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The Deepwater Horizon Disaster: *Insurance Market Impacts*

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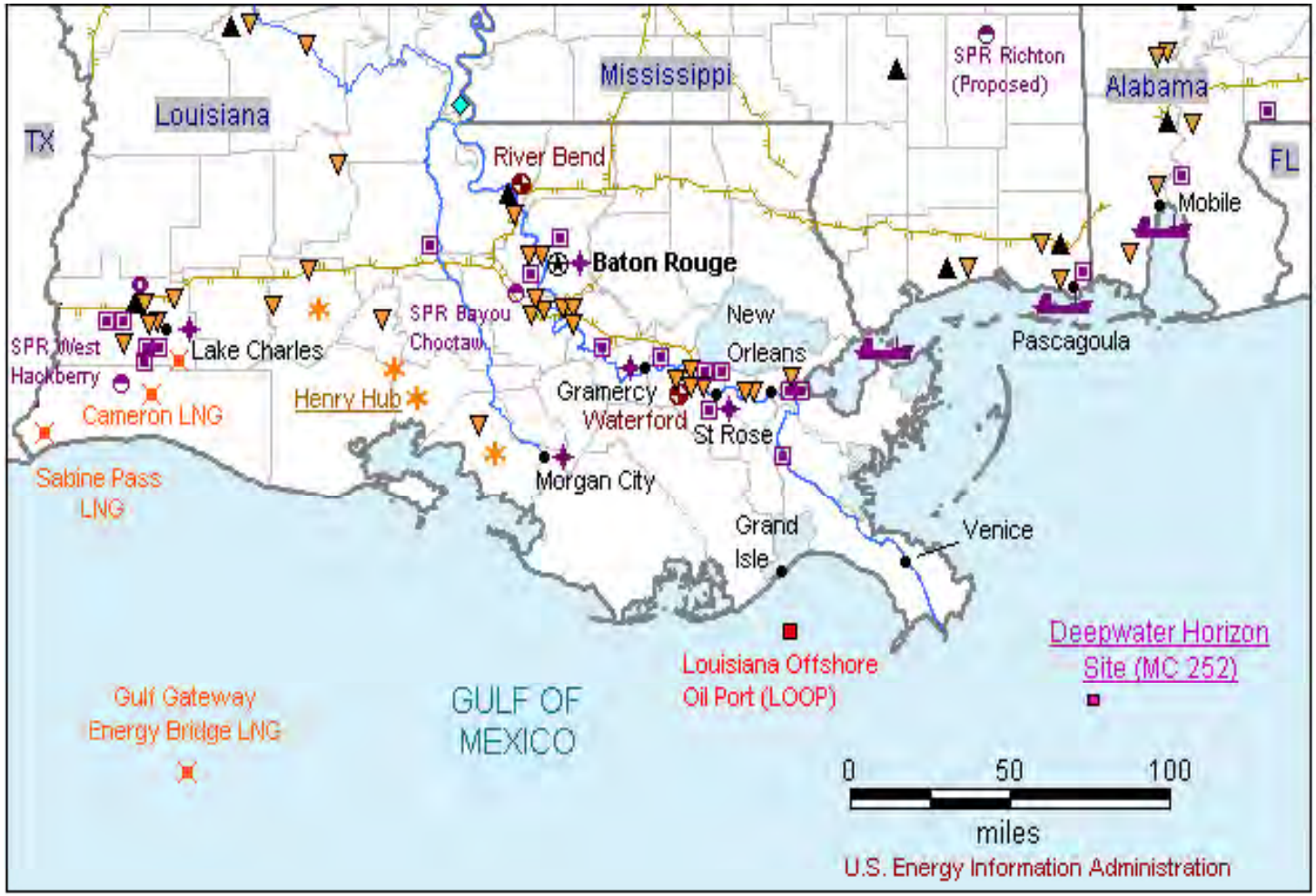
Gulf Coast Near Deepwater Horizon Site



On April 20, 2010, an explosion and fire occurred on the offshore drilling rig Deepwater Horizon, which had been drilling an exploratory well in approx. 5,000 ft of water in the Gulf of Mexico, 52 miles SE of Venice, Louisiana.

The platform subsequently sank, with 11 crewmembers presumed dead, and the uncompleted well leaking oil.

Sources: Energy Information Administration

Largest International Oil Well Blowouts by Volume, as of July 15, 2010

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Date	Well	Location	Bbl Spilled
April 20 2010-present	**Deepwater Horizon**	**Gulf of Mexico, USA**	**est. 4,900,000 thru July 15***
June 1979-April 1980	Ixtoc I	Bahia del Campeche, Mexico	3,300,000
October 1986	Abkatun 91	Bahia del Campeche, Mexico	247,000
April 1977	Ekofisk Bravo	North Sea, Norway	202,381
January 1980	Funiwa 5	Forcados, Nigeria	200,000
October 1980	Hasbah 6	Gulf, Saudi Arabia	105,000
December 1971	Iran Marine International	Gulf, Iran	100,000
January 1969	Alpha Well 21 Platform A	Pacific, CA, USA	100,000
March 1970	Main Pass Block 41 Platform C	Gulf of Mexico	65,000
October 1987	Yum II/Zapoteca	Bahia del Campeche, Mexico	58,643
December 1970	South Timbalier B-26	Gulf of Mexico, USA	53,095

*Based on official estimate by U.S. scientific teams of 53,000 barrels per day leaking from BP well immediately preceding it being capped on July 15. Includes offset for capture of approximately 800,000 barrels of oil prior to capping of well.

Source: American Petroleum Institute (API), 09/18/2009; http://www.api.org/ehs/water/spills/upload/356-Final.pdf and updates from the Insurance Information Institute.

Gulf Oil Spill: Mitigation Efforts Continue

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Officials now estimate that 53,000 barrels of oil per day (2.2 million gallons per day) were leaking immediately prior to the well being capped by BP on July 15, up from their initial estimates of 5,000 barrels per day (210,000 gallons per day). Efforts continue to mitigate the resulting environmental damage.

Sources: NASA Satellite Imagery; U.S. Dept. of Interior.

Worst U.S. Environmental Disaster in History?

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As of August 2, government officials upped their estimates and said 53,000 barrels of oil per day (2.2 million gallons per day) have been spilling immediately prior to the well being capped by BP on July 15.

This means that Deepwater Horizon has easily surpassed the size of the 1989 Exxon Valdez disaster (11 million gallons of oil spilled).

Source: NASA Satellite Imagery; Bloomberg.

Deepwater Horizon – A Timeline

- **April 20:** Transocean reports a fire onboard its semisubmersible drilling rig Deepwater Horizon. The incident occurred at approximately 10:00 p.m. central time in the United States Gulf of Mexico.
- **April 22:** Deepwater Horizon sinks. BP activates an extensive oil spill response and initiates a plan for the drilling of a relief well.
- **April 25:** BP continues to assist Transocean's work below the surface on the subsea equipment, using remotely operated vehicles to monitor the Macondo/MC252 exploration well.
- **April 26:** Transocean announces that the rig is now located on the sea floor approximately 1,500 feet northwest of the well center and away from any subsea pipelines.
- **May 2:** Drilling of first relief well begins.
- **May 5:** BP announces that it has stopped the flow of oil from one of the three existing leak points.
- **May 8-9:** Efforts to place the containment dome over the main leak point are suspended as a build up of hydrates prevents a successful placement of the dome over the spill area.
- **May 13:** Planning continues for so-called 'top kill' of the well, involving injecting material of varying densities and sizes (also known as 'junk shot') into the internal spaces of the BOP to provide a seal, before pumping specialized heavy fluids into the well.

Source: Willis Energy Market Review (EMR) newsletter May-June 2010; Insurance Info. Institute (I.I.I.); Transocean and BP company websites.

Deepwater Horizon – A Timeline

- **May 16:** The Riser Insertion Tube Tool (RITT) containment system is put into place in the end of the leaking riser. This involves inserting a four-inch diameter tube into the Horizon's riser (21-inch diameter pipe) between the well and the broken end of the riser on the seafloor in 5,000 feet of water. The insertion tube is connected to a new riser to allow hydrocarbons to flow up to the Transocean Discoverer Enterprise drillship located on the surface.
- **May 18:** The RITT containment system is operational. It is estimated to be collecting and carrying about 2,000 barrels a day (b/d) of oil to flow up to the drillship Discoverer Enterprise on the surface 5,000 feet above.
- **May 20:** Plans continue to develop the 'top kill' operation.
- **May 24:** Subsea efforts continue to focus on progressing options to stop the flow of oil from the well through interventions via the blow out preventer and to collect the flow of oil from the leak points.
- **May 26:** "Top Kill" operation begins.
- **May 31:** "Top Kill" operation fails.
- **June 1:** Federal authorities launch criminal and civil investigations into the Deepwater Horizon incident.
- **June 3:** BP successfully cuts riser pipe and fits a containment cap on the well.
- **June 6:** BP says it has captured 10,500 barrels of oil (439,500 gallons) in the last 24 hours.

Source: Willis Energy Market Review (EMR) newsletter May-June 2010; Insurance Info. Institute (I.I.I.); Transocean and BP company websites.

Deepwater Horizon – A Timeline

- **June 9:** BP says cost of clean-up and containment efforts has hit $1.43 billion. The White House demands BP cover all costs of oil spill in the Gulf of Mexico, including millions of dollars in salaries of workers laid off as a result of federal moratorium on deepwater drilling.
- **June 10:** BP says approximately 88,700 barrels of oil have been collected since containment cap system implemented.
- **June 13:** The Obama Administration wants BP to establish an independently administered multi-billion dollar fund to compensate victims of the Deepwater Horizon oil spill.
- **June 16:** BP agrees to set aside $20 billion in an escrow account to pay economic damage claims to individuals and businesses affected by the oil spill. BP and the Obama Administration agreed to appoint Ken Feinberg (who administered the 9/11 victims compensation fund) to run the independent claims process.
- **June 18:** Anadarko Petroleum (with a 25% stake in Deepwater Horizon JV) releases a statement accusing BP of "gross negligence or willful misconduct." Anadarko says contract with BP stipulates BP is responsible for all damages caused by its "gross negligence or willful misconduct."
- **June 18:** BP says that other parties besides BP may be responsible for costs and liabilities arising from the oil spill and it expects those parties to live up to their obligations. BP also says CEO Tony Hayward will step down from day-to-day oversight of oil spill.
- **June 19:** BP says it has paid $104 million to residents along the Gulf coast for claims filed as a result of the oil spill, issuing more than 31,000 checks in the past seven weeks.

Source: Insurance Info. Institute (I.I.I.); Transocean and BP company websites.

Deepwater Horizon – A Timeline

- **June 22:** Federal judge in New Orleans, Louisiana, blocks six-month federal moratorium on deepwater drilling in the Gulf.
- **June 24:** Federal judge says he won't reconsider his decision to overturn the six-month federal moratorium on deepwater drilling in the Gulf.
- **June 28:** BP says cost of cleanup and containment efforts has hit $2.65 billion. To-date, the total volume of oil recovered or flared by BP containment systems is approx. 435,600 barrels.
- **June 30:** Hurricane Alex, later downgraded to a tropical storm, moves into Gulf waters temporarily halting cleanup and threatening to push more oily water onshore.
- **July 5:** BP says cost of cleanup and containment efforts has hit $3.12 billion.
- **July 12:** BP installs a new "capping stack", completing installation of new sealing cap on the well.
- **July 15:** BP says it has stopped the leak with the new containment cap.
- **July 16:** BP says it has paid out $201 million on more than 32,000 claims to Gulf coast residents and businesses affected by the spill, out of a total of 114,000 claims submitted. Testing continues to ensure the well remains intact.
- **July 19:** BP says cost of cleanup and containment efforts has hit $3.95 billion. BP says it has paid out $207 million on more than 33,000 claims, out of a total of 116,000 claims submitted.

Source: Insurance Info. Institute (I.I.I.); Transocean and BP company websites.

Deepwater Horizon – A Timeline

- **July 21:** Four of the world's largest oil companies -- Exxon Mobil Corp., Chevron Corp., Royal Dutch Shell PLC and ConocoPhillips -- announced the establishment of a new venture to design, build and operate a system to rapidly respond to oil spills in the deep waters of the Gulf of Mexico.
- **July 27:** BP announces it has taken a pre-tax charge of $32.2 billion for the spill, including the $20 billion escrow fund announced June 16. BP also announces resignation of Tony Hayward as CEO, to be succeeded by Robert Dudley.
- **July 30:** BP announces it has hired Witt Associates and its CEO, former FEMA director James Lee Witt, to support the oil spill response effort.
- **August 5:** BP says it has paid out $303 million in total claims payments to-date. Claim payments by month are: $39 million in May; $93 million in June; $134 million in July.
- **August 9:** BP says it has established a trust and made an initial deposit of $3 billion of the previously-announced $20 billion escrow fund.
- **August 10:** The U.S. judicial panel on multidistrict litigation meeting in Boise, Idaho, issues order that Judge Carl Barbier of New Orleans will hear hundreds of federal lawsuits related to the oil spill.
- **August 11:** BP agrees to use its U.S. oil production payments as collateral for the $20 billion escrow fund.
- **August 17:** BP says it has paid out $368 million in total claims to-date, and is in final stages of preparing to transfer responsibility for claims to independent Gulf Coast Claims Facility.

Source: Insurance Info. Institute (I.I.I.); Transocean and BP company websites.

Deepwater Horizon – A Timeline

- **August 23:** Independent Gulf Coast Claims Facility begins accepting claims from individuals and businesses affected by the oil spill.

Source: Insurance Info. Institute (I.I.I.); Transocean and BP company websites.

Deepwater Horizon Oil Spill: $20 Billion Claims Fund Established

- On June 16, 2010, BP agreed to set aside $20 billion in an escrow account to pay economic damage claims to individuals and businesses affected by the oil spill.
- BP and the Obama Administration agreed to appoint Ken Feinberg (who administered 9/11 victims compensation fund) to run the independent claims process.
- Payments from the fund will be made as they are adjudicated, whether by the Independent Claims Facility (ICF), or by a court, or as agreed by BP.
- The ICF will adjudicate on all Oil Pollution Act and tort claims excluding all federal and state claims.
- The fund does not represent a cap on BP liabilities, but will be available to satisfy legitimate claims.

Source: http://www.bp.com/; http://www.whitehouse.gov/

Deepwater Horizon Oil Spill: $20 Billion Claims Fund Established

- **Parties seeking compensation from the fund most likely will have to waive their rights to sue BP and other defendants, a move that would reduce litigation related to the spill.**
- **BP will use U.S. oil production payments as collateral for the $20 billion fund.**
- **BP has agreed to contribute the $20 billion over a four-year period at a rate of $5 billion per year, including $5 billion in 2010.**
- **On August 9, BP made an initial deposit of $3 billion into the escrow fund. An additional $2 billion deposit into the fund will be made in the fourth quarter of 2010.**
- **Thereafter some $1.25 billion will be deposited per quarter until the fund reaches $20 billion.**

Source: New York Times *BP Settlements Likely to Shield Top Defendants* 08/20/2010; Bank of America Merrill Lynch Research note 08/20/10; http://www.bp.com/; http://www.whitehouse.gov/

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Gulf Coast Claims Facility

What it is and how it works

Gulf Coast Claims Facility: Who is Eligible?

- **As of August 23, 2010, the Gulf Coast Claims Facility (GCCF) has replaced the BP claims process.**
  - **Who may file a claim:**

- Individuals and businesses that have incurred damages as a result of the spill may submit a claim to the GCCF for removal and clean up costs, damage to real or personal property, lost earnings or profits, loss of subsistence use of natural resources, or physical injury or death.
- Claimants do not have to live in the Gulf region, but to be reimbursed by GCCF costs and damages must have been proximately caused by the spill and not too remote in time or place from the spill.
- Claimants will be required to waive any legal rights if they are eligible for a final payment from the GCCF. But they may file a claim with the GCCF regardless of whether they have already filed a lawsuit.
- Any payments previously received from BP will be subtracted from the amount of any final payment from the GCCF.
- Claimants do not need to be a U.S. citizen or submit proof of legal residency to receive a payment from GCCF.

Source: http://www.gulfcoastclaimsfacility.com

Gulf Coast Claims Facility: What Is An Emergency Advance Payment?

- **As of August 23, 2010, the Gulf Coast Claims Facility (GCCF) has replaced the BP claims process.**
  - **Claims for Emergency Advance Payment:**

- Individuals and businesses that are experiencing financial hardship resulting from damages incurred by the spill may file for emergency advance payments
- Any emergency advance payments received will be deducted from any final payment received.
- Claims for emergency advance payments must be submitted on or before November 23, 2010 to be processed by the GCCF.
- Claimants may apply for an emergency advance payment on a monthly basis or for six months of losses. Only claims for lost earnings or profits, loss of subsistence use of natural resources, or loss of income due to physical injury or death are eligible for payments for six months of losses.
- Claimants do not waive any legal rights if they receive an emergency advance payment. However, they will be required to waive any legal rights before the GCCF can issue them a final payment.
- Total emergency advance payment amounts received will be deducted from any final payment received from the GCCF.

Source: http://www.gulfcoastclaimsfacility.com

Gulf Coast Claims Facility: How Will GCCF Calculate Compensation Payments?

- **As of August 23, 2010, the Gulf Coast Claims Facility (GCCF) has replaced the BP claims process.**
  - **Compensation:**

- Claims for direct damages resulting from the spill will receive compensation for the amount of damages, costs or lost earnings or profits that claimants are able to prove with acceptable documentation.
- Claims for indirect economic damages will be evaluated based on whether claim is compensable and the appropriate amount of compensation based on geographic proximity to spill, whether claimant is dependent on injured natural resources and nature of business.
- Collateral source compensation applies, so amounts received from benefits for damages incurred as a result of the spill such as unemployment insurance or private insurance will be deducted from final payment by the GCCF.
- Charitable donations and the value of services or charitable gifts such as emergency housing, food or clothing are not considered collateral source compensation.
- Other income received during the period for which claim filed will be deducted from final payment.
- Claimants should consult with a tax advisor to determine impact of any payments on their individual tax situation. GCCF will report payments to fed and state authorities.

Source: http://www.gulfcoastclaimsfacility.com

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Hurricanes and Oil Spills

What Does History Tell Us?

Concerns That Spill Could Spread to Florida Coast and Beyond

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Oil started washing up on the Louisiana shore May 20. Scientists warned a small portion of the slick entered the loop current and could be headed to the Florida Keys and Atlantic.

The 2010 Atlantic Hurricane season opened June 1. There are rising concerns over the impact of the BP oil spill if a major storm moves into the northern Gulf of Mexico and makes landfall.

Hurricane Alex, the first named storm of the 2010 Atlantic hurricane season (later downgraded to a tropical storm), temporarily halted the cleanup and threatened to push oil onshore.

Source: AFP Graphic May 20, 2010

Probabilty of Landfall of at Least One Major Hurricane (CAT 3-4-5) in 2010*

Region	Average Over Last Century	2010 Forecast*
Entire U.S. Coastline	52%	76%
U.S. East Coast Incl. FL Peninsula	31%	51%
Gulf Coast from FL Panhandle to Brownsville, TX	30%	50%
Caribbean	42%	65%

The Probability of a Major Hurricane Making Landfall Somewhere Along the US Coast is Greatly Elevated in 2010, Including a 50% Chance Along the Oil Spill-Impacted Gulf Coast

*Forecast as of June 2, 2010.
Source: Colorado State University, Department of Atmospheric Sciences; Insurance Information Institute.

Outlook for 2010 North Atlantic Hurricane Season*

Forecast Parameter	Average (1950-2000)	2010 Forecast*
Named Storms	9.6	18
Named Storm Days	49.1	90
Hurricanes	5.9	10
Hurricane Days	24.5	40
Major Hurricanes	2.3	5
Major Hurricane Days	5.0	13
Accumulated Cyclone Energy	96.1	185
Net Tropical Cyclone Activity	**100%**	**195%**

The 2010 Hurricane Season is Expected to Be Nearly Twice as Active as the Long-Run Average (195% of Normal)

*Forecast as of June 2, 2010.
Source: Colorado State University, Department of Atmospheric Sciences; Insurance Information Institute.

What Would a Hurricane Do to the Deepwater Horizon Oil Spill?

- **What history tells us:**

- A hurricane never passed over a sizable oil spill before, so there is considerable uncertainty about what might happen.
- The closest call was after the Ixtoc I blowout Jun. 1979 – Apr. 1980. Category 1 Hurricane Henri passed just north of the main portion of the oil spill on Sept. 16 and 17.
- A NOAA/AOML report on the Ixtoc spill found that the winds did not blow long enough or strongly enough to control the direction of the oil flow.
- However, the combination of swells from Hurricane Henri and wind-driven waves from a non-tropical low pressure system scoured beaches of over 90% of their oil.
- Ixtoc blowout experience shows us that if a sandy beach is already fouled by oil, a hurricane can help clean up the mess. However, along shores with marshlands, the majority of oil will probably remain stuck.

Source: Dr. Jeff Masters' WunderBlog 05/26/10

What Would a Hurricane Do to the Deepwater Horizon Oil Spill?

- **Transport of oil by hurricanes:**

- Shores that are already fouled by oil may benefit from a hurricane, but the oil cleaned off those shores then becomes someone else's problem.
- A hurricane moving through the Gulf of Mexico spill will very likely result in much higher damage to the coast, spreading the oil over a larger region and bringing oil to shore, even if diluted.
- Loop Current eddy: oil moving south due to a hurricane's winds may get trapped in the 250-mile wide eddy, resulting in broad spinning oil slick stuck in Gulf of Mexico for days or weeks after a hurricane, leading to a warming effect on the Gulf waters.
- Loop Current eddies often act as high-octane fuel for hurricanes. Warming of eddy by oil pulled into it by a passing hurricane could lead to explosive intensification of next hurricane that passes over the eddy.
- Rapid intensification of Hurricanes Katrina and Rita were both aided by the passage of those storms over Loop Current eddies.

Source: Dr. Jeff Masters' WunderBlog 05/26/10

What Would a Hurricane Do to the Deepwater Horizon Oil Spill?

- **Other unknowns:**

- ***Storm surge and oil:*** if a hurricane hits the oil spill what would the hurricane's storm surge do with the oil/dispersant mixture? Potential impact on residential areas and vegetation.
- ***Winds and oil:*** winds from a hurricane hurl ocean sea spray miles inland, often causing major defoliation and tree damage far beyond where the storm surge penetrates.
- ***Rain and oil:*** hurricanes evaporate huge amounts of water from the ocean and convert it to rain. In general, no need to worry about oil dissolving into the rain, since oil and water don't mix.
- ***Lightning and oil:*** hurricane winds are so fierce that any surface oil slick of flaming oil would quickly be disrupted and doused by wave action and sea spray.

Source: Dr. Jeff Masters' WunderBlog 05/26/10

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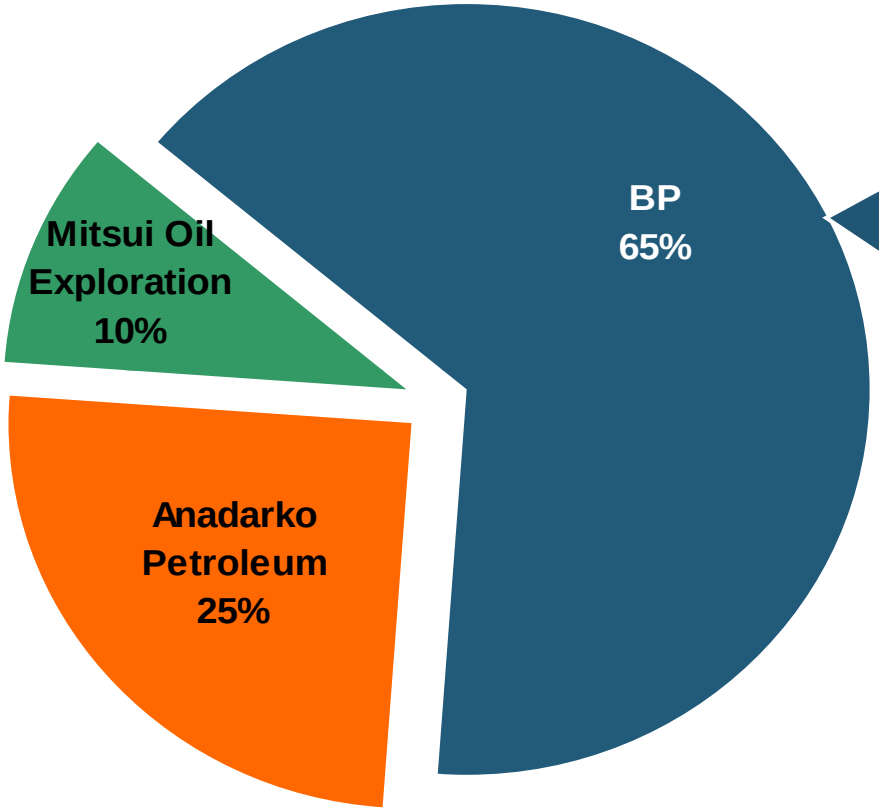
Deepwater Horizon and Insurance Market Impacts

A number of parties are involved and different types of insurance coverage will come into play

Operating Group for Deepwater Horizon: Joint Venture



The operating group for Deepwater Horizon is a joint venture led by BP.

BP has said it will assume liability for all legitimate claims caused by the oil spill.

BP is self-insured, so large portion of losses will not hit the insurance industry.

On June 1, 2010, U.S. Attorney General said federal authorities have opened criminal and civil investigations into the spill.

As of August 9, BP says that the cost of the response totals $6.1 billion. Former BP CEO Tony Hayward had insisted *"Other parties besides BP may be responsible for costs and liabilities arising from the oil spill, and we expect those parties to live up to their obligations."* But Anadarko accuses BP of gross negligence.

Source: Barclays Capital research note 05/10/10; I.I.I. research.

Deepwater Horizon Oil Rig Loss: Types of Coverage That Might Apply

- **Business Interruption/Loss of Production Income:** provides coverage for energy businesses against loss due to temporary interruption in oil/gas supply from an offshore facility as a result of physical loss or damage to an offshore facility.
- **Comprehensive General Liability:** provides coverage for claims an energy business is legally obligated to pay as a result of bodily injury or property damage to a third party.
- **Environmental/Pollution Liability:** provides coverage for bodily injury, property damage, and clean up costs as a result of a pollution incident from a designated site.
- **Operators' Extra Expense (Control of Well):** provides coverage for costs incurred by energy businesses when regaining control of a well after a "blowout". Coverage may include redrilling expenses incurred in the restoration of a well after a 'blowout' as well as the legal expenses emanating from an incident such as the sinking of a rig, or oil spill.
- **Physical Damage:** provides coverage for physical damage or loss to a company's offshore property and equipment, including offshore fixed platforms, pipelines and production and accommodation facilities.
- **Workers compensation/employers liability:** covers energy businesses for claims arising out of injury or death of employees incurred while in the line of duty.

Source: http://www.iii.org/insuranceindustryblog/; http://www.iii.org/articles/offshore_energy_facilities_insurance_considerations.html

Deepwater Horizon Loss: The Key Players and Insurance Coverage in Place

- **BP:** With a 65% interest in the Deepwater Horizon joint venture, BP says it is self-insured. BP's captive (Jupiter Insurance Ltd) has $6 billion in capital, but does not purchase outside reinsurance protection. Jupiter's per occurrence limit on physical damage and business interruption is $700 million and is not expected to cover environmental clean-up costs or third party liability.

  BP Shipping purchases $1 billion of marine liability pollution insurance through mutual insurance associations (P&I clubs), but it is unclear if this coverage will respond.

- **Andarko Petroleum:** With a 25% interest in the Deepwater Horizon joint venture, Andarko Petroleum is believed to have a $100 million owner's extra expense policy (covers re-drilling, re-gaining control of well, etc).

- **Mitsui Oil Exploration:** With a 10% interest in the Deepwater Horizon joint venture, Mitsui is believed to have a $45 million owner's extra expense policy.

- **Transocean:** The drilling contractor is believed to have $560 million of physical damage insurance, which is highly syndicated. Insurers have already paid out over $400 million to-date under this coverage. In addition, Transocean carries some $950 million in third party liability insurance, of which $700 million excess of $50 million is thought to cover offshore risks.

- **Cameron:** The manufacturer of the blowout preventer that failed on the rig has a $500 million liability insurance policy.

- **Halliburton:** Service provider to Deepwater Horizon has liability insurance in excess of $1 billion.

Source: Barclays Capital research note 05/10/10; Credit Suisse research note 5/11/10

Insured Losses Significant, But Manageable

- **Insured Loss:**

- The loss is a major event for the offshore energy insurance and reinsurance market
- Companies with exposure to the Deepwater Horizon oil rig are insured for losses totaling $1.4 billion to $3.5 billion, according to initial reports.
- Litigation, D&O liability and workers comp losses may bring total insured loss to $4 billion to $6 billion, according to Towers Watson. But, likely limits on lawsuits via $20 billion fund could reduce chances for large liability awards.
- The risks are well-syndicated, with the insured loss spread across a broad range of insurers and reinsurers on a global scale
- Since BP, which owns 65% of the Deepwater Horizon consortium self insures, a large portion of the losses ***will not*** hit the insurance industry.
- Lawsuits against equipment manufacturers, suppliers and sub-contractors, and business interruption claims, will likely increase total insured losses.
- BP said it will assume liability for all legitimate claims caused by the oil spill. Primary liability for clean up costs will be with BP consortium.

Source: Insurance Information Institute (I.I.I.); Towers Watson, 08/02/10; Bank of America Merrill Lynch research note 08/20/10; Barclays Capital research note 05/10/10; Credit Suisse research note 05/11/10

Deepwater Horizon Oil Spill: Insurance Policies Called Upon to Respond

- **Legal experts suggest the oil spill is likely to give rise to a host of claims under first- and third-party insurance policies:**
  - **First-party claims:** Impending first-party claims offer more predictability, because businesses covered by commercial property and business interruption insurance are often on standardized forms published by ISO.

    A lot of activity is expected around business interruption, but under BI policies the suspension of the insured's business operations must be caused by direct physical loss or damage.
  - **Third-party claims:** Oil companies/rig owners tend to have complex insurance programs, with unique policies. It remains to be seen what policy limits are in place and whether applicable to relevant claims.
  - **Insurers' policy language:** History shows that when there is a large-scale societal problem that requires significant funding to solve it, insurers' policy language faces pressure to become more malleable than intended. As a result, insurers may find themselves under pressure to pay more than their appropriate share.

Source: White and Williams, Randy J. Maniloff "Gulf Oil Spill: Gusher of Insurance Claims", 05/04/10

Other Insurance Considerations: Business Interruption

- **Business Interruption losses may not be as high as expected due to a number of mitigating factors:**

- **Physical Damage:** business interruption losses may not be triggered for many third parties (hotels, commercial fishing), because the coverage typically responds in the event of physical damage from a covered peril.
- **Pollution:** is usually excluded as a covered peril in admitted market policies.
- **Civil Action:** civil authorities may limit access to an area after a disaster, forcing an industry to shut down, but losses are only covered if they arise out of a covered peril.
- **Subrogation:** insurers can try to recover losses by suing the BP consortium, if the cause was pollution. However, this would imply paying losses first and then suing BP which could be a long drawn out and costly litigation process.

Source: Barclays Capital research note 05/10/10; Credit Suisse research note 5/11/10

Other Insurance Considerations: Flood Insurance and Pollution Coverage

- **The 2010 Atlantic Hurricane season opened June 1. Concerns are rising over the impact of the oil spill if a major storm makes landfall. National Flood Insurance Program (NFIP) policies may apply:**

- **Residential:** The NFIP Dwelling form and the Residential Condo Building Association (RCBA) policy contain ***no pollution exclusion*** for property damage due to flood. As a result, policyholders are able to apply up to their policy limits to pay for damage from pollution caused by flood.
- However, both the Dwelling form and RCBA policy do exclude the cost of testing for or monitoring of pollutants unless it is required by law or ordinance.
- **Non-Residential/Commercial:** There is some limitation for pollution damage due to flood to commercial properties under the NFIP.
- The NFIP General Property form (non-residential) covers pollution damage to covered property up to a $10,000 limit for each occurrence.
- This amount, when combined with other benefits under the policy, cannot exceed the policy limits of the replacement cost or actual cash value of the covered property, whichever amount is appropriate.

Source: http://www.floodsmart.gov/

Other Insurers Comment on Deepwater Horizon Estimated Loss Exposure

Company	Estimated exposure	Date of Remarks
ACE Ltd.	Will notify investors of any material impact. Event is contained within the current accident year loss ratios for 2010 as contemplated in its annual guidance.	04/29/10
American International Group Inc.	Exposure to property loss on event was approx. $20 million, which has been paid.	05/07/10
Aspen Insurance Holdings Ltd.	Difficult to quantify at this stage.	04/29/10
Flagstone Reinsurance Holdings Ltd.	Limited exposure, “well within” expected quarterly load for such events.	05/04/10
HCC Insurance Holdings Inc.	Participated in Transocean placement, as well as the placement for one of the co-venture partners. No estimate yet of gross loss. Has purchased significant facultative reinsurance, and expects its net loss will be minimal.	05/04/10
Navigators Group Inc.	First party property damage claim of $4.6 million. Ultimate liability for marine liability portion, if any, still unclear.	05/07/10
NYMAGIC INC.	Slightly more than $1.2 million.	05/03/10
Travelers Cos. Inc.	Net exposure of $7.5 million to the “large names you read about in the press.”	05/20/10
XL Capital Ltd	Property damage exposure to rig roughly $30 million, including $5 million in reinstatement premiums. Estimates a roughly $900 million industry event.	05/04/10

Majority of estimates are net of factors like reinstatement premiums and reinsurance.
Source: Company disclosures, SNL Financial.

Largest Offshore Energy Events in U.S. History (>10 dead, and/or >5,000m^3 oil spilled)*

Date	Event type	Location	No. of Dead and/or Oil Spilled
April 20, 2010-today	Explosion/fire, sinking of Deepwater Horizon rig.	Gulf of Mexico	11 dead and estimated 166,937m^3 oil spilled to June 1.**
Jun. 30-Jul. 2, 1964	Blowout, gas explosion.	Gulf of Mexico	22 dead.
Oct. 15-Oct. 27, 1967	Pipeline leakage due to damage caused by anchor.	Gulf of Mexico	19,155 m^3 oil spilled.
Aug. 21, 1968	Blowout, gas explosion.	Gulf of Mexico	11 dead and 20 injured.
Jan. 28-Feb. 7, 1969	Oil and gas blowout.	Pacific	Significant oil pollution on beaches, 9,539m^3 oil spilled, 3,686 seabirds dead.
Dec. 1, 1970- Apr. 17, 1971	Blowout, gas explosion.	Gulf of Mexico	4 dead and 36 injured, 6,439m^3 oil spilled. Minor beach pollution

Deepwater Horizon is the largest U.S. offshore energy event to have occurred in the last 40 years.

*Excluding helicopter accidents.

**At 5/27/10 U.S. Dept. of Interior estimates the size of the oil spill at up to 25,000 barrels of oil per day. 25,000 barrels/per day x 42 gallons per barrel x 42 days (Apr. 20 through June 1) = 44,100,000 gallons = 166,937m^3 oil spilled

Source: Munich Re; Outer Continental Shelf Reports of U.S. Minerals Management Service (MMS); U.S. Dept. of Interior; Ins. Info. Inst.

Top 20 Property Damage Losses in the Hydrocarbon Industry (1)

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Rank	Date	Plant type	Event type	Location	Property Loss (2) U.S. $ Millions
1	Jul. 7, 1988	Upstream	Fire/explosion	North Sea, UK (Piper Alpha)	$1,600
2	Oct. 23, 1989	Petrochem	Vapour cloud explosion	Texas, USA	1,300
3	Mar. 19, 1989	Upstream	Fire/explosion	Gulf of Mexico, USA	750
4	Sep. 12, 2008	Refinery	Hurricane	Texas, USA	750
5	Jun. 4, 2009	Upstream	Collision	North Sea, Norway	750
6	Aug. 23, 1991	Upstream	Structural Failure	Sleipner, North Sea, Norway	720
7	May 15, 2001	Upstream	Explosion/fire/sinking	Campos Basin, Brazil	710
8	Sep. 25, 1998	Gas processing	Vapour cloud explosion	Victoria, Australia	680
9	Apr. 15, 2003	Upstream	Riot	Escravos, Nigeria	650
10	Apr. 24, 1988	Upstream	Fire	Campos Basin, Brazil	640
11	Sep. 21, 2001	Petrochem	Explosion	Toulouse, France	610
12	Jun. 25, 2000	Refinery	Vapour cloud explosion	Mina Al-Ahmadi, Kuwait	600
13	May 4, 1988	Petrochem	Explosion	Nevada, USA	580
14	Jan. 19, 2004	Gas processing	Fire/explosion	Skikda, Algeria	580
15	May 5, 1988	Refinery	Vapour cloud explosion	Louisiana, USA	560
16	Nov. 1, 1992	Upstream	Mechanical damage	North West Shelf, Australia	470
17	Nov. 14, 1987	Petrochem	Vapour cloud explosion	Texas, USA	430
18	Dec. 25, 1997	Gas processing	Fire/explosion	Sarawak, Malaysia	430
19	Jul. 27, 2005	Upstream	Fire/explosion	Mumbai High field, India	430
20	Jan. 20, 1989	Upstream	Blowout	North Sea, Norway	410

Deepwater Horizon will become among the top two most expensive property losses in history for energy insurers.

Some 167 crew members lost their lives in a July, 1988 fire and explosion aboard the Piper Alpha oil platform in the North Sea. The incident caused property damage losses of $1.6 billion in 2009 dollars. Losses for the ongoing Gulf oil spill are still being tallied.

(1) According to the report, "these costs, to the extent insurance is applicable, are paid by property ins. underwriters."
(2) Inflated to December 2009 values.
Source: Marsh Energy Practice.

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The Liability Factor

Legal ramifications and what types of claims are being filed?

Deepwater Horizon Oil Spill: Issue of Legal Liability Is Complex

- **The number of lawsuits filed in the wake of the spill on behalf of business owners and fishermen is reported to be rising with dozens of plaintiffs' firms reportedly jumping into the fray**
- **To-date more than 300 lawsuits have been filed against BP and other companies in the aftermath of the Gulf oil spill**
- **But, establishing legal liability is complex. Different legal frameworks (civil or criminal, state and federal laws, maritime laws, OPA) will govern the liability that each company and others involved in the oil spill will face**
- **On August 10, the U.S. judicial panel on multidistrict litigation meeting in Boise, Idaho, issued order that Judge Carl Barbier of New Orleans will hear hundreds of federal lawsuits related to the oil spill.**
- **Transocean has already filed a request in court to limit claims against it to $27 million under the Limitation of Liability Act of 1851, a law that limits liability after a maritime accident. A Houston judge has suspended all claims against Transocean until the issue is decided.**
- **Offshore contracts may contain hold harmless/indemnity clauses whereby one party assumes the liability of another.**

Source: AP reports; Credit Suisse Research Note 05/11/10; National Law Journal 05/24/10

Deepwater Horizon Lawsuits: Many Legal Avenues Will Be Pursued

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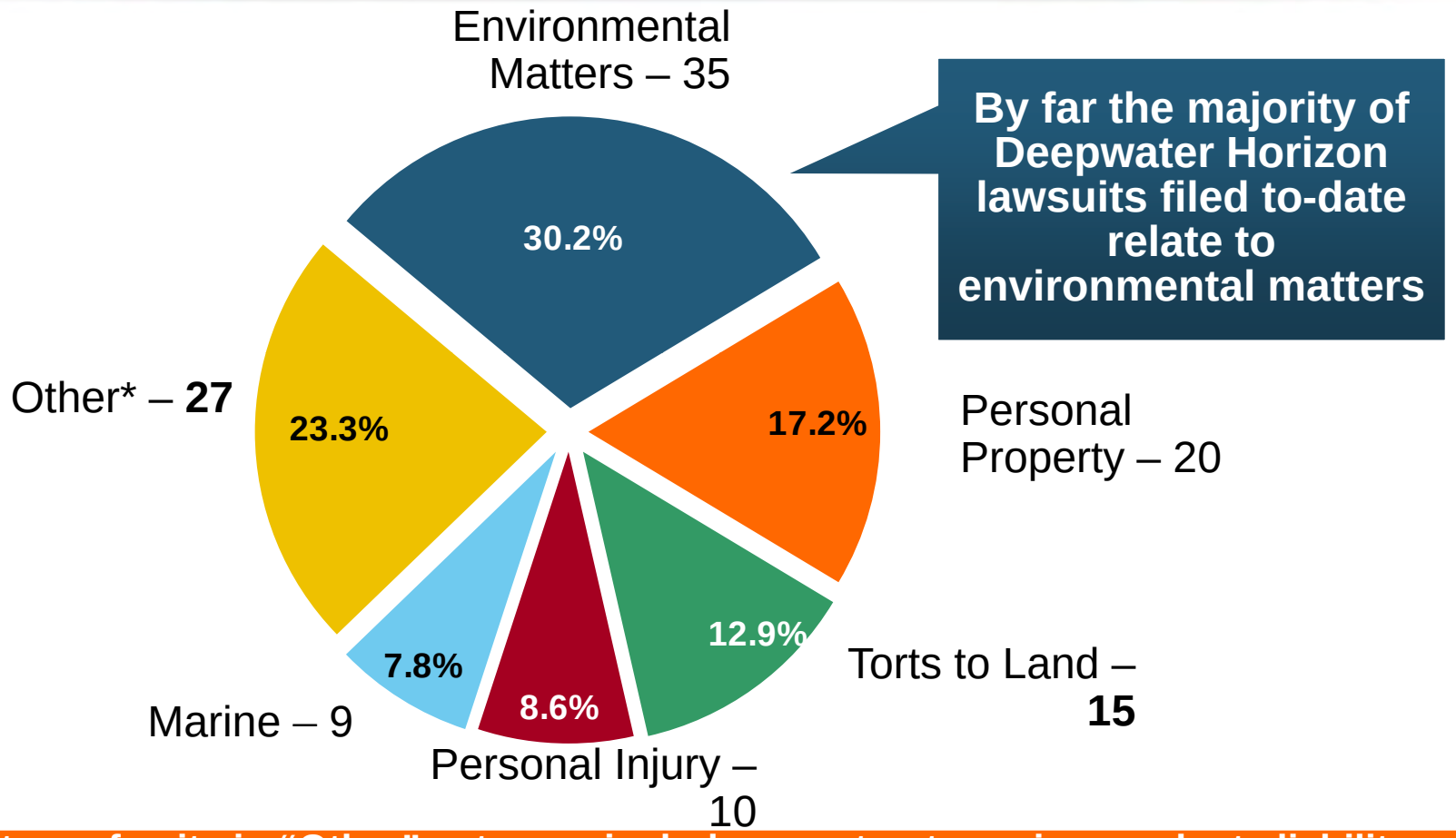
Types of claims likely to be filed:

- Personal injury claims on behalf of families of persons suffering injury or death in initial platform explosion
- Products liability and/or negligence claims against equipment manufacturers, suppliers etc.
- Natural resource damage claims from states (water, air, seashore)
- Claims by businesses and individuals for lost earnings and/or property damage, (e.g. fishermen, shrimpers, resort operators, excursion boat operators, casino operators, hotels, restaurateurs.)
- Claims alleging lost revenues at the govt. level, (e.g. royalties, lease payments, fishing licenses, sales taxes)
- Shareholder and securities class action suits against BP, Transocean and other companies involved and their directors and officers
- Environmental claims (e.g. on behalf of conservationists and fishermen)
- Health claims by workers assisting with cleanup (e.g. occupational injury due to use of dispersants) and coastal residents

Source: Credit Suisse Research Note 05/11/10; Insurance Information Institute (I.I.I.) research

Deepwater Horizon Lawsuits: Nature of Suits Filed To-Date



***Nature of suits in "Other" category includes: contract; marine products liability; other statutory actions; Outer Continental Shelf Lands Act; personal injury product liability; products liability; property damage; property damage/products liability; real property; securities/commodities and stockholder suits.**

.
Source: National Law Journal, 05/24/10

Deepwater Horizon Lawsuits and Claims Filed By Workers Involved in Cleanup

- **The volume of workers used in onshore and offshore cleanup operations and the toxic substances involved make workers compensation claims inevitable.**
- **Whether an injury occurs on land or at sea will determine whether workers file state workers comp claims or federal claims under the Jones Act.**
- **The Jones Act provides coverage for claims by workers injured while in service to a vessel on navigable waters, including offshore oil rigs (e.g. injured workers on a boat working in the Gulf of Mexico would be covered by the Jones Act as would workers injured or killed when the Deepwater Horizon rig exploded).**
- **The Occupational Safety and Health Administration (OSHA) has warned that cleanup workers face hazards caused by oil byproducts, chemical dispersants, drowning, heat and snake encounters.**
- **Injured workers could also file claims under the Federal Longshore and Harbor Workers Compensation Act (LHWCA).**
- **LHWCA is administered by the U.S. Dept. of Labor and typically covers workers loading and unloading boats and those working on OCS projects like oil rigs.**

Source: Business Insurance, *BP workers exposed to illness, injury from cleanup*, 06/13/2010

Deepwater Horizon Oil Spill: Oil Pollution Act (OPA) and Polluter Pays Principle

- As a responsible party (RP) under the Oil Pollution Act of 1990 (OPA), BP is liable for all clean up costs and all damages under OPA up to a limit of $75 million
- Under OPA, BP is liable for $1,100 in civil penalties for each barrel of oil spilled. If BP is found to have acted with gross negligence, this fine would rise to $4,300 for each barrel
- U.S. Attorney General on June 1, 2010, said federal authorities have opened criminal and civil investigations into the spill
- Environmental Protection Agency (EPA) has indicated that BP faces fines over the disaster
- In addition to fines, BP faces potentially billions of dollars of lost earnings due to damaged reputation which could bar it from bidding for future contracts

Source: Credit Suisse Research Note 05/11/10; Guardian UK 05/26/10

Deepwater Horizon Oil Spill: Criminal and Civil Investigations

- **On June 1, 2010, U.S. Attorney General said federal authorities have opened criminal and civil investigations into the spill**
- **In addition to the Oil Pollution Act of 1990 (OPA), the government has a wide range of laws it can bring charges under, including:**
  - **The Clean Water Act – primary federal law in the U.S. governing water pollution.**
  - **The Migratory Bird Treaty Act – federal statute makes it unlawful to harm over 800 species of migratory birds.**
  - **The Refuse Act - federal statute governing use of waterways that prohibits dumping of refuse into navigable waters.**
  - **The Endangered Species Act – makes it unlawful to harm or kill any animal on endangered species list.**
- **Criminal charges could result in a fine equal to twice the cost of economic and environmental damages**

Source: U.S. Dept. of Justice, Office of the Attorney General; Environmental Protection Agency (EPA); U.S. Fish and Wildlife Service

Deepwater Horizon Oil Spill: Attempts to Retroactively Raise Liability Limits

- **Under the Oil Pollution Act of 1990 (OPA), responsible parties (holders of leases or permits) for offshore facilities are liable for up to $75 million per spill, plus removal costs.**
- **In the wake of the spill, Congress has introduced legislation seeking to raise the limit of liability to $10 billion**
- **According to U.S. DOJ Congress would be on solid constitutional ground if it retroactively wanted to raise the $75 million liability cap. DOJ also said in future the cap should be eliminated**
- **Rising concerns over impact of raising liability caps on insurance costs**
- **At Congressional hearings insurance industry said it is highly unlikely that insurers could provide coverage limits sufficient to meet a $10 billion liability cap.**

Source: *Obama Administration Supports Lifting Liability Cap for Future Oil Spills*, New York Times, 05/25/10; http://www2.iii.org/meetings/iii-testifies-onthe-liability-and-financial-responsibility-for-oil-spills-under-the-oil-pollution-act-of-1990-and-related-statutes.html

Oil Pollution Act (OPA) of 1990: What It Means

- **OPA was signed into law in August 1990, amid rising public concern in the wake of the Exxon Valdez oil spill:**

- **Polluter Pays:** Under OPA the owner or operator of a facility from which oil is discharged ("responsible party" (RP)) is liable for damages resulting from the spill and costs associated with the containment or cleanup of the spill.
- **Limits of Liability:** OPA established new and higher limits for oil spills. Responsible parties (holders of leases or permits) for offshore facilities are liable for up to $75 million per spill, plus removal costs.
- **Liability Exception:** The limit of liability ***does not*** apply if the incident was caused by gross negligence or willful misconduct or violation of a Federal safety, construction or operating regulation.

Source: U.S. Coastguard National Pollution Funds Center

Oil Pollution Act (OPA) of 1990: What It Means

- **OPA was signed into law in August 1990, amid rising public concern in the wake of the Exxon Valdez oil spill:**

- **Trust Fund:** OPA also created the national Oil Spill Liability Trust Fund (OSLTF) to pay removal costs and damages resulting from oil spills. The Fund can provide up to $1 billion for any one oil pollution incident, and is used for costs ***not*** directly paid by the polluter (i.e. "responsible party" (RP)).
- **Financial Responsibility:** Offshore facilities are required to maintain evidence of financial responsibility of $150 million. Claims for removal costs and damages may be asserted directly against the guarantor providing evidence of financial responsibility.
- **Penalties:** OPA increased fines for regulatory non-compliance. Fines for failing to notify the appropriate Federal agency of a discharge are $250,000 for an individual and $500,000 for an organization. Civil penalties are $25,000 for each day of violation or $1,000 per barrel of oil discharged.

Source: U.S. Coastguard National Pollution Funds Center

Oil Pollution Act (OPA) of 1990: Financial Responsibility

- **Under Section 1016 of OPA, parties responsible for offshore facilities must establish and maintain oil spill financial responsibility (OSFR) to meet their liabilities for removal costs and damages caused by oil discharges from an offshore facility and related pipelines:**

- **Insurance Certificate:** OSFR is demonstrated in various ways incl. surety bonds, guarantees, letters of credit and self insurance, but most common method is an insurance certificate.
- **Limit Required Under Section 1016:** Leaseholders of a covered offshore facility (COF) must demonstrate a minimum amount of OSFR of $35 million per 35,000 barrels of "worst case oil spill discharge" up to a maximum of $150 for COF located in the OCS and $10 million in state waters.
- **Worst-case scenario:** A worst case oil spill discharge volume of 35,000 barrels (bbls) requires $35 million in OSFR while a volume of 35,001 bbls requires $70 million.
- **Exemption:** An exemption to the OSFR is provided for persons responsible for facilities having a potential worst case oil spill discharge of 1,000 bbls or less.

Source: Testimony of Rawle O. King, analyst in financial economics and risk assessment, Congressional Research Service, before Senate Committee on Energy and Natural Resources, 05/25/2010.

Structure of the Oil Spill Liability Trust Fund (OSLTF)

- **The OSLTF has two major components:**

- **The Emergency Fund:** is available for Federal On-Scene Coordinators (FOSCs) to respond to oil discharges and for Federal natural resource trustees to initiate natural resource damage assessments. The Emergency Fund is capitalized by a recurring $50 million available to the President annually. Funds not used in a fiscal year are available until expended. Another $100 million can also be advanced from the OSLTF principal fund if necessary.

- **The remaining Principal Fund balance:** is used to pay claims and to fund appropriations by Congress to Federal agencies to administer the provisions of OPA and support research and development.

Source: U.S. Coastguard National Pollution Funds Center

Sources of Revenue for the Principal Fund of OSLTF

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- **The Principal Fund of the OSLTF has several recurring and nonrecurring funding sources:**

- **Barrel Tax:** the largest source of revenue is a 5-cent-per-barrel tax, collected from the oil industry on petroleum produced in or imported to the United States. (The 2005 Energy Policy Act reinstated the tax.)
- **Transfers:** a second major source of revenue has been transfers from other existing pollution funds. No additional funds remain to be transferred to OSLTF.
- **Interest:** a recurring source of OSLTF revenue is the interest on the Fund principal from U.S. Treasury investments.
- **Cost recoveries:** another source is cost recoveries from responsible parties (RPs); those responsible for oil incidents are liable for costs and damages.
- **Penalties:** In addition to paying for cleanup costs, RPs may incur fines and penalties under OPA, the Federal Water Pollution Control Act, the Deepwater Port Act, and the Trans-Alaska Pipeline Authorization Act. Penalty deposits generally amount to $4 million to $7 million a year.

Source: U.S. Coastguard National Pollution Funds Center

What Can The OSLTF Be Used For?

- **Federal Removal Costs:** including payment to cleanup contractors, overtime for govt. personnel, equipment used in removal operations, testing to identify the type and source of oil, disposal of recovered oil and oily debris, and preparation of associated cost documentation.
- **Claims:** for costs and damages specified in OPA:
  - Uncompensated removal costs
  - Natural resource damages (NRD)
  - Real/personal property
  - Loss of profits
  - Loss of subsistence use of natural resources
  - Loss of govt. revenues
  - Increased costs of govt. services, and
  - Claims from responsible parties (RP) asserting a defense to liability.

Source: U.S. Coastguard National Pollution Funds Center

Who Can Access the OSLTF?

- **All Federal On-Scene Coordinators (FOSCs):** obtain immediate access to a funding account and ceiling for incident response.
- **Other Federal, State, Local and Indian tribal government agencies:** assisting the FOSC get reimbursable funding authority via an FOSC-approved Pollution Removal Funding Authorization (PRFA).
- **Natural Resource Trustees:** designated by the President of the U.S., state, territorial governor, or Indian tribal governing authority.
- **Claimants:** (individuals, corporations, and govt. entities) can submit claims for uncompensated removal costs and OPA damages caused by the oil spill if the RP does not satisfy their claims.

Source: U.S. Coastguard National Pollution Funds Center

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Risk Management and Regulatory Fallout

Increasing Federal oversight a certainty

Obama Administration on Deepwater Horizon Oil Spill

- **U.S. President Barack Obama says fixing oil spill is Administration's responsibility:**

  "In case you're wondering who's responsible, I take responsibility. It is my job to make sure everything is done to shut this down."

U.S. President Barack Obama, May 27, 2010

- **President Obama reiterates the Administration's efforts to tighten up the regulation of offshore drilling:**

  "For too long, for a decade or more, there has been a cozy relationship between the oil companies and the federal agency that permits them to drill. It seems as if permits were too often issued based on little more than assurances of safety from the oil companies. That cannot and will not happen anymore. To borrow an old phrase, we will trust but we will verify."

U.S. President Barack Obama, May 14, 2010.

Source: http://www.whitehouse.gov/blog/2010/05/14/relentless-efforts-stop-leak-and-contain-damage

Regulatory Fallout: National Commission Inquiry Into Spill

- **National Commission:** On May 22, 2010, President signs Executive Order setting up National Commission on the BP Deepwater Horizon oil spill and offshore drilling. President names former Senator Bob Graham (former governor of Florida) and William Reilly (former administrator of EPA) as co-chairs of the bipartisan commission.
- Commission's mission is to:
  - Examine the root causes of the disaster
  - Develop options for mitigating impact of future oil spills, including improving Federal oversight and organizational other reforms of Federal agencies
  - Submit a public report to the President with findings within six months

Source: http://www.whitehouse.gov/

Regulatory Fallout: Oversight of Offshore Drilling Industry to be Stepped Up

- **On May 27, 2010, President Obama orders:**
  - **Further six-month moratorium on new permits for new deepwater oil and gas wells (blocked June 22 by Federal judge in New Orleans, Louisiana)**
  - **Suspension of work on 33 exploratory wells currently being drilled in the Gulf of Mexico**
  - **Suspension of planned exploration in the Chukchi and Beaufort Seas off the coast of Alaska**
  - **Cancellation of planned August lease sale in the western Gulf of Mexico**
  - **Cancellation of planned lease sale off the coast of Virginia**
  - **Further moves to strengthen oversight of offshore industry to come**

Source: http://www.whitehouse.gov/

Regulatory Fallout: Minerals Management Agency (MMA)

- **U.S. Interior Secretary Ken Salazar has been charged by U.S. President Barack Obama with reforming Minerals Management Service (MMS) – the federal agency that regulates offshore drilling**
- **On May 11, 2010, Salazar announces MMS will be split into two, effectively separating its safety and environmental enforcement responsibilities from its leasing, permitting and revenue collection activities**
- **Oil response legislation Administration submits to Congress proposes additional $29 million for inspections, enforcement, studies and other activities**
- **On May 26, 2010, Head of Minerals Management Agency (MMA) steps down, reportedly "under pressure"**

Source: http://www.whitehouse.gov/

Risk Management Fallout: Questions Raised On Disaster Plans

- **Oil industry focus on developing experimental equipment and techniques to drill in ever deeper waters, according to Wall Street Journal analysis.**
- **Deepwater drilling presents a challenging and complex operating environment, e.g. water pressure, seabed temperature, underground conditions.**
- **By some measures, offshore drilling is safer today. Serious accidents are rare, but not unheard of, e.g. 2001 explosion and sinking of Petrobras platform off Brazil's coast.**
- **Texas A&M 2005 paper: *"While drilling as a whole may be advancing to keep up with these environments, some parts lag behind. An area that has seen this stagnation and resulting call for change has been blowout control in deep and ultra-deep waters."***

Source: "Disaster Plans Lacking At Deep Rigs," Wall Street Journal, 05/18/10

Risk Management Fallout: Oil Giants Create Rapid Response Joint Venture

- **On July 21, 2010, oil giants Exxon Mobil, Chevron, Shell and ConocoPhillips announced a new venture to create a rapid response system to contain deepwater oil spills.**
- **The Marine Well Containment Co. will be funded with an initial investment of $1 billion split evenly between the four companies.**
- **The mission of the JV is to design, build and operate a rapid response system to capture and contain up to 100,000 barrels of oil a day flowing 10,000 ft below the sea's surface.**
- **The containment system will be ready within 18 months and able to start mobilizing within 24 hrs of an oil spill.**

Source: "Oil Firms Plan Rapid-Response Force," Wall Street Journal, 06/22/10

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Global Energy Insurance Markets: Before and After Deepwater Horizon Loss

Key trends on capacity, insured exposure and profitability.

Market Response to Deepwater Horizon Loss

- **Price Impact:**

- The loss is a major event for the offshore energy insurance and reinsurance market, described by many as a "market-changing" event.
- Others note that while energy insurers have been unsettled by the loss, capacity has not constricted and price increases are likely to be modest unless further major losses occur.
- As of May 26, 2010, Lloyd's estimates net claims from Deepwater Horizon loss at between $300 and $600 million. Richard Ward, Lloyd's CEO: "These figures are our estimate of the market's total exposure…The event in the Gulf of Mexico is still developing."
- Energy insurance rates for offshore accounts are expected to rise and terms and conditions to tighten.
- MarketScout CEO Richard Kerr predicts 15% to 25% rate increases for rigs operating in shallow water and up to 50% rate increases for operations further out to sea.
- However, given existing capacity levels, analysts do not expect the event to lead to a sustained hard market in offshore energy insurance. Prior to this event, energy insurance pricing was declining 15%.

Source: Towers Watson August 2010; Marsh Energy Monitor July 2010; Willis Energy Market Review (EMR) newsletter May-June 2010; Wall Street Journal 05/25/10; Credit Suisse Research Note 05/11/10

Market Response to Deepwater Horizon Loss

- **Impact on Demand:**
  - Many firms involved in offshore activities are reviewing their current insurance programs and seeking to top up their cover and looking at terms and conditions.
  - Business Interruption coverage resulting from pollution is not widely purchased by insureds. Analysts predict more businesses will be looking to purchase such cover.
- **Impact on Capacity:**
  - Marsh comments, July 2010: “There isn’t a lack of capacity, and as things stand, no one looks like they are ‘leaving the party’.”
  - Concerns remain that if the U.S. raises the liability cap under OPA for offshore facilities to $10 billion from $75 million, insurance capacity will be insufficient and more energy companies will have to self-insure.
  - Potential reduction in reinsurance capacity is another concern. In the wake of the loss reinsurers’ management may be starting to question necessity of writing offshore business which could impact energy insurers at year-end renewals.

Source: Marsh Energy Monitor July 2010; Willis Energy Market Review (EMR) newsletter May-June 2010; Wall Street Journal 05/25/10; Credit Suisse Research Note 05/11/10

Key Events June 2010 – Jan 2011 from Upstream Energy Market Perspective

Late June/ early July	July 1, reinsurance renewal season. Onset of Gulf of Mexico hurricane season. Some insurers' reinsurances renew at June 1. Some may have missed the impact, while others will be impacted immediately.	Most upstream insurers will have written approximately 75% of their income for the year. There is likely to be less pressure to compete for market share, but no withdrawal of capacity yet either. It is therefore possible that over-supply of capacity may dampen the level of market increases.
June to December	Underwriters seeking support for 2011 from both management and reinsurers.	Fresh underwriting stances may appear in anticipation of increased reinsurance costs and increased retentions, as well as Solvency II capital requirements.
October/ November	Gulf of Mexico hurricane season winding down.	Implications for January 1 renewals: -- If the windstorm season has not had a major impact on the market, then there will be less pressure on markets to withdraw. -- However, if major hurricane or other losses have been sustained by the market, then this could prompt a significant market reaction.
November/ December	Insurers seek fresh reinsurance terms for 2011, mindful of Solvency II increased capital requirements.	Decisions made as to: -- Changes in capacity offered for 2010 -- Election to withdraw
January 2011	Extent of capacity changes evident in market.	Any significant depletion of capital will clearly exacerbate any remaining hardening dynamic. However, in the unlikely event of capacity levels remaining essentially unaltered, competitive pressures may re-assert themselves for non-capacity business.

Source: Willis Energy Market Review (EMR) Newsletter, May-June 2010

Global Energy Insurance Markets: Key Trends *Prior* to Deepwater Horizon Loss

- **Insurance Capacity:**

- Aggregate commercial property/casualty (nonlife) capacity is now just below its 2007 Q3 peak after falling sharply in 2008 and is expected to set a new record in 2010.
- Capital providers are increasingly attracted to the *energy* sector because of the profitable underwriting results posted by vast majority of p/c insurers in 2009.
- Abundance of capital, together with good underwriting results and lack of major catastrophe losses is driving down prices and increasing competition.
- 2010 global capacity for upstream energy at 10-year high. Capacity for downstream risks also back up to 2000 levels.
- Absence of major storm in Gulf of Mexico in 2009 means new underwriting strategies unveiled in wake of Hurricane Ike have yet to be tested.

Source: Willis Energy Market Review March 2010.

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Key Energy Market Trends in 2010 Before Deepwater Horizon Event

Most Terms and Conditions Were Established Before April 20 Loss

Upstream Operating Underwriting Capacities, 2000-2010 (Excl. GOM)

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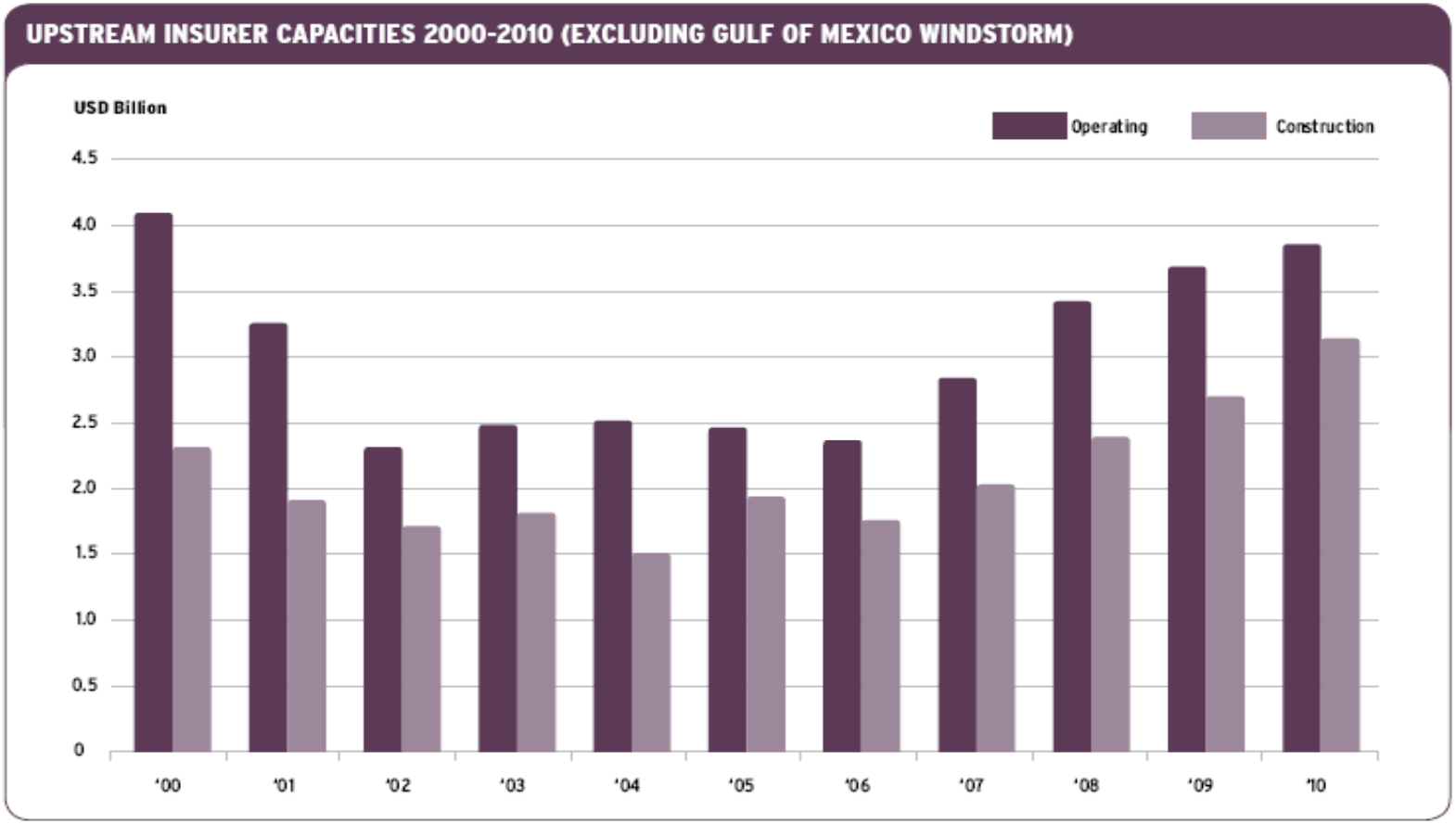
CAPACITY AT TEN YEAR HIGH



Upstream capacity levels continue to rise

Source: Willis

Source: Willis Energy Market Review March 2010.

Downstream Operating Underwriting Capacities, 2000-2010 (Excl. GOM)

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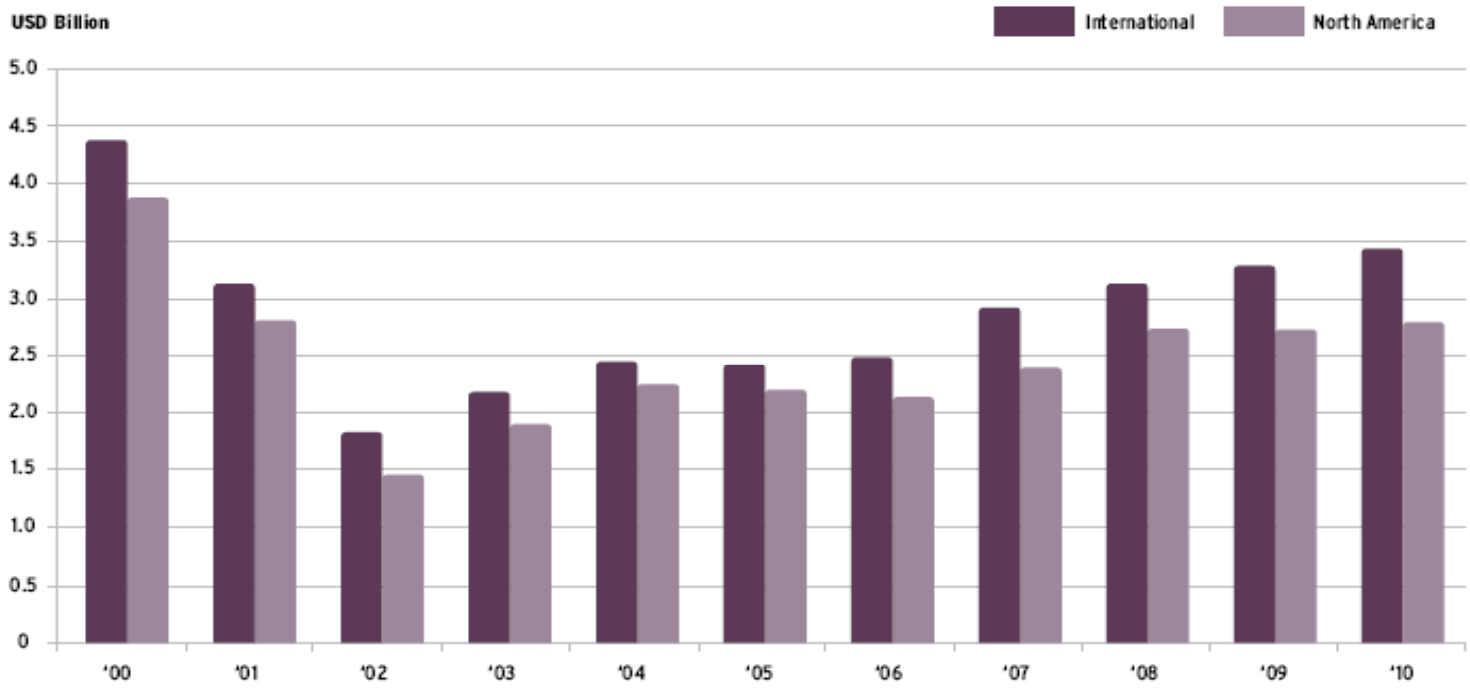
CAPACITY

DOWNSTREAM OPERATING UNDERWRITING CAPACITIES, 2000-10 (EXCLUDING GULF OF MEXICO WINDSTORM)



While North American Downstream market capacity remains stable, its International counterpart continues to grow - exacerbating the softening market conditions

Source: Willis

Source: Willis Energy Market Review March 2010.

Upstream Capacities and Average Rating Levels, 1993-2010 (Excl. GOM)

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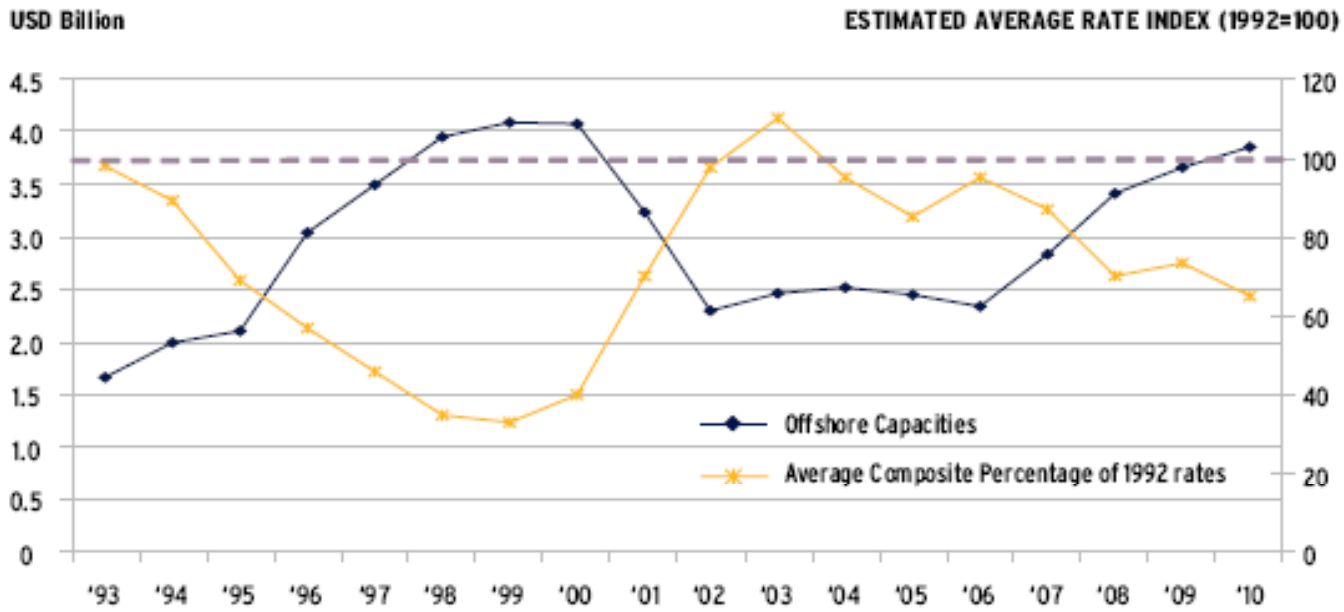
HOW FAR ARE RATING LEVELS SET TO FALL?

ENERGY INSURER CAPACITIES AND AVERAGE RATING LEVELS, 1993-2010 (EXCLUDING GULF OF MEXICO WINDSTORM)



Upstream rates have some way to go before reaching truly soft market levels

Source: Willis

Source: Willis Energy Market Review March 2010.

Onshore Capacities and Average Rating Levels, 1993-2010 (Excl. GOM)

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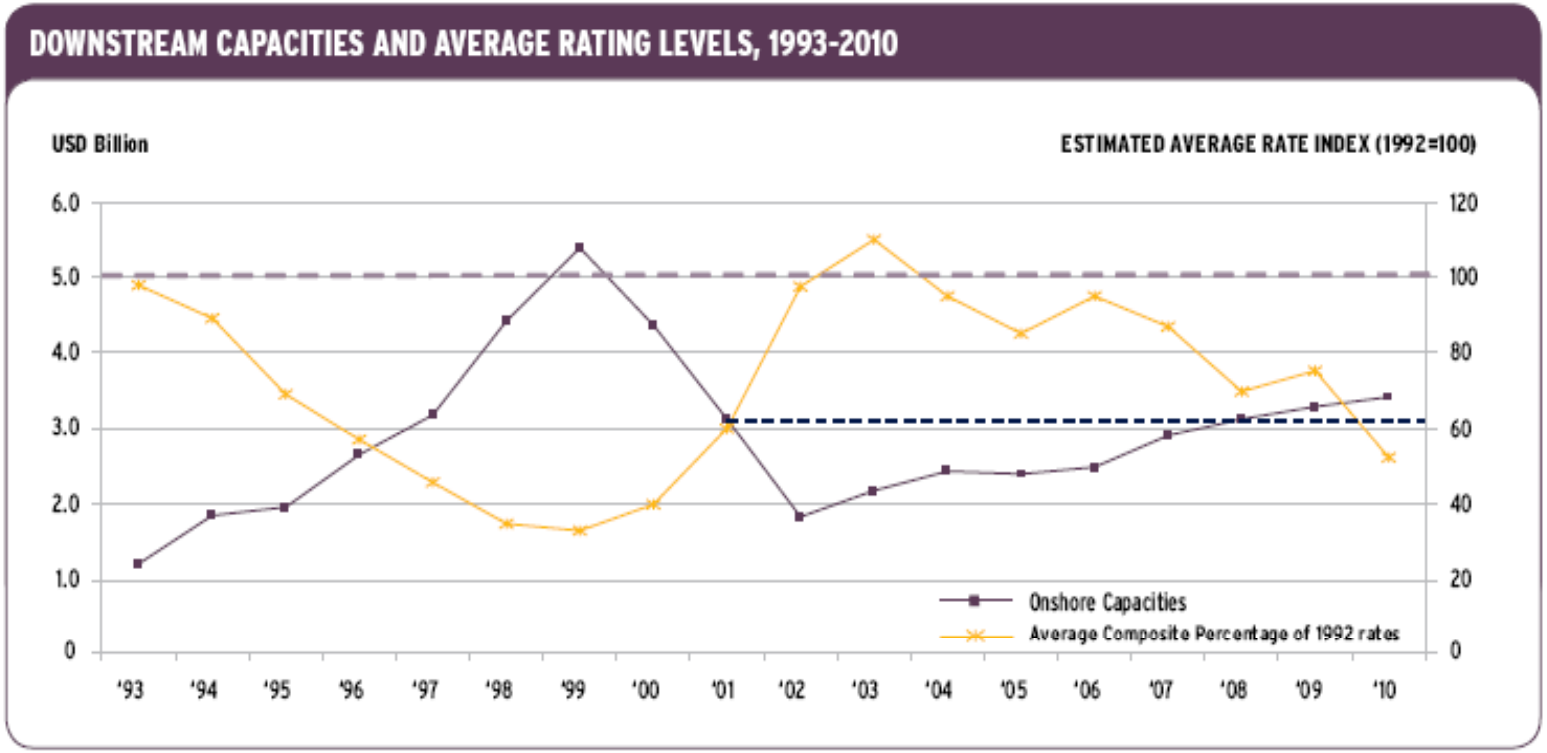
RATING LEVELS

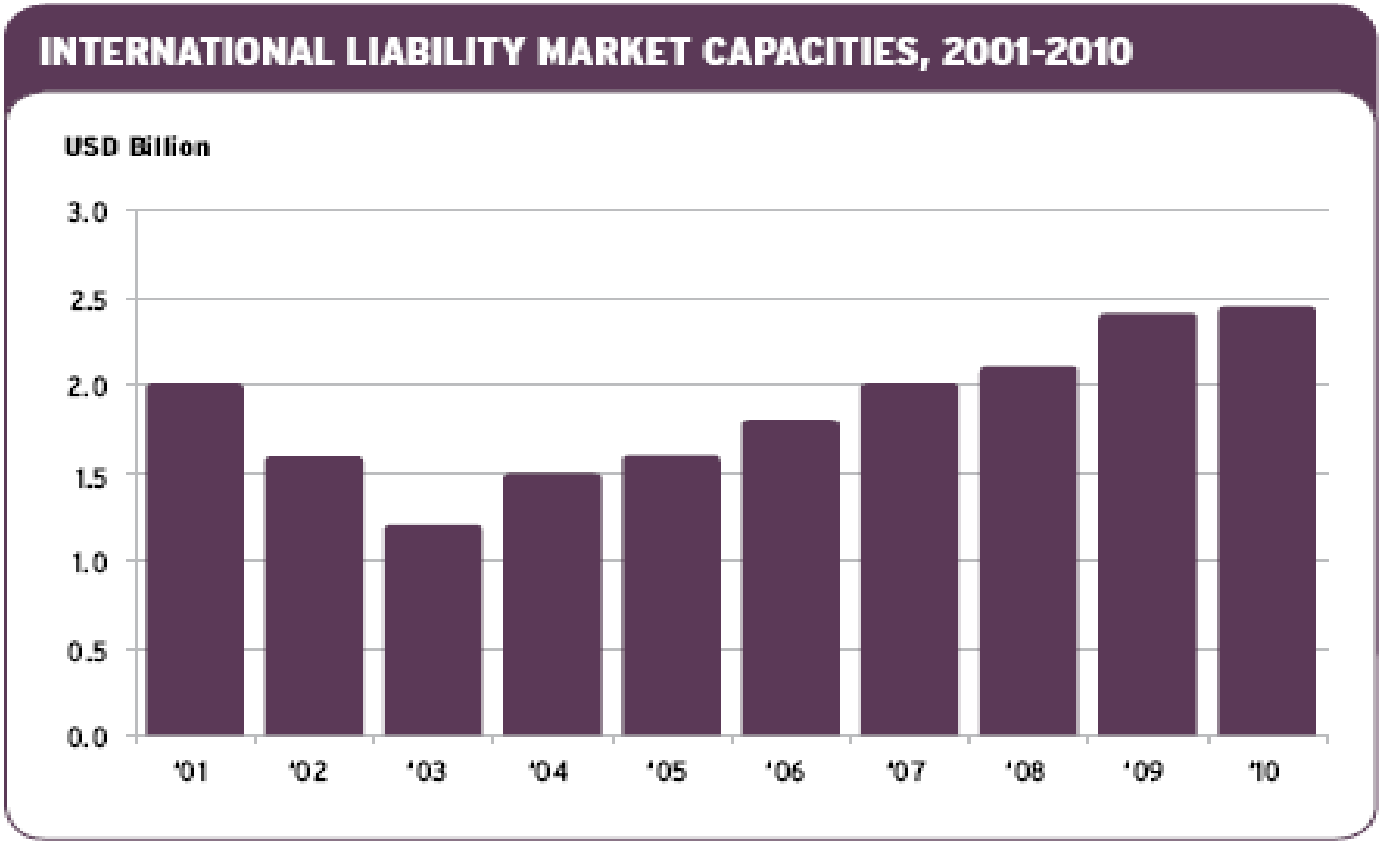


Last year we pointed out that downstream market rates still remained, on average, at a higher level than before 9/11. Not any more...

Source: Willis

Source: Willis Energy Market Review March 2010.

International Liability Market Capacity, 2001-2010



Capacity levels in this market remain more stable than in other markets

Source: Willis

Source: Willis Energy Market Review March 2010.

Global Energy Insurance Markets: Key Trends Prior to Deepwater Horizon Loss

- **Insured Exposure:**
  - Global energy demand rebounding as financial crisis eases. Energy insurers' exposure and therefore premium income levels can only benefit from upturn in energy industry activity and recovery of worldwide oil prices.
  - BUT, capital providers' willingness to invest fresh capital in insurance industry has boosted capacity to 10-year high, creating soft market conditions.
  - Upswing in project activity begins to get underway following oil price recovery
  - *BOTTOM LINE IN 2010*: Renewed confidence in the economic recovery boosts demand and supply for energy and energy assets
    - Global energy demand will continue to rebound
    - Rise in fuel prices signals new sources of premium income, but could also signal potential increase in frequency and severity of losses
    - Long-term partnerships and risk quality key as insurance industry continues to meet demands of buyers in increasingly competitive market

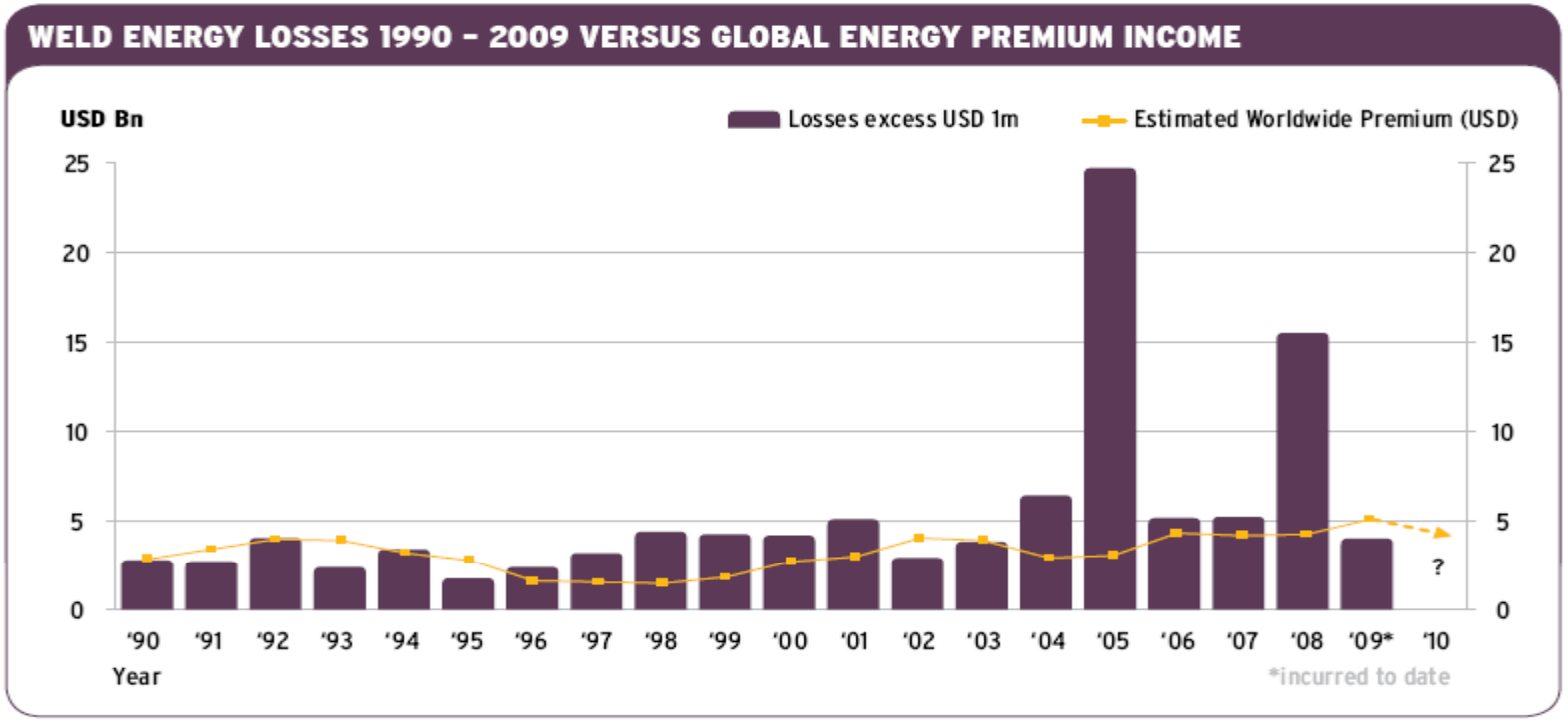
Source: Willis Energy Market Review, March 2010

Global Energy Insurance Markets: Key Trends Prior to Deepwater Horizon Loss

- **Profitability:**
  - Loss of investment return necessarily increases pressure on (re)insurers to generate underwriting profits in soft market
  - Lack of major catastrophes and relatively benign claims environment (for now) reduces insurers' reliance on decreasing investment returns for profits
  - Many insurers struggling to obtain premium growth in face of global recession and softening market
  - Insurers will be forced to compete more fiercely for premium income and market share in future
  - *BOTTOM LINE IN 2010*: Stable and profitable energy sector (for the most part)
    - Does apparently healthy premium base mask a market that is on the edge of an abyss?

Source: Willis Energy Market Review March 2010.

Energy Losses vs. Global Energy Premium Income 1990-2009*



Following an uneventful Gulf of Mexico hurricane season, the additional premium generated to the market in the aftermath of hurricane Ike has enhanced the profitability of the energy sector. But does this apparently healthy premium base mask a market that is on the edge of an abyss?
(WELD = Willis Energy Loss Database)

Source: Willis Energy Loss Database (figures include both insured and uninsured losses)

*Figures include both insured and uninsured losses
Source: Willis Energy Market Review March 2010.

Gulf of Mexico Windstorm: Major Market Driver

- Despite benign 2009 hurricane season, volatility in Gulf of Mexico windstorm (GOM) loss record continues to be major market driver
- Absence of GOM wind activity last year means new underwriting strategies unveiled in the wake of Hurricane Ike have yet to be tested
- The jury's still out on the market's new GOM wind model
- Oil price rises mean more money available for insurance spend *or* sufficient funds to retain more risk
- Reduced commercial rates in 2010, but: if price goes too low insurers may withdraw; if no takers at price offered then portfolio will collapse
- Sustainability of offshore GOM wind portfolio hangs in the balance

Source: Willis Energy Market Review March 2010.

Reinsurance Market Trends

- Over the preceding 12 months when many other markets were in turmoil the global reinsurance industry continued to meet its clients requirements
- By and large reinsurers have maintained a responsible underwriting attitude over the January 1 renewal season
- Jan. 1 renewals saw a softening in reinsurance pricing due to profitable 2009 underwriting year and recovery from 2008 losses following global investment market recovery in 2009.
- Primary insurers struggling to obtain premium growth pressures their expense ratios and reinsurance cost budgets
- Cat bond market recovering helped by convergence in pricing between traditional reinsurance and cat bonds
- Reinsurers' ability to continue to provide clients with long-term capital secure

Source: Willis Energy Market Review March 2010.

INSURANCE INFORMATION INSTITUTE

Oil Spills: A History

Top 10 Worst Oil Spills: By Volume of Oil Spilled

INSURANCE INFORMATION INSTITUTE

Date	Spill Name	Location	Size of Spill (Tons)
January 1991	Gulf War Oil Spill	Persian Gulf	1,500,000*
June 1979	Ixtoc I oil well	Gulf of Mexico	454,000
July 1979	Atlantic Empress/Aegean Captain	Caribbean Sea	287,000
March 1992	Fergana Valley	Uzbekistan	285,000
February 1983	Nowruz oil field	Persian Gulf	260,000
May 1991	ABT Summer	Angolan coast	260,000
August 1983	Castillo de Bellver	Cape Town, South Africa	252,000
March 1978	Amoco Cadiz	Off the coast of Brittany, France	223,000
April 1991	The Haven	Off the coast of Italy	145,000
November 1988	The Odyssey	Off the coast of Nova Scotia	132,000

As of June 15, 2010, government officials upped their estimates and said between 35,000 and 60,000 barrels of oil per day (1.5-2.5 million gallons per day) have been spilling into the Gulf of Mexico due to Deepwater Horizon.

*Top end of estimated tons of oil spilled.

Sources: http://www.msnbc.msn.com/id/36852827/ns/us_news-environment

Sample of Most Costly Oil Tanker Spills*

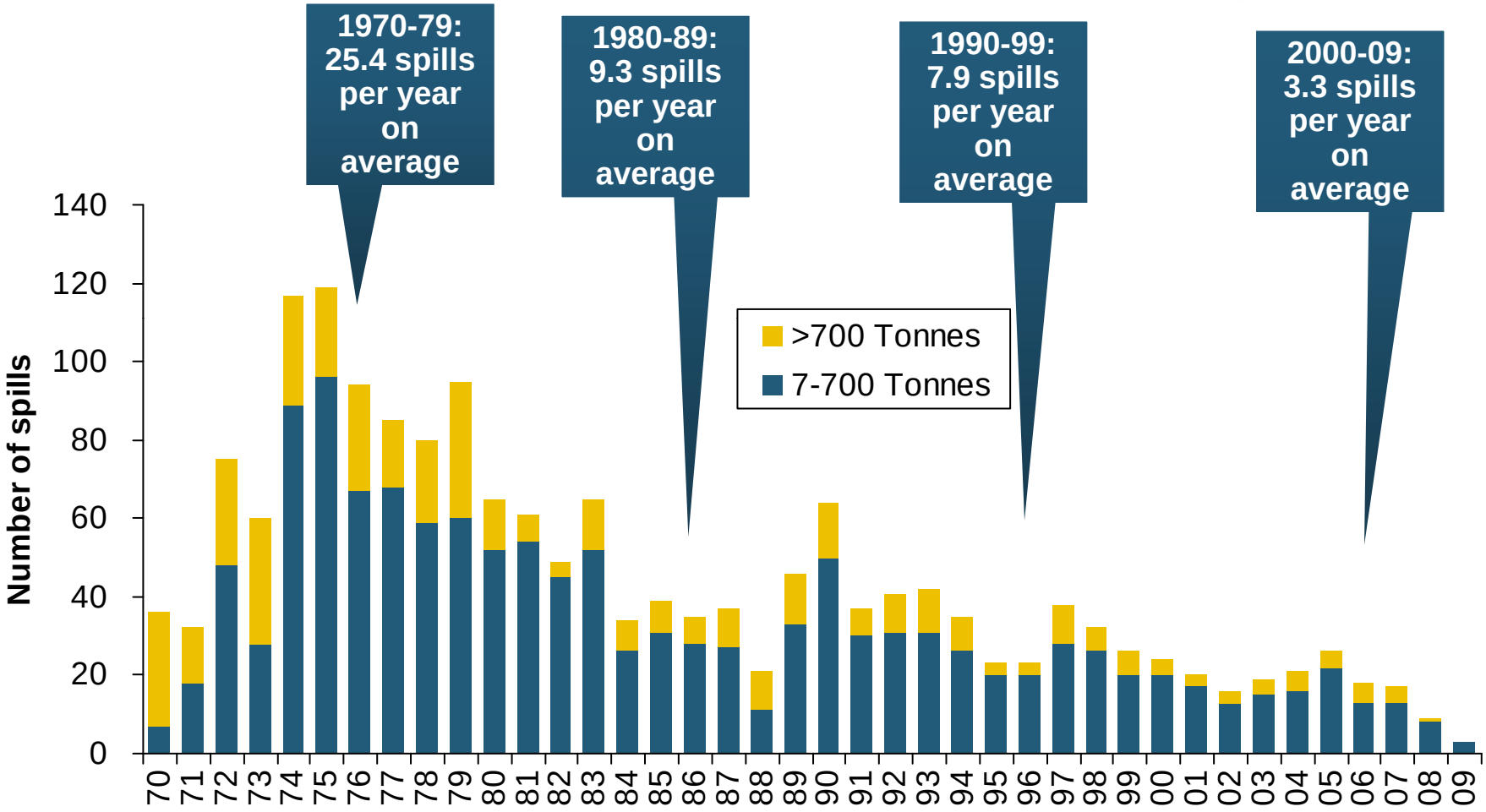
INSURANCE INFORMATION INSTITUTE

Date	Spill Name	Location	Estimated Size of Loss
1989	EXXON VALDEZ	Alaska	Clean up: $2.5 billion. Total costs (incl. fines, penalties and claims settlements): $7 billion. Court cases continue, final costs unknown.
1978	AMOCO CADIZ	France	Est. cost $282 million, of which about half for legal fees and accrued interest.
1993	BRAER	UK	Est. cost $83 million. Clean up costs extremely low. Some $61 million paid out in fishery-related damages.
1996	SEA EMPRESS	UK	Clean up: $37 million. Total costs: more than $60 million.
1997	NAKHODKA	Japan	Compensation settled at approx. $219 million.
1999	ERIKA	France	Claims still being processed. Likely to exceed the $180 million available under '92 Civil Liability and Fund Conventions.

*Where published data is available, caution is advised, as certain notoriously expensive cases can easily skew the analysis

Sources: International Tank Owners Pollution Federation; http://www.itopf.com/spill-compensation/cost-of-spills/

Number of Oil Tanker Spills Over 7 Tons



Source: The International Tanker Owners Pollution Federation Limited; Insurance Information Institute.

Top 20 Major Oil Tanker Spills by Size of Spill Since 1967, Plus Exxon Valdez

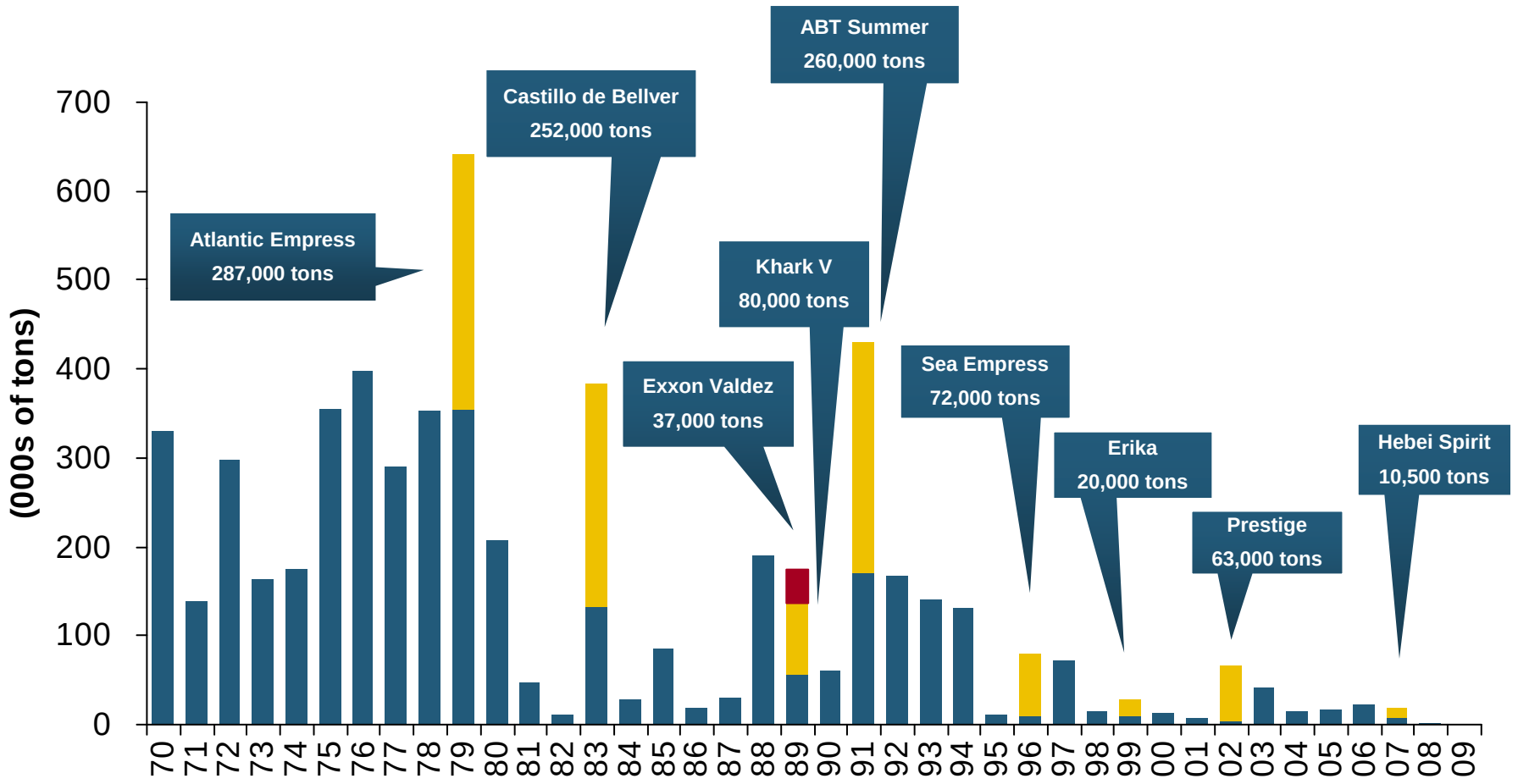
INSURANCE INFORMATION INSTITUTE

Position	Shipname	Year	Location	Spill size (tons)
1	Atlantic Empress	1979	Off Tobago, West Indies	287,000
2	ABT Summer	1991	700 nautical miles off Angola	260,000
3	Castillo de Bellver	1983	Off Saldanha Bay, South Africa	252,000
4	Amoco Cadiz	1978	Off Brittany, France	223,000
5	Haven	1991	Genoa, Italy	144,000
6	Odyssey	1988	700 nautical miles off Nova Scotia, Canada	132,000
7	Torrey Canyon	1967	Scilly Isles, UK	119,000
8	Sea Star	1972	Gulf of Oman	115,000
9	Irenes Serenade	1980	Navarino Bay, Greece	100,000
10	Urquiola	1976	La Coruna, Spain	100,000
11	Hawaiian Patriot	1977	300 nautical miles off Honolulu	95,000
12	Independenta	1979	Bosphorus, Turkey	95,000
13	Jakob Maersk	1975	Oporto, Portugal	88,000
14	Braer	1993	Shetland Islands, UK	85,000
15	Khark 5	1989	120 nautical miles off Atlantic coast of Morocco	80,000
16	Aegean Sea	1992	La Coruna, Spain	74,000
17	Sea Empress	1996	Milford Haven, UK	72,000
18	Nova	1985	Off Kharg Island, Gulf of Iran	70,000
19	Katina P	1992	Off Maputo, Mozambique	66,700
20	Prestige	2002	Off Galicia, Spain	63,000
35	Exxon Valdez	1989	Prince William Sound, Alaska, USA	37,000

This table gives a brief summary of 20 major oil spills since 1967. EXXON VALDEZ is included for comparison although this incident falls somewhere outside the group.

Source: The International Tanker Owners Pollution Federation Limited; Insurance Information Institute.

Annual Quantity of Oil Spilled by Tankers, 1970-2009



Source: The International Tanker Owners Pollution Federation Limited.

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