
Risk vs. Business Requirement – Industry Perspective

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Introduction

• What are the tools for Risk Management (mitigation)?
• What is Marine Insurance?
• How does it differ amongst it types?
• How Marine Insurance works as a Risk Mitigation tool
• What we do to determine, manage and mitigate risks
• Case studies
What is Risk Management (Mitigation)

- Consideration of all alternative methods for dealing with Risk
  - Avoid
    - Don’t go into that line of business
    - Sell that line of business
  - Loss Prevention and Reduction
    - Engineering control
  - Retention – Planned assumption
    - Self insure
  - Transfer
    - Insurance
    - Contractual
What is Marine Insurance

• Oldest type of insurance
  – Ancient Phoenicians in 3000 BCE shared the common rise
• Formalized by the Italians in early current era (+/-500 AD)
• Lloyds Coffee house – 1734 developed into the center for global marine market
• Now over a 30 billion dollar market (IUMI estimated 2010)
Marine Insurance - Types

• Combination of Dynamic and static Risks
• Dynamic
  – Cargo in transit
  – Hull
• Static Risks
  – Ship Builders
  – Ports and Terminals Liabilities
  – Cargo in Storage/Delay in Transit
Dynamic – Cargo in Transit

Analysis of risk
  Where to/from
    Piracy
    Weather
  Transit restrictions
    Volcano
    Tsunami
  Port Damages
Dynamic - Hull
Static – Marine Liability

• Analysis of Risk
  – CAT
  – Political
  – Social
  – Location
    • Near population
  – Activities
Static – Ship Builders
Static – Cargo in Storage/
Delay in Transit
Supply Chain Risks

• Interruptions caused by something that does not cause Physical Damage or loss to the subject of the insurance. For Example:
  – Car parts delayed due to the Japanese Earthquake causing shutdowns in the US car market
  – Iceland volcano shutting down air and vessel traffic
Case Studies - Hurricane Ike

• Cargo on dock in Houston Ship Channel for project in Peru
• Houston was a layover/consolidation point
• 2008 – struck just east of Houston and Galveston
• Storm Surge up the ship channel
• Over 9 feet 30 miles inland
• Dock overtopped by storm waters
• Project delayed for over 6 months due to cargo damages
Case Studies - Piracy

The Piracy - Figures

The Piracy in the world

Total number of attacks
(actual and attempted attacks)

Sources: International Maritime Bureau
Case Studies - Piracy

The Piracy - Figures

The piracy in Somalia

**Somalia**
- Several political entities
- Multitude of tribal authorities
- 5 to 10 gangs
- 1500 pirates
- $6000 US$ invest for hijacking campaign
- Earning by pirate $400 US$
- 6/8 land bases

![Map of Somalia with pirate activity areas and ship transit](image)

- 28,000 ships transit
- 624 M tons (8% world)
- 1% attacked
- 0.3% hijacked

**Counterpiracy**
- 35/45 warships from 20 nations
- Some ships security companies
- 1,000 private armed guards
- Somaliland coast guards
- Puntland Marine Force

17 hijacked ships
- 375 hostages
- 2011/31/08
Case Studies - Piracy

The Piracy - Figures

Cost of piracy

<table>
<thead>
<tr>
<th>Cost for shipping</th>
<th>Cost for global economy</th>
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<tbody>
<tr>
<td>Freight rate</td>
<td>Extra Cost of shipping &amp; trade</td>
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<tr>
<td>Piracy risk surcharge</td>
<td>2010 global cost 8/10 Bil US$</td>
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<tr>
<td>Crew salary</td>
<td>Regional trade</td>
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<tr>
<td>Special prime</td>
<td>2010 global cost 1.25 Bil US$</td>
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<tr>
<td>Insurance Premiums</td>
<td>Eg: Kenya 414 MUS$; 95 $ / TEU, 15 $ / ton wheat</td>
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<td>War risk surcharge: 2010 global cost 4 Bil US$</td>
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<td>Kidnap &amp; ransom: 2010 global cost 540 M US$</td>
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<td>Extra 30 000 – 60 000 US$ by transit, 2011: extended area</td>
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<tr>
<td>Security Guards &amp; Equipments</td>
<td>100 000 US$ for 10 days</td>
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<tr>
<td>100 000 US$ for 10 days</td>
<td>Cost for countries</td>
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<tr>
<td>Bunkering</td>
<td>Military Counterpiracy &amp; dedicated programs</td>
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<tr>
<td>Enlarge routing Arabian Sea, speed steaming in Gulf of Aden</td>
<td>2010 global cost 2 Bil US$</td>
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<tr>
<td>Rerouting via Cape (+0.7 MUS$)</td>
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<tr>
<td>Ransom</td>
<td>Prosecutions by justice in Africa, USA, Europe</td>
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<tr>
<td>Average 2007: 1.5 M US$, 2010: 5.2 M US$ + 50%</td>
<td>Antipiracy organisations in East Africa</td>
</tr>
<tr>
<td>additional costs</td>
<td>2010 global cost 24.5 M US$</td>
</tr>
</tbody>
</table>

Sources: Loyd List Daily, The Economic Cost of Maritime Piracy, oceansbeyondpiracy.org
What is being done?

• Rerouting
• Convoys
• Hardening ships
• Crew training
• Rapid response
According to the *Business Dictionary*:

- **risk** is the probability or threat of damage, injury, liability, loss or other negative occurrence that is caused by external or internal vulnerabilities and may be neutralized through preemptive action.

- The **probability** that actual return will be less than expected return.
According to Merriam-Webster Dictionary:

- **requirement** is defined as something essential to the existence or occurrence of something else.

- **business requirement** is defined as something essential to the existence of the business - in the private sector, organizational existence is primarily dependent on profitability, while in the public sector tends to be dependent on the service provided versus a public need.
External Vulnerabilities

ENVIRONMENTAL

- A vessel goes to sea and is battered by heavy weather that results in loss of containers overboard, or a hull fracture and pollution, or passengers thrown around and injured
- As a vessel is docking an unanticipated heavy current causes it to allide with a pier resulting in hull damage
- A vessel collides with another vessel through no fault of its own resulting in loss of life and damage to the vessel

Security or Threat-based

- An oil tanker is rammed by a terrorist small craft resulting in loss of life and pollution
- A ferry is boarded by a passenger with an IED in backpack that is detonated in passenger spaces resulting in loss of life and damage
- A port experiences a terrorist attack that results in a complete business shut down
Internal Vulnerabilities

- **physical fitness** - the captain of an oil tanker becomes incapacitated while approaching pilot station which results in the vessel grounding and pollution

- **human error** - a crew member on a passenger vessel *ignores* the vessel security plan which results in a major security breach, injury to passengers and crew and damage to the vessel

- **mechanical** - the steering gear on a container ship fails as the vessel is navigating a narrow channel which results in a collision, personal injury and damage to the vessel
risk management begins with competent personnel
objective vulnerability assessments
well-developed and effective management systems, accountability and monitoring procedures (internal controls, safety management systems, security plans, spill response plans, emergency procedures, etc.)
personnel training and effective drills
appropriate technology
periodic competence assessments
strict adherence to all applicable regulations and statutes
demonstrated support of senior management and employee feedback to promote continuous improvement
In a normal business cycle – what is risk mitigation worth?
- MTSA & ISP mandate risk mitigation
- customer expects risk mitigation
- vessel owners’ liabilities require risk mitigation
- it’s expensive, but tends to improve bottom line

In a down business cycle – what is risk mitigation worth?
- MTSA & ISP mandate risk mitigation
- customer expects risk mitigation, but might not want to pay for it
- vessel owners might be willing to assume more risk
- it’s expensive and safety and security tend to be victims of economic downturns
Public Sector Risk Mitigation

- In a normal business cycle – what is risk mitigation worth?
  - MTSA & ISP mandate risk mitigation
  - Public expects risk mitigation, but it’s expensive
  - Vessel owners’ liabilities necessitate risk mitigation
  - Public agencies may be held to a higher standard

- In a down business cycle – what is risk mitigation worth?
  - MTSA & ISP mandate risk mitigation
  - Public expects risk mitigation, but might not be willing to pay additional fees and taxes for it
  - Public agencies might be willing to assume more risk provided they are in compliance with regulations and statues
  - It’s expensive and safety and security tend to be victims of tight budget cycles
Challenges

- human element and internal vulnerabilities
- external vulnerabilities
- economic uncertainty
- public perception
- objectivity of assessment
maritime industry is an inherently risky business and risk management has always been prominent

there is no way to neutralize risk in the maritime industry aside from not being in the business in the first place – must accept a certain level of risk and strive to mitigate

there is a natural nexus between safety and security and how we mitigate the related vulnerabilities, all of which leads to safer and more secure operations and improved bottom line outcomes

must ensure that risk and vulnerabilities are assessed objectively and understand that we cannot eliminate risk - we can only mitigate to an acceptable level
Questions?

Thank You