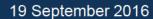# Pricing Plenary

Hasitha Subasinghe, Tech Rate Consulting

# Big Data in Specialty Classes

- Marine and Energy Pricing Working Party (Co – Chair)

- Big Events and Big Data

- We all know the **issues** with Big Events

  – Less  Data

  – Bad Data (Unstructured Vs Structured)

  – Judgement

  – Limited Techniques

  – Outliers

  – The impact of that is limited today however…

# Specialty

- Big events are about

  - **"specialisms"**  (Actuarial / Underwriter Judgement / Expertise… )

  - **looking for data** ( Can we hide behind "there is no data" or "data quality is really poor" or "there's never been any claims" ?)

  - ….which can lead to Big Data but a **long way** away from **full automation** because….

# Marine Example

- Lets look at a P&I Example where there is varying degrees of understanding

- P&I is **protection and indemnity**

    – Lets look at losses from a P&I contract….

# Judgement / Specialism on Similarities and Differences

- Big events:-
  - 5th October 2011 Container Carrier.
  - 13th January 2012 Cruise Liner.



- Both losses are relevant but lets look at .....

# Specialise

| Topic | Different | Same |
|---|---|---|
| Vessel Types | Cruise Line Vs Container Carrier | "Big Vessels" |
| Pollution | Containers (Cargo) and Wreckage (Disintegrated)<br>New Techniques | Fuel evacuated<br>Had to clean up in the end |
| Regulation | Adversarial / Restrictive | Constructive / Job Done |
| Human Tragedy | Lot more lives lost by nature of vessel type | |
| Damage to Nature | One more than the other | They both damaged nature |

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# How Specialist?

- Underwriters and Actuaries can be "very" special indeed.

- Being a specialist might stop you from looking for similarities in data.

- Not being a specialist might bring irrelevant data.

  - Irrelevant data.

    - Tankers that become FPSO are no longer tankers. (Floating Production Storage and Offloading unit)

  - Irrelevant / Inappropriate actions.

    - E.g.

      - 350 Vessel classifications collapsed in to 150 and further collapsed in to 4….

      - Using tonnage for towing tugs and not horse power as a measure of exposure…

      - Interchanging deadweight tonnes and gross tonnes and formula driven weight…

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# Recent Marine Loss

   – \* Recently (4 -5 months "ish" ago "in the press") a large FPSO (floating production storage and offloading unit) loss $850m+

\* Can't get in to specifics of any losses due to legal reasons. The more recent the more sensitive.

   – The $850m+ loss has many similarities and quite a few differences.

       • Big events not all relevant, depends on the vessel.

       • Beware … or be aware.

       • "Normal vessel" converted to an FPSO so…

       • The data item is irrelevant to the contract as it is not covered?

   – One event but ….. Irrelevant to P&I but historically exposed in P&I.

       • Look for data…

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# Looking for Data

- Then you will see patterns in the **<u>Big Events</u>**
  - Eg:- big events at the start are "big" but not "very big".
    - They are usually X at the start and end up well over 3 times when they "Settle". The X is the threshold for "Big events"
  - Big Data doesn't get you there but specialising and looking for data does.
  - Looking for Data can eventually lead to Big Data.

- You can not hide behind being a specialist or not having enough data.

-  Big data is coming.. Lets look at a different example in "Marine Hull" Exposure data

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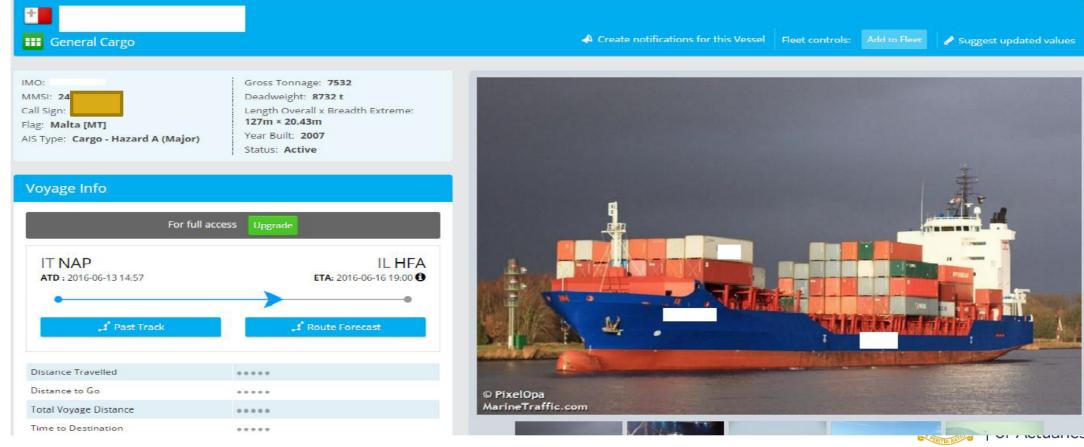of Actuaries

# Big Data…. Break through

- Vessel Tracking information… (**pick one**)

# Big Data…..Exposure

- All vessel exposure information including past tracks…
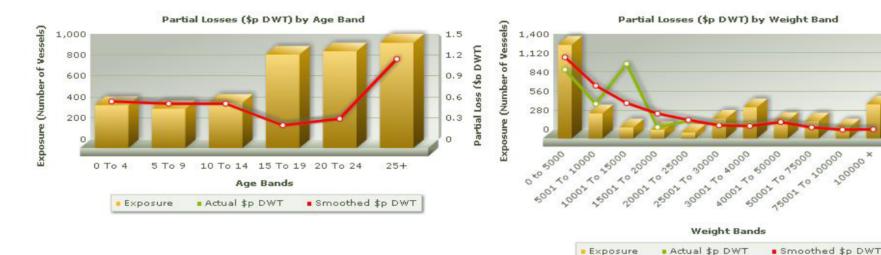
# Big Data….Loss information

- "Big" events are publicly available.

- The rest is available on "certain" subscription services.

- Also more data, if you participate on risks.
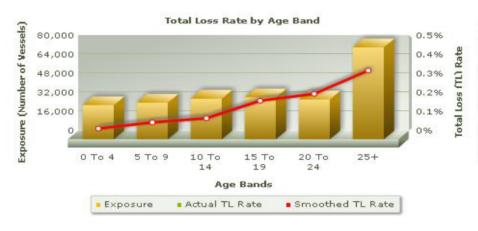
- You can make robots that "lap up" the data.

- When you do that you get to "Analysis like……."

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**Vessel Chart -**

- **Source:-www.hullrate.com**

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# Big Data:- Specialty Classes like Marine and Energy

- Judgement / Expertise still needed.
    - Still beyond machine learning..


- look for data.
    - "Big Data" but still can be "Special"
    - Data cleaning is automated
    - Structuring data is automated


- Keep looking, join the dots, but be aware.

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# Q&A at the end

- Back to the chair…..