

# No tipping for economic forecasters

We continue our series of articles specially written for *Tanker Operator* by Marine Traffic Forecasts, this time analysing the lack of tipping points in forecasting\*.

To every seafarer, the tipping point is surely evocative of the point at which a vessel starts an inexorable slide to, for example, capsize, or swamping.

Scientists will say it is a matter of mainstream physics. But it is surprising and serious that this concept is ignored, avoided, or over-simplified in many areas of analysis and especially forecasting.

Our interest and that of many is the forecasting of critical maritime metrics, such as traffic volumes. These include weather and related climatic drivers and it is informative that even this area, despite being a part of physics, has suffered from ignoring of tipping point effects, or more pertinently setting up experiments, or forecasting models, that do not permit tipping points.

The rapid shrinking of the permanent Arctic ice cap was poorly forecast because the models had assumed that an unchanging recovery mechanism takes effect after each set-back to the ice coverage and thickness.

We now know that the accumulated effect of a sustained period of global warming was undermining that recovery mechanism. In the mid -2000s, the system was dragged below a tipping point after which the ice takes longer to recover from small set-backs. This in turn leads to an acceleration of the trend decline in sea ice coverage.

When most economists and in particular econometricians get engaged in forecasting the world, which is critical to the population

and activities, such as port investment, vessel purchase and route planning, it is tragic to note that they have achieved much less than the climate scientists. Tipping points are noticeably absent in models used to forecast maritime traffic.

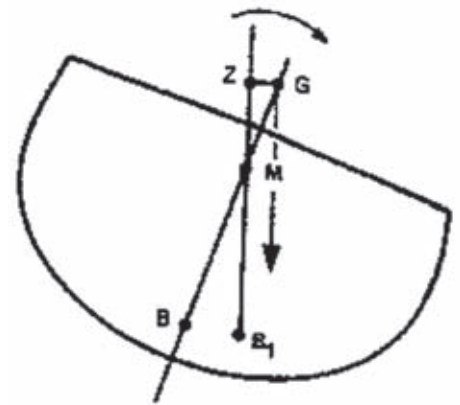
A simple explanation and forecast model is used for traffic volumes. In most cases, consultants use an unchanging relationship of volume to a sole driver (GDP); which is nothing short of unprofessional. They ignore for example the impact that any structural changes in economies will have on the future pattern and level of trade.

As all seafarers know, adverse conditions, such as large waves will ‘rock the boat’ which can lead to delays. But occasionally, unusual combinations can produce extreme conditions with, for example, ‘superwaves’ that cause severe damage, or worse; especially if the vessel is not prepared for these conditions.

### Economic ‘superwave’

So too with economics and hence the knock-on effect on traffic volumes and vessel prices. One such hidden ‘superwave’ built up in peripheral Europe as weak economies were encouraged to push the boat out with interest rates from the Euro that were too low for their situations even at the outset.

The general maritime forecasters and many of their clients were happy with simple GDP/volume relationships because it supported their investment strategies.



The tipping point.

But the actual GDP numbers did not show, or foreshadow, the distortions building up, nor were the tipping point dangers identified before the point when the ‘superwave’ arrived.

Clearly illustrated here are the major boom build-ups of construction activity in a southern European country over 40 years in relation to the movements of GDP. The medium and small waves that occurred in the mid-1970s and around 1990 led to disruption and damage. But the ‘superwave’ that broke in 2009 on the other hand smashed the normal recovery mechanism into disfunction.

As the effect of this was repeated in several



The rapid shrinking of the permanent Arctic ice cap was poorly forecast.



Construction Industry Activity in relation to movement in GDP. Source: Maritime Traffic Forecasts



**A potential economic capsze.**

other countries regionally, it pushed maritime trade into a dark place on which no conventional models shine a light. We will show in a future article how straightforward forecasting and data analysis techniques can show up all these effects with a clear view of potential economic capsze and the very non-standard consequences that this can have.

In the meantime, don't expect the pre-crisis pattern of trade to resume. This fundamental assumption has been quoted by both central banks and economic forecasters, but as we will show, it can be a fundamentally flawed presumption due to the damage caused by an economic 'superwave'.

TO

*\*By Graham Cox, economist, Maritime Traffic Forecasts - [www.maricasts.com](http://www.maricasts.com)*

**Responsible tank cleaning**



SC 45TW

SC 15TW

SC 30T

**Same make makes sense**

Select Scanjet for both your fixed installed and portable tank cleaning equipment

Phone: + 46 31 338 7530  
E-mail: [sales@scanjet.se](mailto:sales@scanjet.se)  
Web: [www.scanjet.se](http://www.scanjet.se)



topping-off



Visit us:



Learn about Honeywell Tanksystem's portable, digital, automatic, topping-off monitoring system at Sea Asia in Singapore.

The HERMetic TOMSYS is a portable, digital, automatic, gas tight, level monitoring system, designed to continuously and automatically monitor the cargo tank liquid level during topping-off procedures. The unit accurately monitors the liquid level over the last upper three meters.

By increasing safety and efficiency, Honeywell Tanksystem helps customers improve business performance.

**Honeywell**

For more information: [www.tanksystem.com](http://www.tanksystem.com)  
Tel. +41 26 919 15 00  
E-mail: [tanksystem@honeywell.com](mailto:tanksystem@honeywell.com)

© 2013 Honeywell International, Inc. All rights reserved