"Markets and Operations : How Market Trends Affect Operations"

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October 2006

Overview

- Demand for improved Health, Safety, Environmental and Security (HSES) performance at unprecedented high
  - Regulators, Charterers / Customers, Public
- Vessel earnings at high levels
  - In ideal world not relevant, but of interest in the real world
- Unique opportunity to improve HSES performance for company and industry
  - Drives are aligned
  - Use the “ratchet effect” for safety
- Unique personal opportunity to improve your personal HSES performance at your current employer or your next employer

HSES quality

- Unprecedented demand for health, safety, environmental and security performance
- Probably listed in the wrong order in terms of public perception
- However, all reinforce one another provided handled as part of an organised safety management system

HSES Demand: Europe

- Estonia, Prestige and Erika incidents increased public and political awareness
- Public incensed by ferry sinking and by pollution on French and Spanish coasts
- EU as Flag State and more so as Port State pushed IMO regulation by threat of unilateral measures
  - EU better at “working” IMO than US
- EU charterers becoming aware of risks and screening vessels rigorously
  - In practice, becoming difficult to use single hull and DB/DS vessels in Europe
- Basel Convention health and safety toxic waste issues with “ship recycling”

HSES Demand: USA

- Exxon Valdez incident led to OPA 90
- High cost of liability exposure has led to tanker industry measures
  - Vetting and SIRE program
  - Drug and alcohol policies
  - Tanker Management Self Assessment program
- High cost of non-tanker casualties (e.g. NEW CARISSA) has led to concern for other vessel types
- Tough enforcement and “whistleblower” rewards program leading to pollution prosecutions, high fines and criminalisation
- Health and safety toxic waste issues with “ship recycling” for Reserve Fleet

HSES Demand: Asia

- Hong Kong taking lead in safe crewing levels
- Leading companies in Asia lead effective day-to-day implementation of safety programs

HSES Demand: Regulatory

- IMO under Secy. General Mitropoulos taking proactive role in
  - Security
  - Disaster relief
  - Air pollution
  - Ship recycling
  - Ballast Water
  - MARPOL Annex 2 Chemical Tanker Regulations
  - Implementation of MARPOL Annex 1 single hull phaseout

HSES Demand: Regulatory

- Classification societies agreeing on common rules to avoid “shopping” for favorable rules
- Port state control authorities agreeing on common standards
- Flag States using quality as marketing tool
  - Marshall Islands advertising that owners are facing expulsion for not meeting quality criteria

Demanding New Markets Need Quality Officers

- LNG fleet grew from 176 vessels at end 2004 to 213 vessels at end August 2006
  - Current orderbook 136 vessels
  - NI/SIGTTO initiative
- Ice class tankers
  - Growing requirements for Russian crude oil and products and potential LNG exports require ice trained officers
- Imminent retirement of European and developed Asian country officers requires replacement
- Fleet growth in existing tanker, dry bulk, container sectors creating demand for qualified officers
- Chemical tanker example

Changes to Chemical Regulations

- MARPOL Annex 2 regulates transport of chemicals
  - Annex 1 regulates transport of mineral oils
- Annex 2 refers to the IBC Code
- IBC Code
  - Categorises chemicals and other products according types and severity of hazards
  - Assigns products to categories requiring IMO 1, 2 or 3 transport or non-IMO classed transport
- Systematic reevaluation of chemical hazards had been undertaken to gain the benefit of years of experience and “better science”

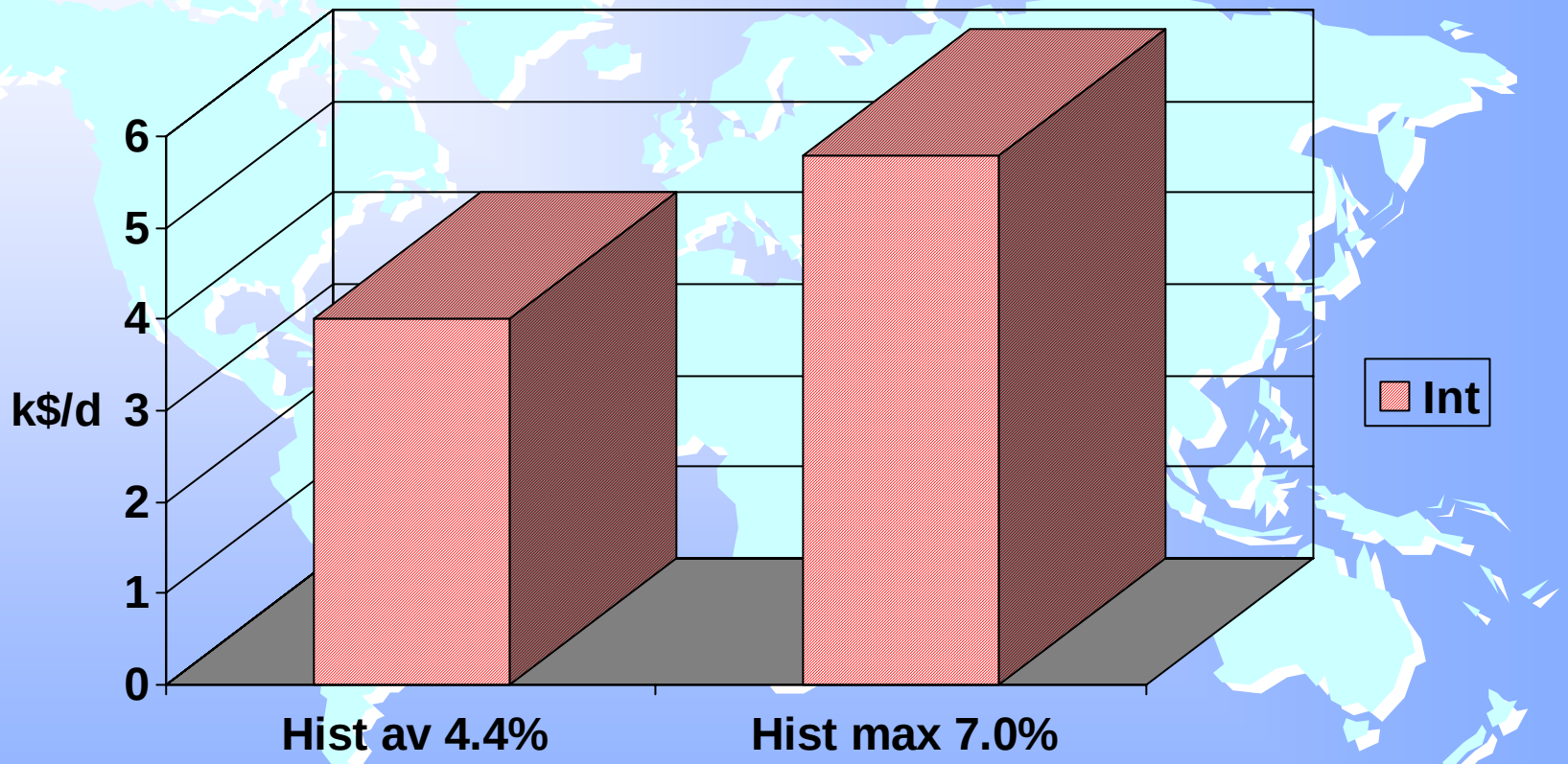
Changes to Chemical Regulations

- Seaborne chemicals and vegoils requiring IMO class chemical transport increase from 55 mt in 2005 to 154 mt in 2007
  - Combination of reclassification and trade growth
- Largest elements are the reclassification of
  - 49 mt of vegoils (requires IMO 2 or double hull IMO 3 tankers)
  - 18 mt of methanol (IMO 3)
  - 8 mt of ethylene glycol (IMO 3)
  - Tonnages shown are 2005 tonnages
- Vessels formerly trading in clean products will be trading in chemicals (including vegoils) and will need properly credentialed officers per STCW 1978 Chapter V

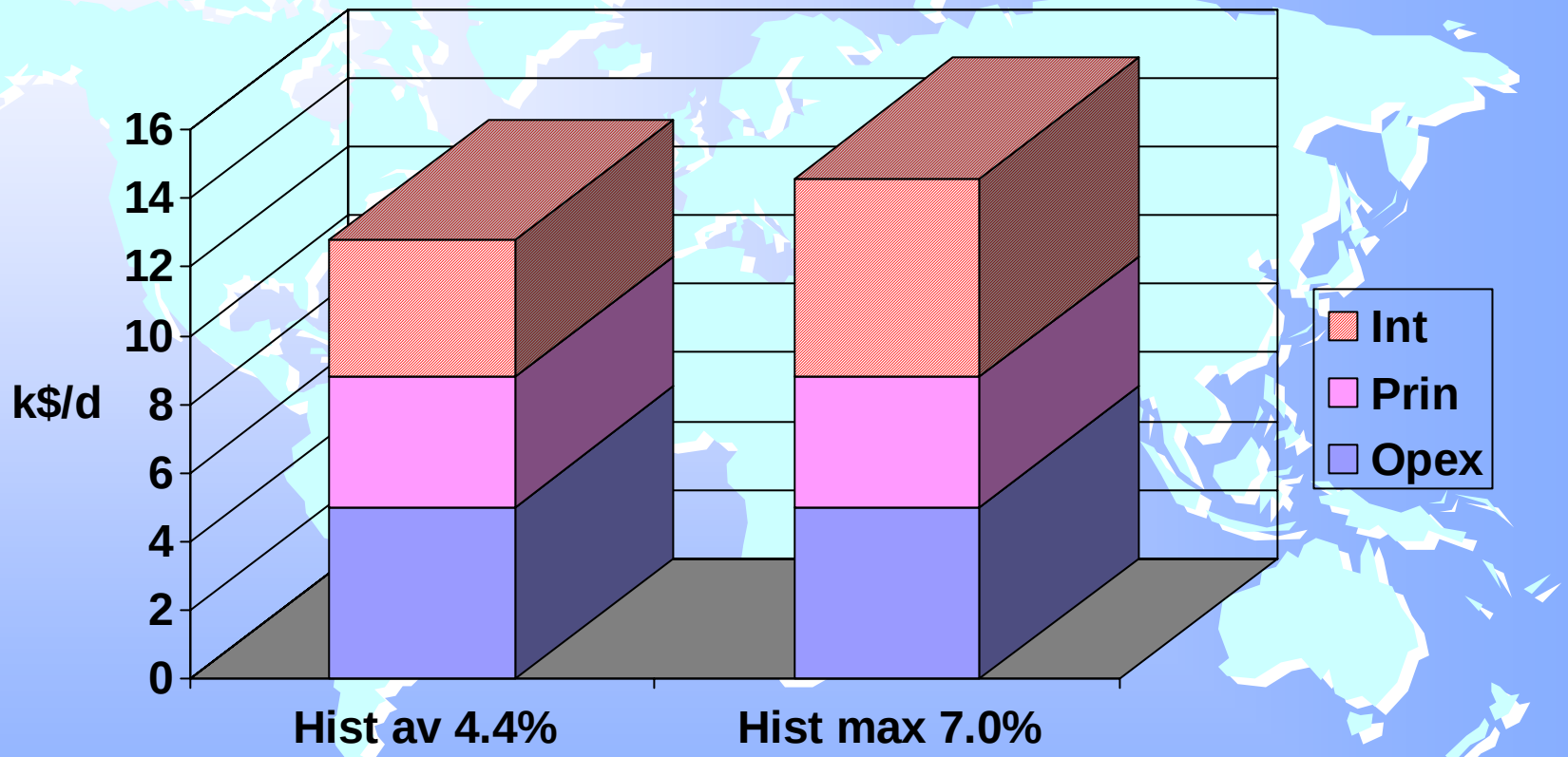
Quick Economics

- Many vessels financed on floating rate loans with interest rate risk exposure
  - Interest rate pegged to 6 month US$ LIBOR rate
  - Examples assume LIBOR plus 125 bp
  - Capesize nb price $40m, opex $5,000/day
  - VLCC nb price $72m, opex $9,500/day
  - 75% loan, 3.5% annual principal amortisation
  - Historical (10 year) average LIBOR 4.4%
  - Historical (10 year) maximum LIBOR 7.0%
  - Current LIBOR 5.4%

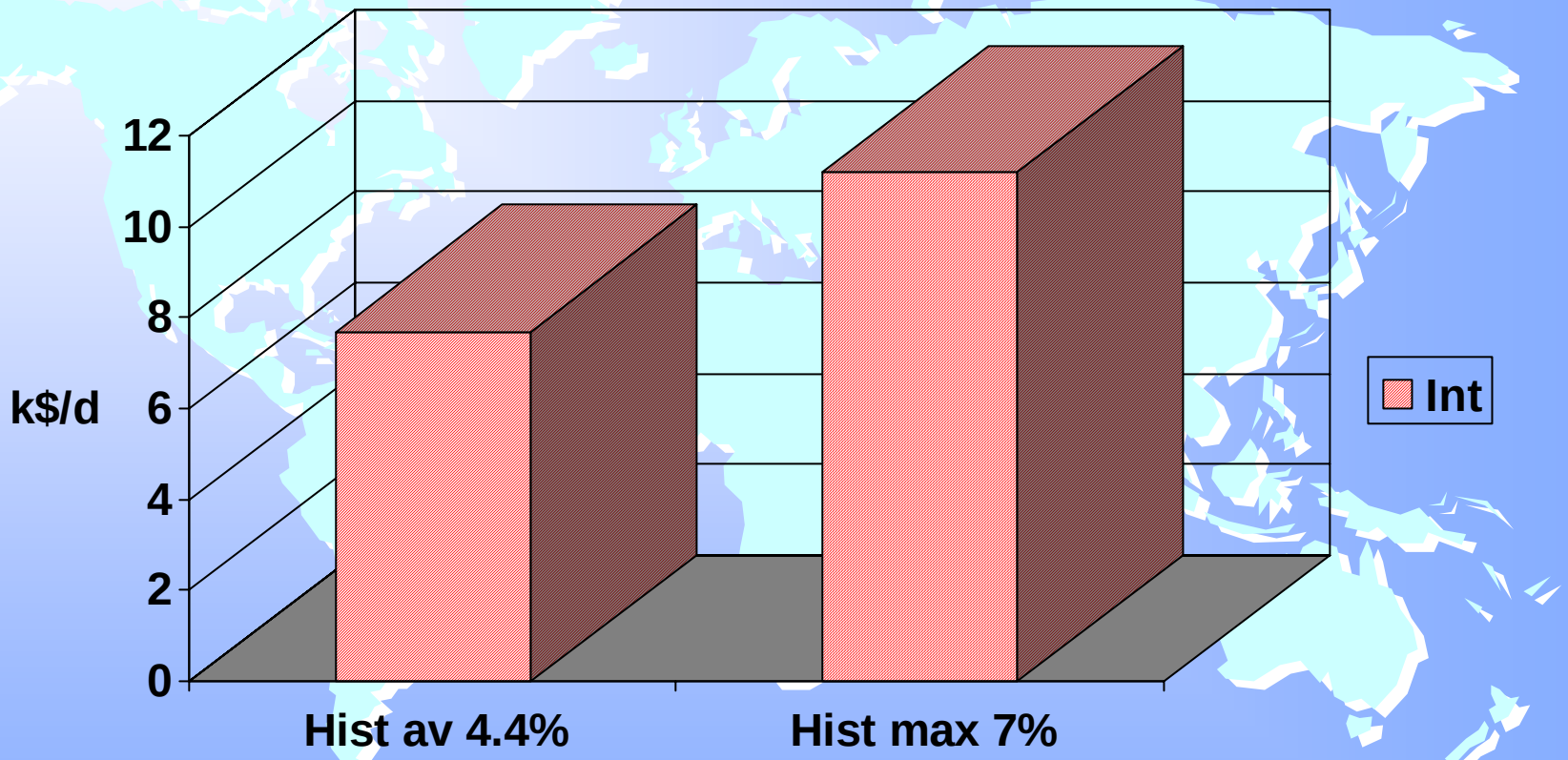
Capesize Interest



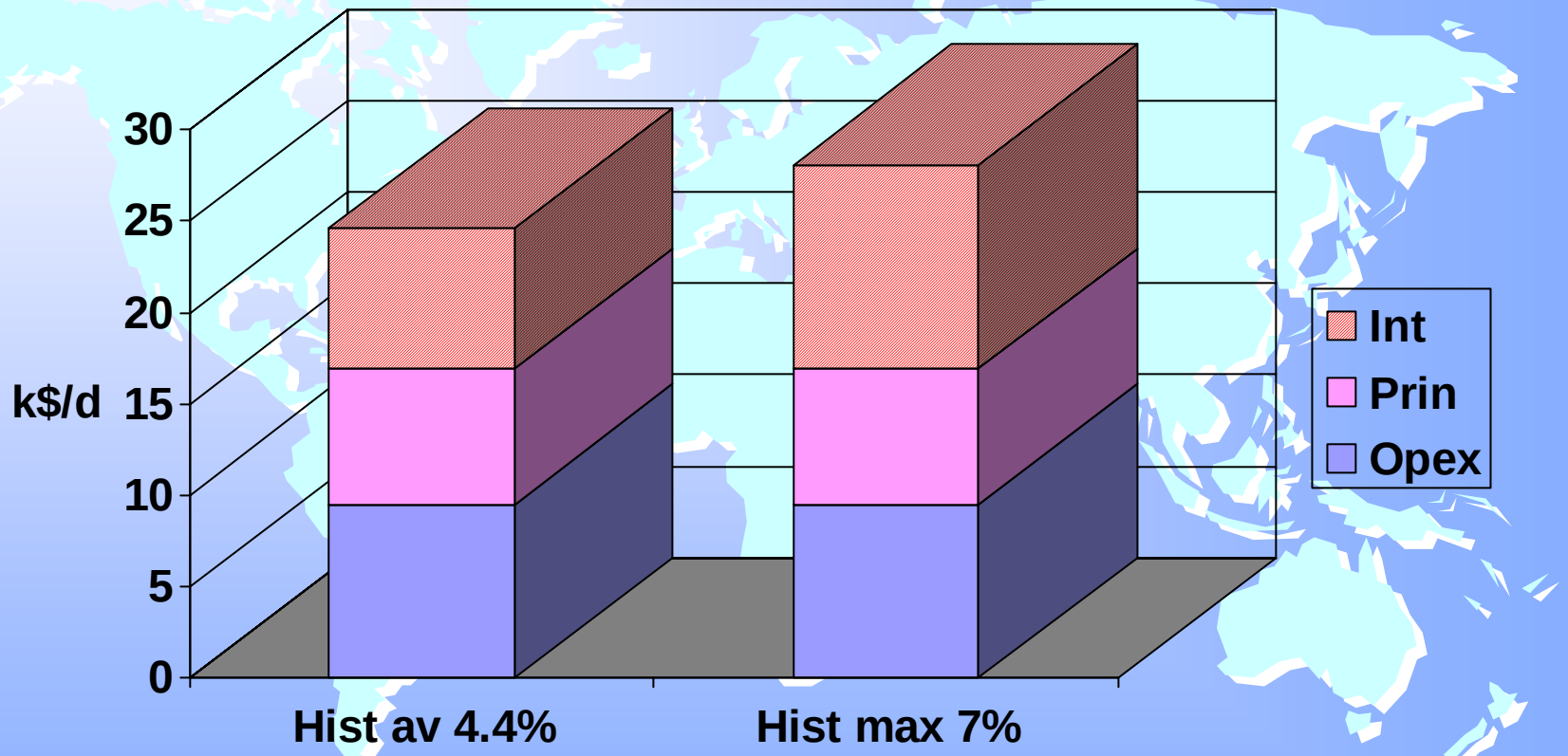
Capesize Opex + Loan Repay



VLCC Interest



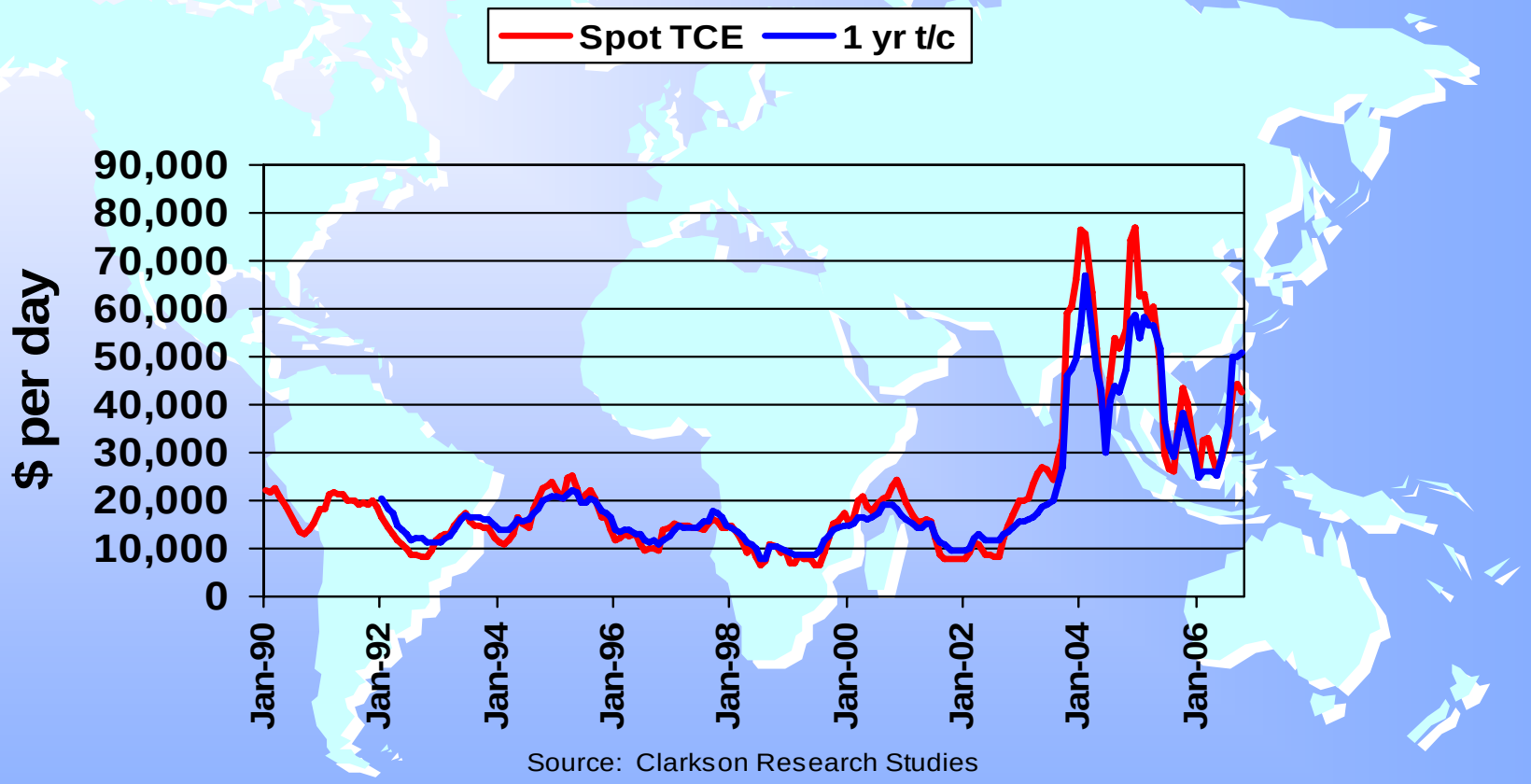
VLCC Opex + Loan Repay



Opex and loan repayment

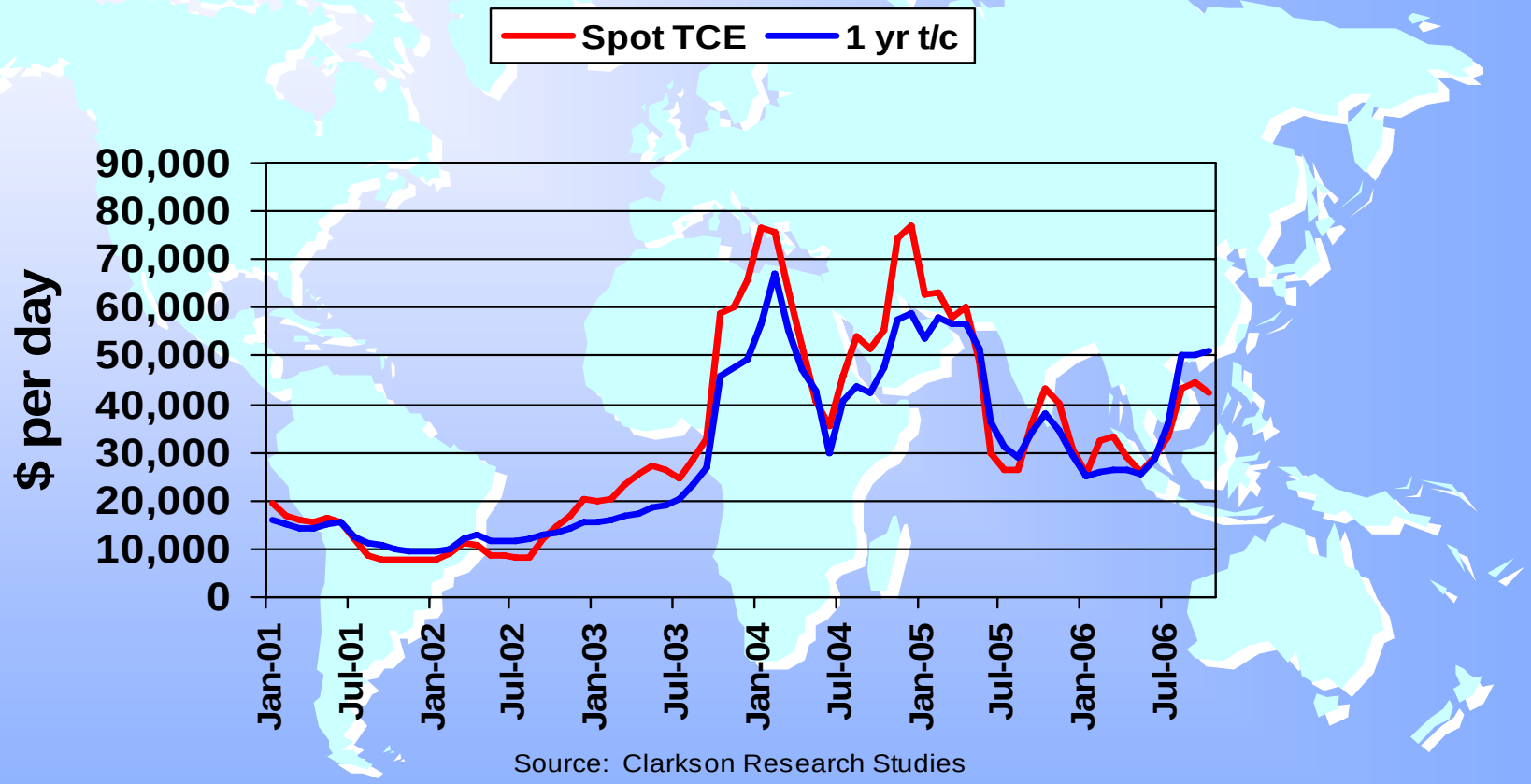
- At 10 year average LIBOR of 4.4%, interest expense averages over first 5 years of loan
  - 4.0 k$/d for Cape
  - 7.7 k$/d for VLCC
- Current LIBOR 5.4%
- Increase in k$/d per 1% increase in LIBOR
  - Cape +0.7, VLCC +1.4

Capesize spot TCE earnings (early 90s type)



Source: Clarkson Research Studies

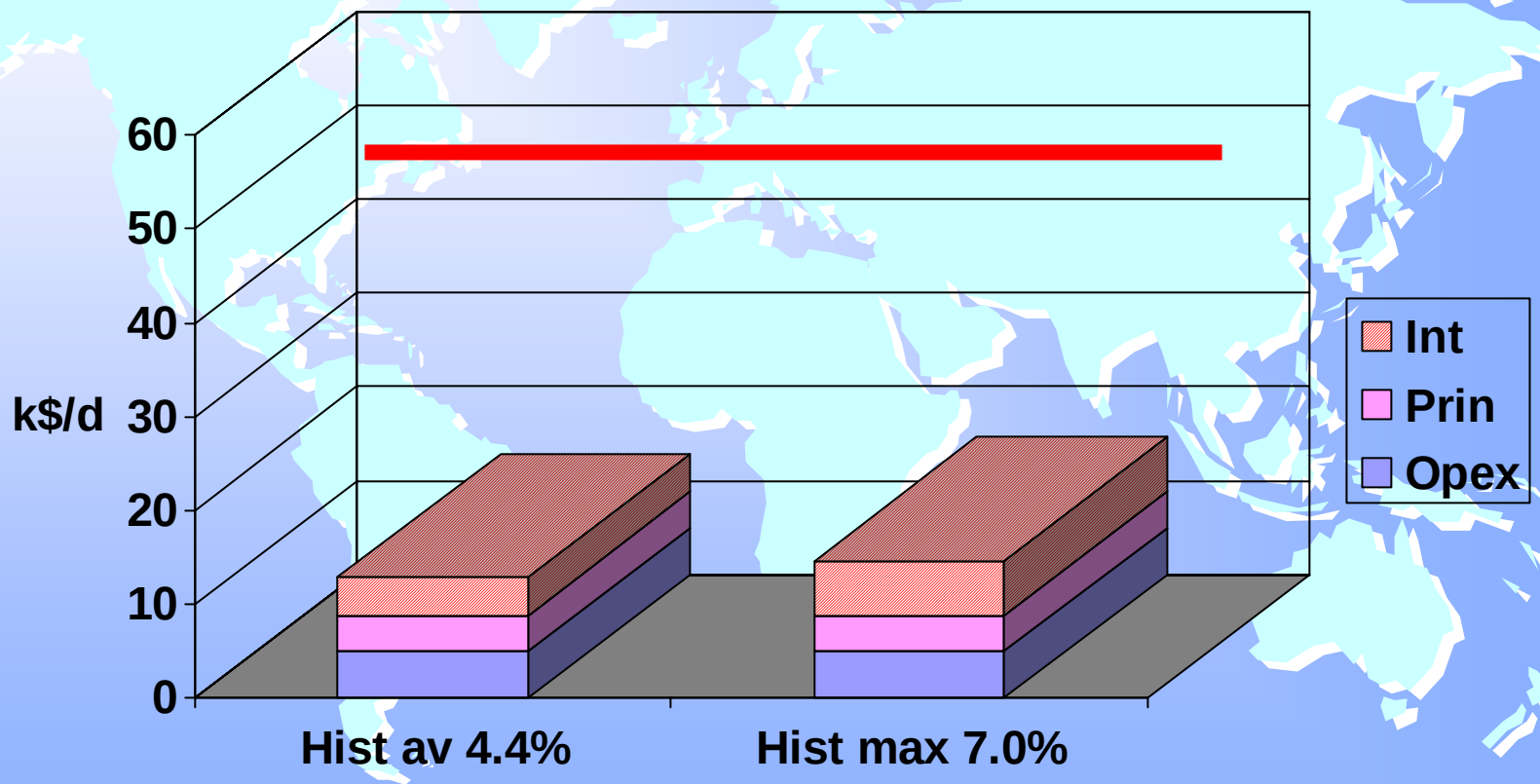
Capesize spot TCE earnings 2001-2006



Source: Clarkson Research Studies

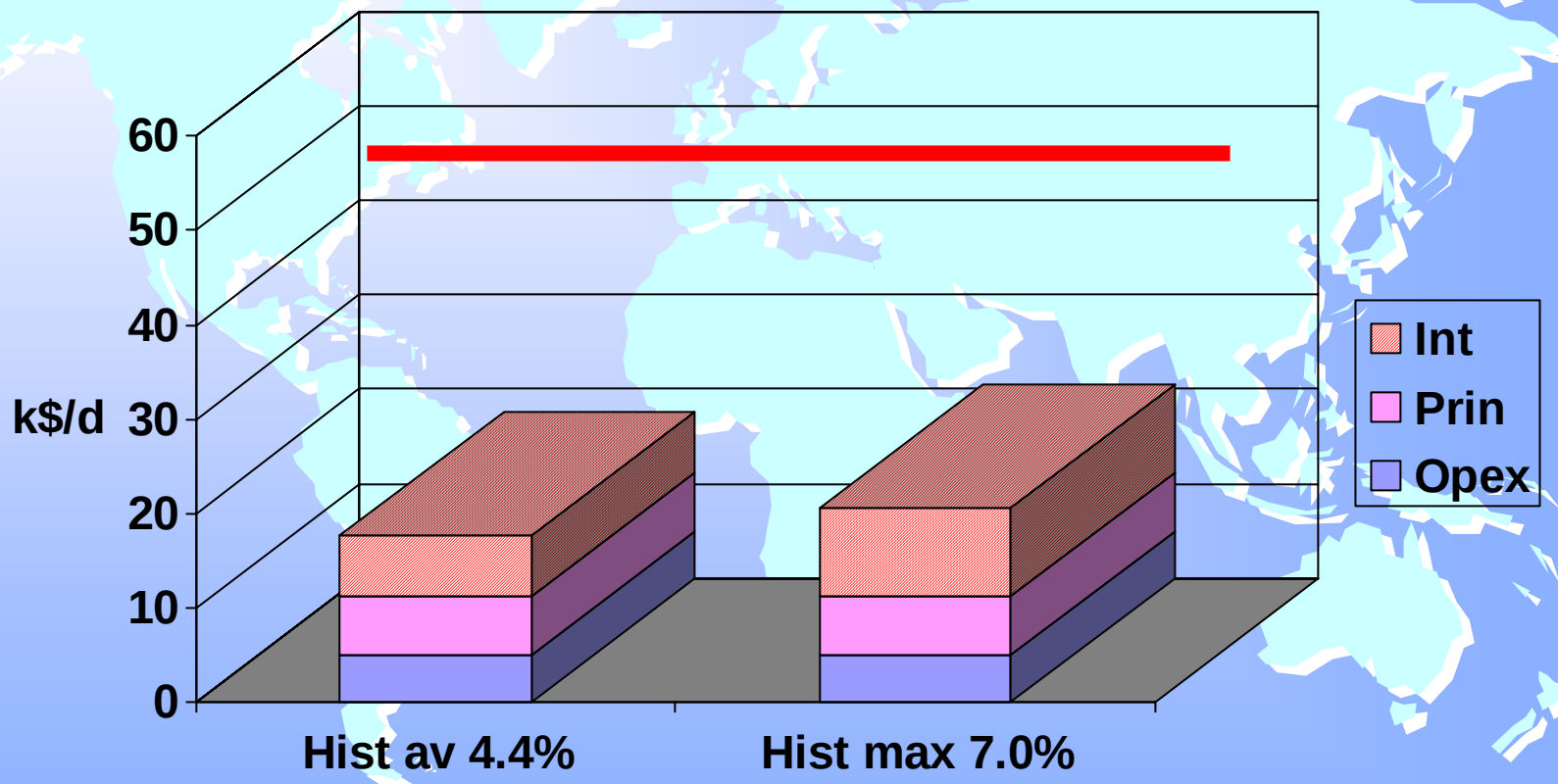
Capesize Opex + Loan Repay

vs. Sep. 2006 spot earnings (——)



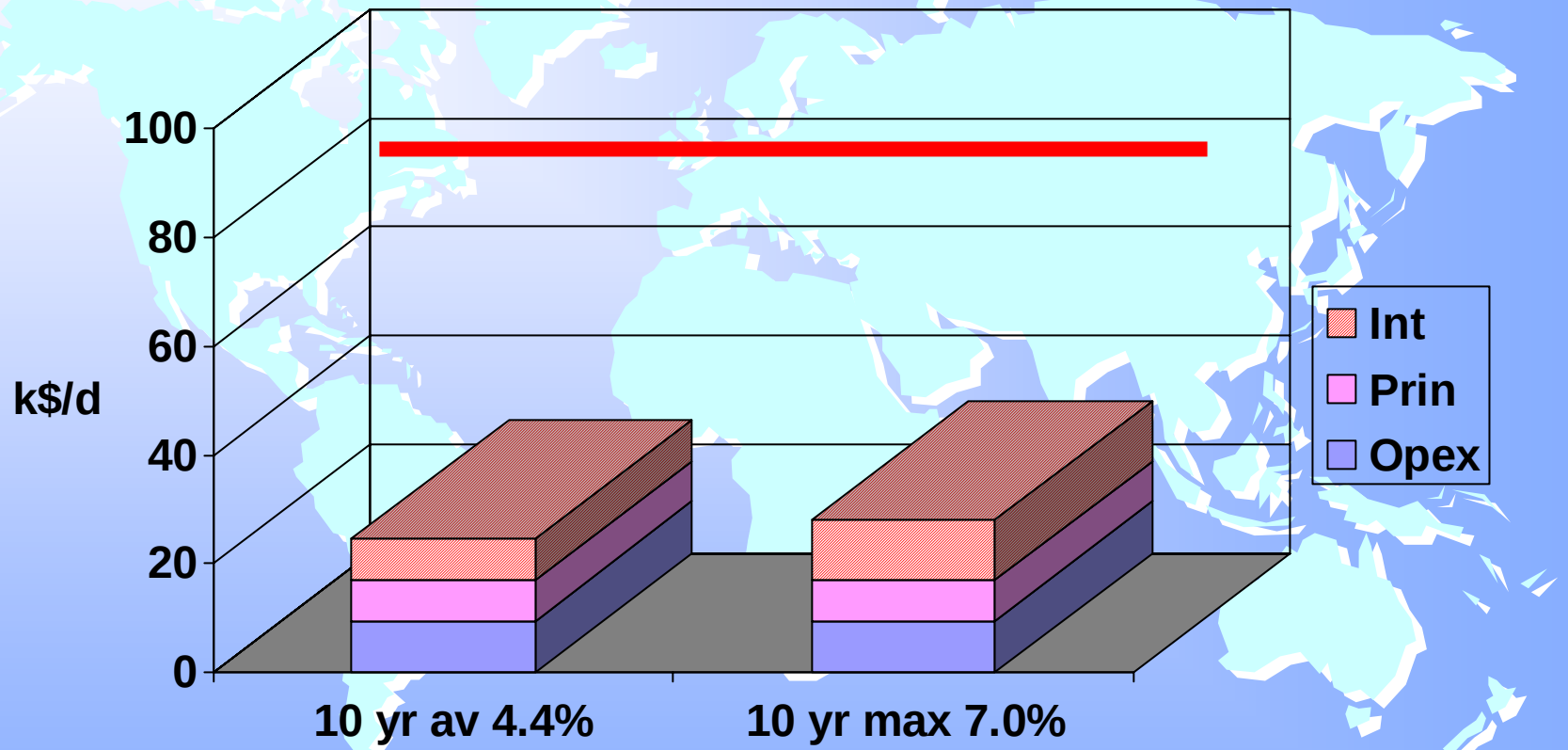
Capesize Opex + Loan Repay $65 million Cape

vs. Sep. 2006 spot earnings (———)



VLCC Opex + Loan Repay

vs. Sep. 2006 spot earnings (——)



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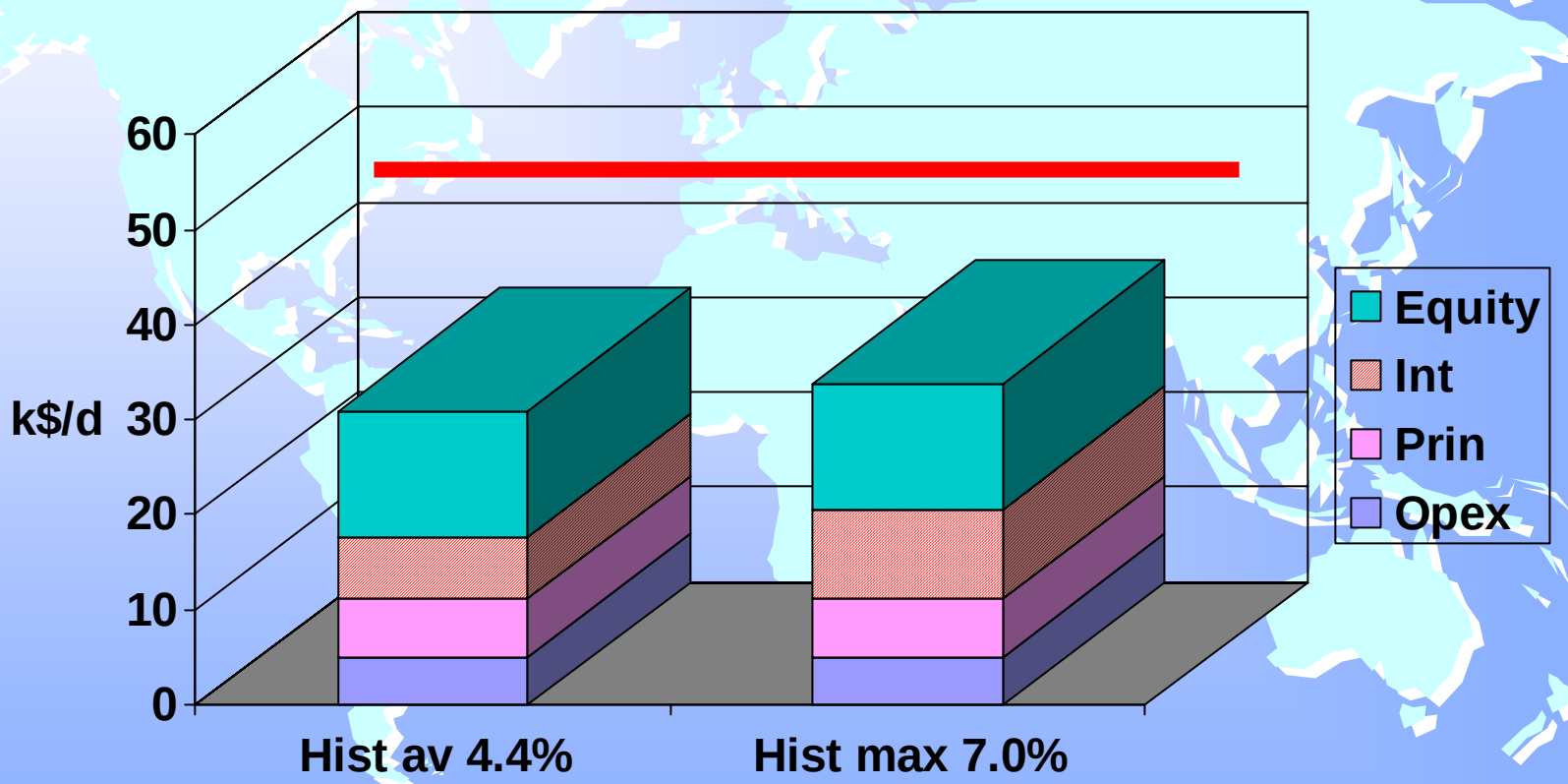
Economics at higher vessel price

- Capesize price $65 million
- Five year equity payback of $24 million
  - Loan $49 million
  - Residual value of $37.5 million at year five extinguishes loan
  - Equity $16 million + 8 million (5 years x $1.6 million)
- Other factors same as previous example
- Breakeven $31-34,000 per day

Capesize Opex + Loan Repay + Equity $65 million Cape

vs. Sep. 2006 spot earnings (———)



Preliminary Conclusions

- Demand exists for improved HSES performance
- For the first time in recent memory, charterers and shippers are paying reasonable rates for shipping
- By the way, oil companies, steel companies, Walmart, others are still making money even with historically high vessel earnings
- Ship owners also making money
- The drives are all aligned

Evolution

Safety culture	Comply with all requirements. Proactive management of safety issues. Work for continuous improvement within safety management system.
Compliance culture	Comply with requirements at lowest possible cost. Provide safety management system with minimum resources required
Non-compliance culture	Do not comply with HSES regulations through intentional evasion or unintentional ignorance

HSES Evolution

- Note: I am a management consultant and former ship's officer, not a safety professional. I am looking for key drivers of value, not perfect jargon.
- Evasion culture
  - Getting smaller, but still there
- Compliance culture
  - Most of the industry remains here
- Safety culture
  - Ample money allows search for cost effective ways to manage and improve safety
  - High value of vessel time creates value for investments in training that lead to higher quality of on board work
  - Knowledge that no shortcuts will be taken with safety becomes a key employee retention incentive

The Ratchet

- Safety culture provides leadership and improvements that eventually become part of the requirements for the compliance culture
- Once the improvements become part of the requirements they remain
- The ratchet: when a safety improvement becomes a requirement it remains
- Bring up the evaders to compliance
- Move compliers to the safety culture
  - Do you have an opportunity to name and shame?
- If and when earnings are reduced in future, important that all are working to the same standards

So, how do we do it . . .

- Use charterer and regulatory demands as indicators of necessity
  - Regulators and certain charterers are trying to shift from compliance culture to safety culture
  - Commercial benefits to being perceived as a quality operator
  - It may not cost more money. Often doing things right on safety and environmental performance leads to doing things right in other areas.
  - How much will a detention cost?
  - How much will being rejected by a charterer or a terminal cost?
  - Let your boss know that you are protecting him.
- Note: I am not minimising difficulties. It is a long and difficult process.

Improve your personal HSES performance

- If you operate Capesizes, can you demonstrate due diligence?
  - Watertight integrity of hatches
  - Loading policies
  - Avoidance of structural damage by equipment
  - Proper inspection and maintenance of coatings and steel
  - Maintenance of water ingress alarms and pumping systems
  - Training in abandonment criteria
  - Letting your Masters know that they have your support in “standing up to the terminal”.

Improve your personal HSES performance

- Recent case of Captain Shroder facing jail term in US for accident . Prosecution alleged:
  - Recurring problems with bow thruster
  - Bow thruster failed leading to contact with crane
  - Vessel struck crane and killed operator
- Now imagine some different scenarios:
  - Captain Shroder sent an email to you personally. No repair was made and on instructions from your boss you tell him to proceed pending availability of spares. You are subpoenaed to appear in court in the US.
  - Another Master finds similar problems recurring on sister ship. He sends written communications requesting repairs without success. He drops anchor and reports fault to US Coast Guard and refuses to take ship into port. What is the cost? What happens to the Master afterwards?

Improve your personal HSES performance

- Quietly push the envelope on seamanship, quality and safety
- Zero tolerance for non-compliance when you see it
  - If there is a fault and it is being corrected, you can tell the difference between true correction and “foot dragging”
- If you don’t have decision rights, see if you can find a good business reason: people who are non-compliant on safety are usually non-compliant in other areas
- If your boss doesn’t support you, look for chances to move within your company
- If your company doesn’t support you, look for chances to move to a different company

If necessary, vote with your feet

- Job market is good now
- Hard to find good operating or commercial personnel
- Lots of ads in Lloyd's List, Trade Winds
- Work with reputable recruiter
  - Spinnaker Consulting www.shippingjobs.com
- Find a new company that shares your attitude
- Quietly ask your professional friends

How is the NI helping?

- Note: my personal views, not official
- Poster on Capesize vessel water ingress and criteria for abandoning ship
- Recent statement by NI CEO opposing “6 hours on-6 hours off watchkeeping”
- Professional LNG training in alliance with SIGTTO
- Ongoing efforts with MARS and CHIRP safety reporting
- Targeting NI efforts worldwide “where the seafarers are”
- Providing you with a professional network in support of company and personal safety

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