights, physical climate risk to sanctions, and credit to geopolitical pressure.



Note: Figures collected January 31, 2024. Figures are rounded.

Navigating Supply Chain Challenges



Fundamental supplier performance risk: delivery and quality



Tariffs and resulting price increases complicating negotiations with suppliers



Demand planning difficulty with tariffs and general uncertainty in global economy



Sourcing during tariff fog: which suppliers will end up most appealing after final tariff rates?



Suppliers' reputational risks in hyper-political times



Geopolitics (e.g., Russia / Ukraine conflict, China tensions) leading to lower supply / higher prices



Governments creating supply chain disruptions in pursuit of political goals



Complexity and uneven enforcement of sanctions, anti-corruption and other areas of compliance



Preparing for Supply Chain orgs to be majorly affected by AI



Successful cyber attacks on suppliers and threats to sensitive data, documents and drawings



Visibility into lower-tier suppliers and the products, services, materials they deliver



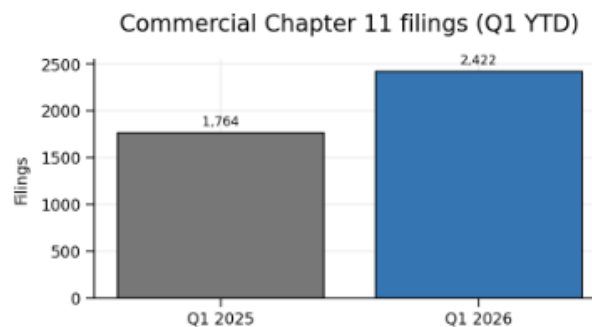
Sustainability performance and susceptibility to climate disasters

Financial and supplier performance risk

- Supplier's financial health
- Payment patterns towards their suppliers
- Probability of serious financial problems

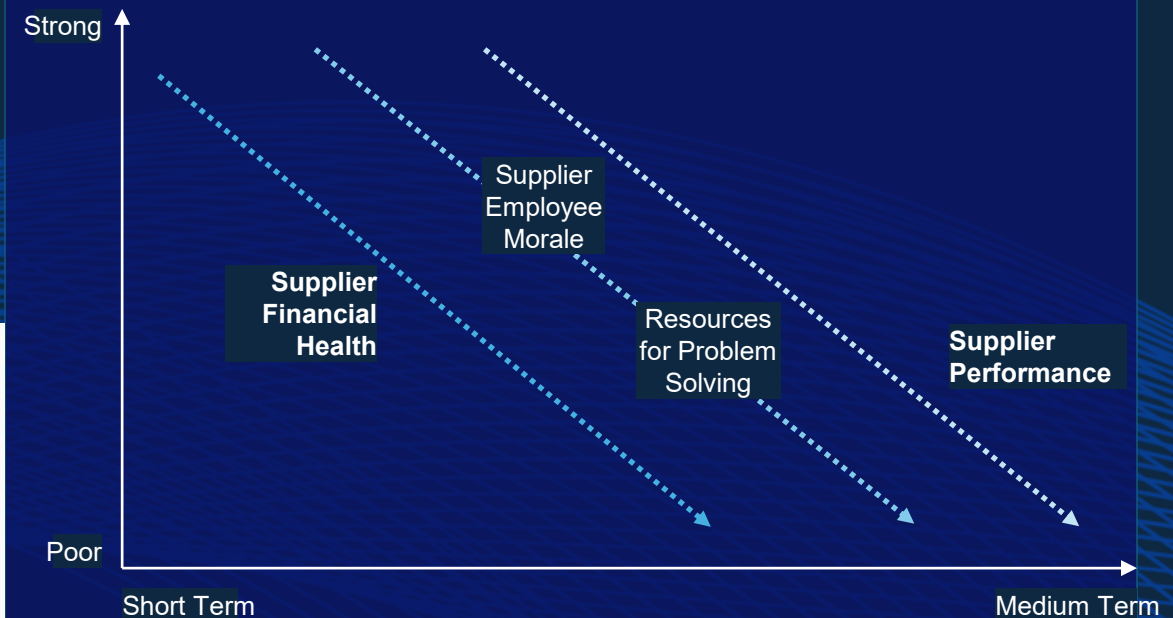


12-month period
Note: 2026 annual AOUUC total not yet published.



Jan 1 - Mar 31

Deterioration in a supplier's financial health often leads to lower employee morale and shortage of problem-solving resources, which translate to poor product quality, increasing cost, and delivery problems.



Cyber Risk

Cyber supply chain risks relate to loss of your company's data by suppliers, a breach of your company's systems by hackers working through a supplier with access, and suppliers going offline because of a ransomware attack.

How we can help

- We offer cyber risk ratings that reflect the probability of a company experiencing a cyber incident
- We expose cyber risk within an organization's third and fourth-party supply chain ecosystem
- We help minimize negative impact on your data and systems if you decide to give access to share data with key suppliers

Our data and analytics

- Cyber risk ratings & analytics



Regulatory and Compliance Risk

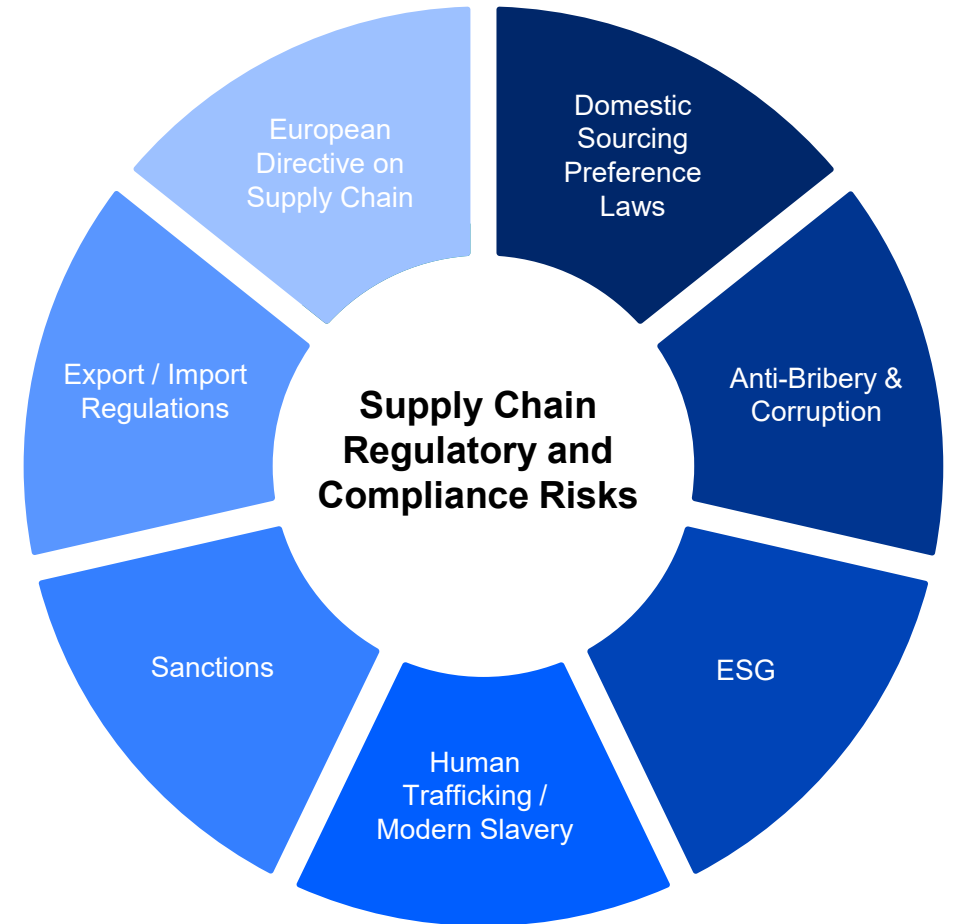
- It's important to focus compliance resources on areas that are vigorously enforced by authorities and pose particular risks to your industry.

Expanding Global Regulatory Landscape

- Mitigate by monitoring accurate legal entity, ownership, and control data that are foundational for effective third-party and supplier due diligence
 - Continuously monitor risk intelligence, covering sanctions, enforcement, political exposure, state ownership, and adverse media
 - Geopolitical tensions and evolving sanctions regimes (OFAC, EU, UN) create hidden risks in supplier networks, especially in multi-tier chains.

Data and analytics

- Sanctions, tariffs, watchlists, and PEPs
- Anti-corruption
- Legal status data and events



Natural Disaster Risk

Natural disaster risk can cause significant interruption of a supplier's business activities due to employee evacuations and/or damage to facilities and infrastructure.

How we can help

- We predict the risk of natural disasters in locations of significance for suppliers
- We help you determine which suppliers require mitigation steps based on the level of natural disaster risk
- We assist you in identifying and diversifying your supplier base by finding alternative suppliers in different regions or countries, reducing the impact of potential disruptions caused by natural disasters

Our data and analytics

- Moody's Climate-on-Demand
- Key supplier locations



ESG and Sustainability Risk

Supply chains can directly and/or indirectly expose companies and their investors to ESG risks.

Regulatory focus is shifting toward responsible sourcing, anti-corruption, and human rights compliance across the entire value chain

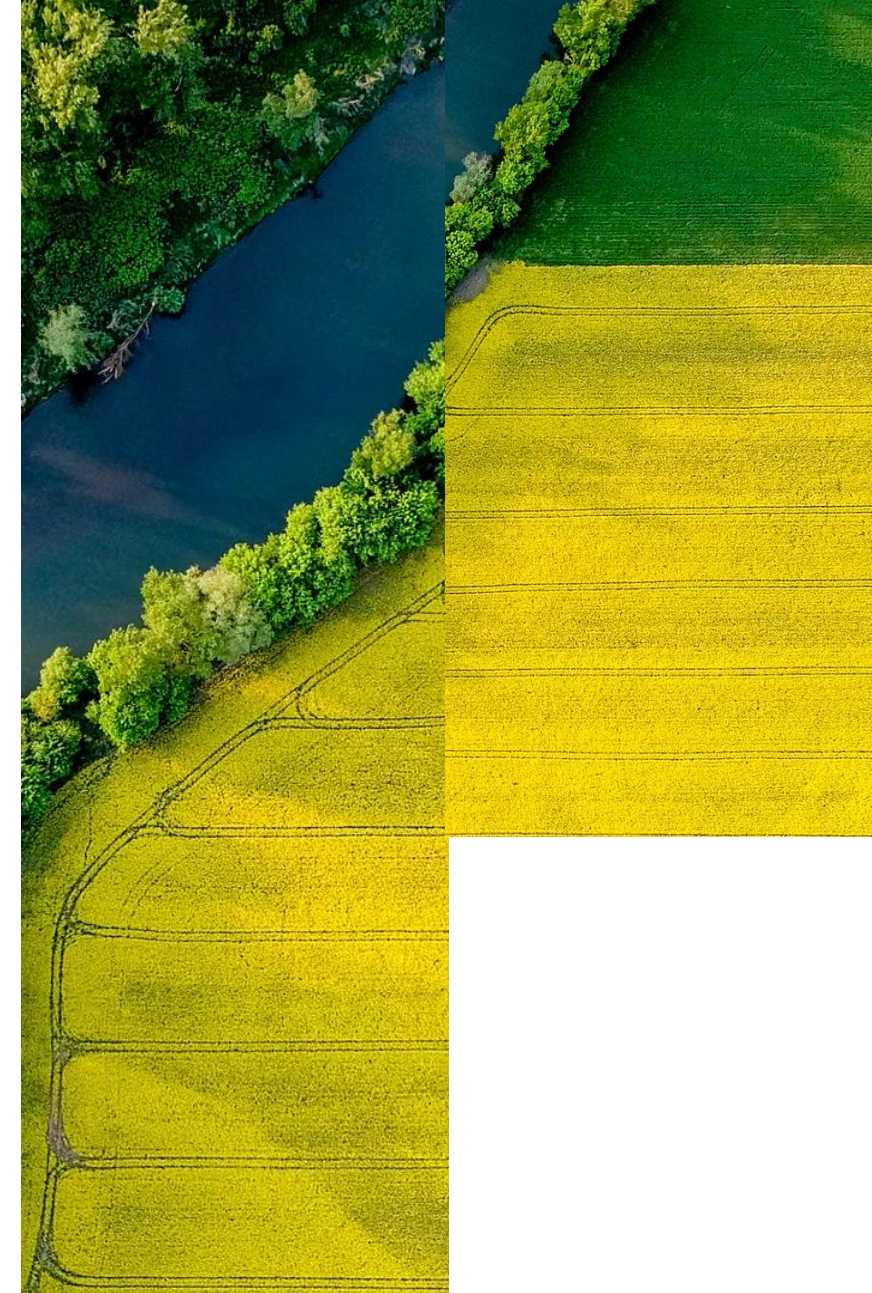
Third-Party and ESG Compliance Integration

Monitor existing and emerging supplier climate risk management

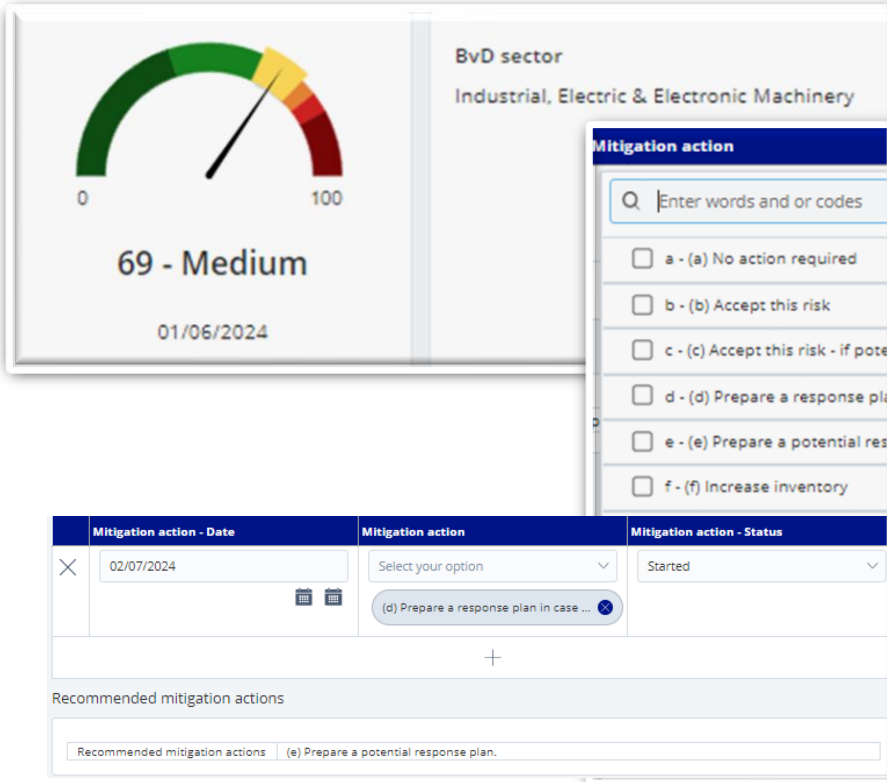
- Identify sustainability improvement opportunities and improvement opportunities for other parts of ESG
- Make progress on corporate sustainability goals and demonstrate ESG leadership to upstream buyers
- Comply with and report on incoming sustainability regulation

Our data and analytics

- ESG indicators, scores, and assessments



Supplier Performan



But this is where I would make the point very clearly.

A score is not valuable because it gives you a number.

A score is valuable if it changes behaviour.

So the question is not:

“Do we have a supplier risk score?”

The real question is:

“What happens when the score changes?”

Does it trigger:

•review?

•escalation?

•supplier engagement?

•further due diligence?

•sourcing pause?

•mitigation planning?

•executive visibility?

•alternative qualification?

•inventory review?

•contract review?

Because if not, the score is informational.

If yes, the score is operational.

A risk score without a decision rule is just another number.

And just to make that real, if you think about it in practice:

If a critical supplier deteriorates financially, finance and operations should be pulled into the review.

If cyber risk rises and the supplier has system access, access should be reassessed.

If sanctions or ownership risk changes, sourcing or onboarding may need to pause.

If climate exposure is high and criticality is high, a continuity plan should be required.

If the supplier is high risk but low dependency, the answer may be to reduce exposure — or exit.

If the supplier is high risk and high dependency, the answer may be mitigation, supplier engagement, executive visibility, or redesign.

That is what I mean by a decision contract.

The organisation has already agreed what the signal means.

Supplier Risk Score

ts: leverages advanced analytics to address challenges, enabling proactive risk management.

offers a unique Supplier Performance predictive metric of a supplier’s potential vulnerabilities.

ies: delivers actionable, resource-based recommendations tailored to various risk levels for base, ensuring preparedness and in

Leveraging Supplier Performance Risk Score for Enhanced Risk Analysis

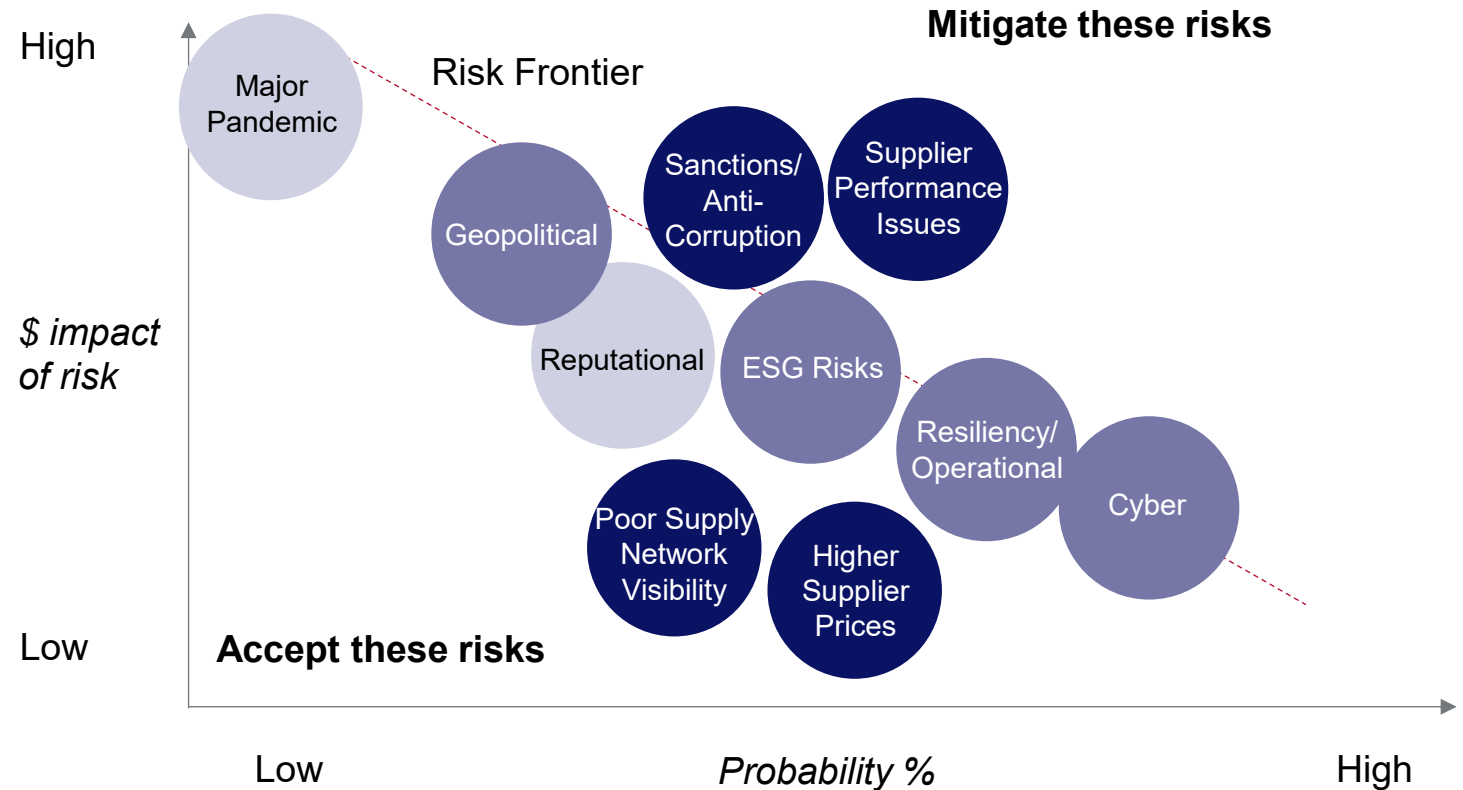
- **Risk Categorization:** groups suppliers based on their risk scores for more efficient management
- **Supplier Assessment:** uses scores for benchmarking against industry standards, identifying improvement areas
- **Risk Mitigation Planning:** develops strategies tailored to the risk profile of each supplier, ensuring precise risk handling
- **Supply Chain Protection:** identifies and addresses risks in critical suppliers to maintain stable supply operations
- **Ongoing Risk Monitoring:** continually assesses supplier risk levels, allowing for timely adjustments in risk management strategies



Unified Risk Management

Internal KPIs +
External KRIs =
Unified View

- Due to the volatile business landscape, continuously monitoring risk is now a necessity.
- Consistently monitoring the operating environment ensures business continuity.



Supplier Risk Solution

550+ Million Suppliers World-Wide

M'

Data

• • • • •

1

2

• • • • •

Analytics

Scorecards

• • • • •

3

4

• • • • •

Prioritization

Mitigation

• • • • •

5

- Financial Risk
- Operational Risk

- Geopolitical Risk
- Sustainability Risk
- Lower-Tier Risks

- Compliance Risk
- Cyber Risk