



By James Brewer

# Overcoming

## a hazardous pricing prediction

**I**s it possible to predict trends in ship repair prices? Could there be a magic formula which could save millions of dollars over a period in fleet costs?

Prediction is famously hazardous in all aspects of maritime trade, but this may be one area where ship managers can get a better grip on their budgeting, and marine underwriters on their reserving for claims.

Since the end of 2009 Sasha Dobra, a senior executive at technical and claims consultancy and survey specialist Kalimbassieris Maritime, has embarked on a wide-ranging analysis to see whether there can be a scientific approach to improve budgeting and effecting real savings on repair strategy – or whether this might be an alchemist's dream.

Ms Dobra and her colleagues have the benefit of access to considerable client and counterparty resources and data for this exercise. The business, led by Christina Kalimbassieris, has offices in Piraeus, Constantza, Bourgas, Varna, and Istanbul and handles the gamut of marine casualties and emergencies.

As to whether the cost path can be accurately forecast, "the basic answer", Ms Dobra admitted to *SMI* "is that it is really difficult to predict because so many factors go into ship repair."

Still, her research has pointed to a series of guidelines and strategic advice that will add critical insight into managing what can at times look like a frighteningly open-ended cost. She sought to identify a system that would be useful not just for the next 12 months, but on a global scale so that provisions could relate to years ahead.

Ms Dobra began by drawing on her firm's considerable experience in Turkey to determine whether average repair prices throughout the yards might relate to the price of steel plate. She studied unit steel prices for flat steel grade A (without extras) charged at the Turkish centre of Tuzla over the last three years averaging them and drawing a heavily qualified trend line.

The results showed a very broad correlation between the unit repair prices and price of steel plates, but with some periods showing exceptions to the rule. So this called for an overview of all the various factors influencing repair costs, including indices and other tools.

In terms of the global picture, the repair industry is affected by three macro-factors – supply, demand and underlying costs.

In terms of supply, one needs to consider globally, the number and capacity of facilities: the number of yards grew rapidly in recent

years, and some changed their focus from newbuilding to repair. Facilities also improved during the boom. Supply is currently very high, so there is a competitive market, meaning lower prices.

Demand in terms of ship repair is affected by anything which influences the amount of repair, maintenance and conversion work required. This will include the size and age of the world fleet. More specifically, a modern fleet requires less maintenance, with the caveat that there tends to be an initially high rate of incidents as new ships are introduced and crew become familiarised with them.

With older ships in circulation there is greater repair/maintenance demand, but again a caveat that maintenance/repair work drops towards the end of vessel life as operators try to get the most out of them.

Indicators of such fleet demographics which might be useful in piecing together a picture of repair demand will include world fleet profile, lay-up statistics and demolition rate.

Demand is also heavily influenced by the state of the shipping market. When freight rates are very high, vessels are in continuous use, as operators seek to minimise any delay. There are more accidents and maintenance needed, but companies are more likely to defer repairs. In that kind of market, minimising off-hire time will become more important than securing the lowest repair price,

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so there is less pressure on the yards to push prices down.

When freight rates are very low, as during the past 18 months, owners attempt to minimise repair/maintenance costs and push harder for lowest possible prices.

Ms Dobra's study included a comparison of repair prices with indicators on performance of the shipping market, such as newbuilding prices and the Baltic Dry Index. These showed a relatively close correlation – when freight rates or vessel prices were high, repair prices were also high, but low freight rates meant lower repair costs.

The third macro-factor affecting repair work is underlying costs – or the raw components of repair costs. Obviously this will include the steel itself, the factor which initially formed the basis for the study. The figures showed a general correlation between price of steel plate and repair costs, but with a time lag, most likely due to the fact that yards stockpile their steel.

Underlying components of repair costs will vary for different kinds of repair work, but even for repairs involving predominantly steelwork, such as grounding damage, the major component is labour.

The proportion of repair costs attributable to labour will also differ from one region to the next. For example in Western European yards, labour will constitute a larger proportion than say Turkey, where labour costs are much lower. Labour costs may also be affected by other factors, e.g. currency fluctuations when workers are paid in one currency but repairs are charged in another.

Fuel is not a major direct component, but does form a part of some costs e.g. fuel needed for grit blasting, yard machinery etc. Further it has a general economic influence: a very general pattern has been seen of repair costs following the crude oil price. Another input to the equation is finance: repair yards usually rely on financial institutions for revolving credit lines to finance working capital. In Turkey for example, this comes from the local banks. In Turkey there has been a two to threefold increase in interest rates since the start of the financial crisis.

Although there are basic factors which influence repair costs

and certain indices such as the Baltic Index, crude oil index and steel prices may be used to give guidance, each repair case is unique. The individual circumstances of each case will vary, so that repair costs may differ widely from one case to the next. Obviously the type and extent of damage will be the main factors in any instance.

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However, the type, size, and age of vessel are also important – some vessels such as LPG carriers, are inherently more expensive to repair and larger vessels will pay higher dry-docking dues. The geographical location of a casualty is also a factor – if the incident occurs in close proximity to a number of shipyards, this will mean that it is feasible to conduct a proper repair tender which will also help to push prices down.

Demand in local repair yards at the time also has a major influence on price – if the yards are hungry for work then they will quote more competitively. In this respect it is useful to have an understanding of how repair yards operate and their perspective of demand.

A yard's two main assets are its dry dock and workforce, and it will want to make the best use of both. You might think that the yard would love to have an enormous damage case with huge steel repairs, but that is not necessarily so, warns Ms Dobra.

Repairs requiring a long period of dry docking can create logistical problems, and limit the other work which the yard can undertake.

As a general rule, the ideal work for the yard will be regular dry docking of short periods, meaning that it can maximise the number of clients it can service.

Scheduled dry-dockings are also generally more attractive as they allow the yard to plan ahead. Yards will also be looking for projects which involve a variety of work, in order to maximise the use of their workforce. All of this will have an impact upon how the yard quotes for a job – the less attractive the work is, the more likely the yard is to quote a higher price.

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So, although it might be possible to make some general predictions in terms of trends in unit prices, there are so many varying factors that there will always be exceptions to the rule. To illustrate the point, Kalimbassieris recently saw a yard come forward and halve its unit price in the hope of securing a damage repair project. Demand was low at the time and the yard was eager to take the deal.

The bottom line comes to this: the factors and indicators mentioned can be useful for understanding and managing the process and working toward more competitive repair prices, as well as more accurate budgeting for the future. However, allowance should always be made for the possibility of variations resulting from the individual circumstances of each case. ■