



The Economic Crisis of 2008 and World Shipping: Unheeded Warnings

Hercules E. Haralambides^a, Helen Thanopoulou^b

^a *Center for Maritime Economics and Logistics (MEL), Rotterdam School of Economics, Erasmus University Rotterdam, Burgemeester Oudlaan 50, 3062 PA Rotterdam, The Netherlands, e-mail: Haralambides@few.eur.nl*

^b *University of the Aegean, Department of Shipping, Trade and Transport, Korai 2a, 82100 Chios, Greece, email: hethan@aegean.gr*

Abstract

Cyclicity in shipping is inherent. However, the speed and amplitude of market changes, since the fateful collapse of Lehman brothers in 2008 - distinguishes this particular crisis from most previous cycles. Predictions and investment moves made until immediately before the crisis have, in retrospect, been proven erroneous. The same applies to many of freight rate forecasts made subsequently. Yet, the information for deciphering market signals was already there in the critical months before the crisis, the authors argue. The paper demonstrates that if investors had relied on certain very simple indices of over-investment in new ships, they would have concluded that the advent of an inflexion point was unavoidable. A market turn should have been anticipated even if favourable demand developments were to continue undisrupted. Indices such as the ratio of orderbook to the existing fleet had deviated manifold from their long-term average since the previous major cycle. The authors conclude that the nature of this last cycle, akin in many respects with the origins and course of the crisis of the 1970s and the 1980s was determined more by what Metaxas called in 1971 «endemic tendency to over-invest».

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1. Introduction

The month before the Northern Rock crisis started unfolding in the UK, the signs of a severe tightening of credit had become evident. Originating from the US subprime mortgage market (Haralambides, 2008), which fed into the rest of the economy, the credit crunch which ensued had reached the financial markets; spreads of interbank short-term interest rates over overnight index swap, and treasury bill rates had widened markedly (Baba, N., and Packer, F. 2009:1). This was weeks only before that

northern U.K. based financial institution resorted to the Bank of England for emergency assistance; it would take another year -almost to the hour- for the collapse of Lehman Brothers in mid-September 2008.

There are few points in the course of an economic cycle where the risk of taking the decision to invest - or that of predicting turning points - is minimized. In terms of investment or disinvestment moves, such opportunities have often arisen at the bottom of shipping recessions, at the point where the market value of second-hand vessels had dropped close, or even under, scrap prices (Thanopoulou, 2002). Similarly, when ship second-hand values reach and overtake newbuilding prices, a recurrent phenomenon in shipping dating from well before the oil crisis (Metaxas, 1971), the peak of the cycle has been reached, increasing the risk of a future downturn. The date, gravity and overall duration of the latter remain indeed unknown.

Paradoxically, “calling” the market and the direction of future rate developments could, at that point, be almost riskless, in total contrast to the risk potential of investors remaining in the realm of inelastic expectations. Adopting semi-rational expectations has been put forward as a solution between the two extremes, i.e. this of purely rational- and of adaptive expectations. Semi-rational expectations assume that agents have some idea of future equilibrium conditions but no insight into the path towards that equilibrium (Strandenes, 1984). However, what happened in 2008 seems to suggest that, unpopular as the term may have been in recent decades, expectations seem to remain distinctively adaptive in shipping. This latter term is in essence deceptive, as the term “adaptive” implies not flexibility but refers to extrapolative market forecasts which, counterintuitive as they may seem after markets contradict them in practice, are the norm at times of high freight rates.

However, shipping was not the only sector of the economy where the long-term rationality of investors was questioned in recent years. The sight of account holders queuing outside Northern Rock branches in the autumn of 2007 should have been - and to the eyes of some it was - a clear sign that the system was heading for a spectacular collapse. Northern Rock was not in Iceland or Greece but a banking institution in the heart of European finance, the UK. If no interbank lending was evidently available (Goldsmith-Pinkham, and Yorulmazer, 2010) or forthcoming and no last minute deal could alternatively be closed to sell it at whatever price – as had been the case with American financial institutions before that date – in order to restore confidence to depositors, then the “credit crunch” -as the new term for the apparent tightening of finance had been coined by then - was inevitably turning into a credit crash; it was not a matter of probability anymore but one of dating the onset of the latter.

Warned as it were (Haralambides 2008; Thanopoulou, 2008), international shipping seemed unaware – or eventually unwilling to heed warnings and analyses which pointed to the unsustainability (Haralambides, 2008) of the then prevailing market euphoria and to the unlikeliness of any elimination of shipping cycles, a recurrent phenomenon in the history of freight markets (Thanopoulou, 2008). However, as much as shipping and trade held, there were few, if any, worried ones among shipping investors. Yet, even in this late stage of the euphoric phase of the market, just before the inflexion point of the main indices occurred, especially those of the dry bulk markets, the realization of where the world economy was heading would have saved many shipowners and operators and it would have prevented a number of financial institutions from finding themselves vulnerable, not only from macroeconomic developments, but from adding what proved to be an unwarranted shipping capacity in an industry known for its cyclicity .

The authors argue that such warnings could have been heeded; if not based solely on early signs that liquidity problems had overtaken the rapidly expanding finance industry (Haralambides, 2008), at least through observing future downturn indicators, such as the ratio of the orderbook to the current fleet. The credit system was the facilitator of the globalization process but also the creator by itself of the asset bubble that preceded the emblematic collapse of the Lehman brothers in mid-September 2008. Well before the middle of that year, the apparent combination of the two should have prepared the shipping markets for the blow it sustained in the months that followed.

The paper is divided in four sections. After the introduction, Section 2 assesses, based mainly on data and literature available up to the summer of 2008, the general economic climate and trends of the period before the financial crash. The next session focuses on habitual precursors of crises such as the ratio of new orders to existing fleet and the rate of change of the former. The authors compare the course towards the present crisis with developments in the supply side of the preceding decades, during which a number of critical aspects of international shipping underwent major changes. The authors conclude in the fourth section that predicting major cycles through simple indicators can increase the resilience of shipping companies through time.

2. A crisis waiting to happen

World markets were prospering, along with shipping, just 12 months before the collapse of Lehman Brothers, while, for many, the trend continued until that fateful day in September 2008. Real estate and financial expansion had gone hand in hand although in early summer of that year there were already several signs (Haralambides, 2008) that there would soon be a violent correction. Until then, together with the defense industries, the real estate market had traditionally been the locomotive of the US economy.

Over the two decades that preceded the crisis, the American economy had demonstrated a rather robust growth, compared to other industrialized economies, fuelled by buoyant consumption, encouraged by rising real estate values and abundant finance. This ‘wealth effect’ however, in turn, caused excessive imports and large current account deficits – which, according to the IMF, amounted to 7% of its GDP - and a low dollar that, since 2001, depreciated more than 60% against the Euro. As pointed three months before the onset of the financial crisis (Haralambides, 2008), “the subprime ‘crisis’ and its globally cascading effects started when real estate values began to decline”.

Among other paradoxes, revealed invariably *ex post*, there was one which sums up the transitional character – and eventually one of the root causes – of the current crisis: The massive entry of China into world trade would probably have taken place at very different rates without the massive creation of derivative products which served as a mechanism to expand credit, facilitating the spectacular increase of international transactions; their role in leveraging has been well documented (Lee, 2004; Harlaftis et al., 2010).

Historically, US current account deficits had been financed by autonomous capital inflows. The low dollar, however, led to capital flight in search of better investment opportunities in other regions among the emerging markets (Haralambides, 2008). Moreover, unlike the 1970s, and following their experiences of then, oil producing countries had been investing their surpluses more in sustainable infrastructure and less into financials; this deprived the dollar from a major source of support. Already in mid-2008, as presented in Haralambides (2008), the export led-growth and the overall quick development of China had changed the setting for all international

transactions, either in goods and services or progressively in financial ones: The built-up of tremendous foreign exchange reserves had not only made China a more powerful successor of the oil producing countries following the early 1970s, but it had turned it into what these countries never became: a massive importer of oil and commodities. Energy dependent USA and Europe were particularly hit from the high oil prices, which - driven by Chinese demand more than by any OPEC action, in contrast to what had happened in the 1970s (Thanopoulou, 2008) - had overtaken the 100\$ a barrel mark, breaking, along with stock exchange indices, all previous records.

The corollary rise of a number of commodity prices crowded-out other countries; re-ignited inflation fears, which to an extent materialized; and eroded competitiveness against higher wage economies, dependent on the same highly priced oil and other commodities.

Our forewarning that we were “at the doorstep of the onslaught of a *severe* economic downturn, caused by the collapse of the US real estate market” had already been shared by analysts, as was our prediction that the end of half a decade of prosperity in shipping (2003-2007) was near (Haralambides, 2008).

However, as had happened with the 1970s and 1980s crises (Thanopoulou 1995), demand was not to bear alone the bulk of the blame for the catastrophic fall of almost all shipping related indices in the weeks that were to follow the Lehman crisis. While the massive entry of China into international supply chains, in a short period of time, introduced structural changes to the otherwise easily predictable trade flows (Veenstra and Haralambides, 2001), overall, world trade continued to increase, following its initial contraction in 2009; a pattern that had already been observed during the first part of the crisis of the 1970s and 1980s (Thanopoulou, 1995). In that, and in a variety of other aspects, the post-2008 crisis points again to a disruption of the equilibrium, where the cobweb theorem (Ezekiel, 1938) eventually finds itself better suited to interpret the explosive destabilization of the shipping market than that of the agricultural sector -fraught with regulatory intervention – from where it was inspired.

The lack of an inherent ability of shipping to retain price stability - at least to a degree that would not make shipping so open to a historical review of the basis of a succession of booms and crises (Stopford, 2009) - is directly related to the nature of expectations in shipping, used to interpret the way economic agents form their estimates of future prices and thus take decisions in the present. Regrettably, however, the seminal work of Zannetos (1996) on the nature of expectations in shipping has had few successors. Expectations notwithstanding, Zannetos was actually the first one to formally note that shipping markets are characterised by long-term instability. Subsequent attempts of modelling the bulk markets have followed the general trend of adopting rational expectations, as the type of expectation underlying the decisions of economic agents. Finally, market efficiency was questioned in a major way only in 2002 by Kavussanos and Alizadeh.

The evidence from the major economic crises in the post-war era suggests that, consistently with the cycles before them, the main concern of participants in shipping is not exactly to protect themselves from exposure to risk. The hedging experience of the BIFFEX for a decade and a half since its introduction in 1985, seems to corroborate the hypothesis that a risk averse shipowner is more of an oxymoron and less of a typical case of an investor, as past investment moves suggest especially in bulk shipping. But the verdict between aversion to risk or adaptive expectations being at the origin of over-ordering and of ignoring clear market signs is one that goes beyond any attempt of empirical testing. Data captures results not motivation. As such, data complicates the search to find “as, much as possible, *direct causal relationships*”,

urged in 1939 by Tinbergen (Tinbergen, 1997): a major contributor in pointing to the prerequisites for divergent or convergent instability in freight markets.

3. Crisis as usual: Ignoring signals to an imminent inflexion point

The improbability that the shipping cycle would not revisit shipping had been stated clearly by the summer of 2008 (Haralambides 2008; Thanopoulou, 2008).

There were clear warnings that:

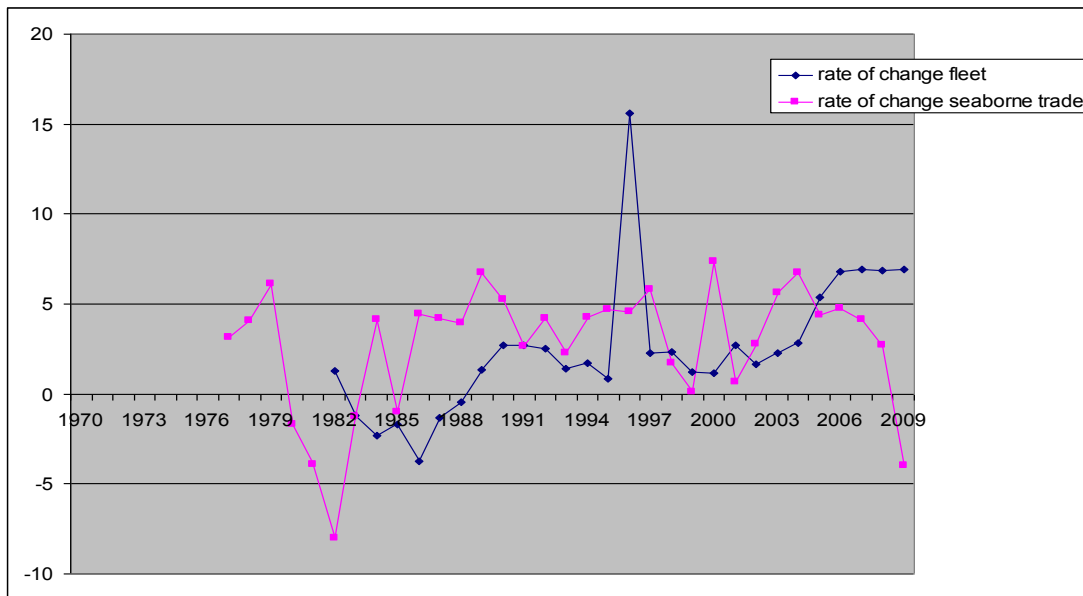
- We were at the doorstep of the onslaught of a severe economic downturn, caused by the collapse of the US real estate market.
- The 5-year period of economic prosperity (2003-2007) had come to an end.
- As a result, we should have expected an overall slowdown of western economies' imports from China.
- A declining trade demand was coupled with substantial excess capacity in shipping. The result of this can only be depressed freight rates, and a rather long period until shipping markets return to long-term equilibrium (Haralambides, 2008).

The market, apparently, was thinking otherwise, increasing its orderbook to such heights that had not been observed before. In relative terms the orderbook to existing fleet ratio had quickly deviated by far from its average values, feeding in essence the extension of the crisis beyond the initial disequilibrium created by the collapse of the financial markets: Some months before the autumn of 2008, the extremely high daily returns obtained by carriers, and the orderbook data, were self-proving the nature of expectations in shipping and of investment patterns.

The only explanation for sky-rocketing new contracting in 2007-2008 (Clarkson, 2010) would be to assume adaptive expectations. For most of the post-war period, there was only one comparable market state for investors, this of the tanker market in the early 1970s, where a vessel could be fully amortized in less than a year. However, as pointed out by Glen et al. in 1981, this was a stark exception for the shipping industry, where long term returns have been traditionally pale compared to other sectors of the economy (Stopford, 2009). Orders of bulk, wet and dry tonnage had risen then to such exceptional heights -just a few months after the first oil shock of 1973- only to be seen again immediately before the 2008 collapse of all markets.

Following a similar path, shipping supply grew in the four years since the Lehman crisis by 36% while demand grew by only 9% (Danmarks Skibscredit, 2012). Even at previous rates of growth of the world seaborne trade, this type of rapid expansion – in another obvious manifestation of the “endemic tendency to overinvest in shipping” (Metaxas, 1971) - could not be met by any demand developments in the realm of any, even the most optimistic, scenario. However, what Figures 1 and 2 show in combination is that realism had left the market.

Figure 1. Annual rate of change of world seaborne trade and of world tonnage 1977-2009



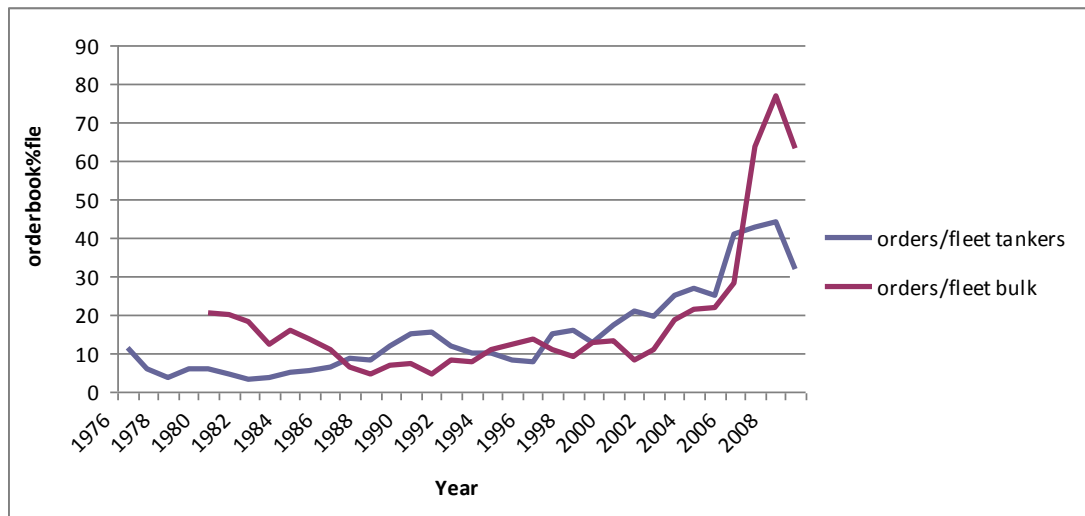
Source: Calculated on the basis of trade data until 1987 data in OECD, 1989. Maritime Transport 1988, Paris data in Clarkson Research, *Shipping Review and Outlook Spring 2010*, and data in Clarkson, *Shipping Intelligence Network*. Data in OECD trade statistics do not include international trade in the Great Lakes of USA and Canada.

Since 1988, when world tonnage started to increase again, there was only one instance when its rate of increase surpassed that of world trade (Figure 1). This was recorded for the period immediately following the extremely good dry bulk markets, around the middle of the decade, which set in 1995 a record for the BDI, then BFI. However, this surge was a short-term “blip”, albeit one contributing to rather morose market conditions in the second part of the 1990s, with the dry bulk market falling again temporarily to a three-digit Baltic Freight Index soon thereafter (Thanopoulou, 1998). Even during that brief period, however, with the massive increase in dry bulk orders in the freight boom of 1995, the orderbook to existing fleet ratios were nowhere near the level recorded in Figure 2 for the years immediately preceding the current crisis.

In the bulk fleet, the ratio went past the two-digit level already by 2004, reaching three quarters of the existing tonnage by 2008 for bulk carriers (Clarkson, 2010). It could have been argued that regulatory changes, and the compulsory replacement prospect of older single-hull tonnage, would have resulted in a more impressive orderbook/fleet ratio in the case of tankers; this figure was exactly half of that of 1974, when it had reached over 88%. However, at 44.2% (Clarkson Research, 2010, this percentage was still more than four times the thirty-year average (1976-2006), and about five times the standard deviation of the series.

For bulk carriers, the orderbook in 2008 had reached more than six times the average for the years 1980-2006, and over 12 times the lower, in their case, standard deviation. In this tonnage category, the jump of the orderbook to existing fleet ratio ought to have sent, if noticed, a warning sign to prospective investors, as this figure had more than doubled between 2006 and 2007 (Clarkson, 2010:114).

Figure 2. Share of the orderbook of major tonnage categories over existing fleet



Source: Based on data in Clarkson Research, *Shipping Review and Outlook various dates*, and data in Clarkson, *Shipping Intelligence Network*.

The world fleet had risen only from 1.06 to 1.13 billion dwt between 2007 and 2008, while the increase of the orderbook had jumped from 344.91 to 537.03 dwt within 365 days between these two years (Clarkson, 2010). It was, almost to the hour, the same timespan that elapsed between the contained Northern Rock crisis and the spectacular collapse of the world and shipping markets, in the weeks following the filing of Lehman Brothers for bankruptcy protection under Chapter 11 in late 2008. Most of the placed orders of ships materialized, taking the world fleet over the 1.5 billion dwt mark; the 2007/2008 investor forecasts obviously never did.

Ignoring a risk that was too obvious to ignore even without any complex statistical analysis beggars belief. The empirical evidence with regard to attitudes towards risk in shipping, albeit not systematic or entirely rigorous to be relied upon for academic research purposes, does rather show that the type of entrepreneurs who become involved in traditional bulk shipping are most likely to be more risk prone than other types of entrepreneurs. It is perhaps the nature of shipping itself - which involves facing-up to the vagaries of the weather and the force of most of nature's elements gathering together to create perils which materialize all too often - that beckons to a specific type of entrepreneurs. Among many of the traditional maritime nations, the low barriers to entry to the traditional bulk shipping markets have contributed to the access to the shipping business of many among the seafaring personnel (Harlaftis, 1996; Theotokas, 1997); it is only to be expected that whoever has fought with the dangers of seafaring and lived to invest in shipping could not possibly be classified as a risk averse personality, or a risk averse entrepreneur.

Miscalculating risk industry-wide, however, is different and this was evidently an equal shipping-wide failure. The perpetrators (or victims) of the "endemic tendency to overinvest in shipping", which was similarly manifested as in the early 1970s, would not even have the excuse this time of their investment being met by a sudden crisis trigger (Thanopoulou, 1995), such as the 1973 oil shock: While the subsequent recession was rooted also in the probable yet not certain Yom Kipur war, the credit crunch around 2007-2008 could not but worsen in view of the then developments in the sub-prime markets and asset prices (Haralambides, 2008).

Much has changed since then. However, apparently not to the extent as to show a structural change in the reaction of shipping investors to market signals; at least if the figures for contracting during the summer of 2013, following a massive improvement at the time of dry bulk rates, are anything to go by. The endemic tendency to overinvest in shipping remains also its more systemic risk.

4. Conclusions and further research

Quick to pick-up the negative market signals, investment decision makers systematically overshoot the market, ignoring drastically changing indices which, through historic knowledge, technical analysis, or simply at first sight would have suggested caution. The period immediately before the failure of Lehman Brothers confirms that the nature of this cycle, akin in many respects to the origins and course of the crisis of the 1970s and the 1980s, was determined once more by what Metaxas called in 1971 «endemic tendency to over-invest» in shipping.

The root cause for this tendency may lie not only in the form of the market but also in the attitude of shipping investors towards risk. The existing body of work in the area of behavioural finance points to the direction towards which future research could be turning to assess how background, experience and training may relate to investment attitudes. There is an evident lack of interdisciplinary research between psychologists and maritime economists - who could eventually link-up personality traits and the risk tendency of shipping entrepreneurs with regard to investment or everyday business. However, some evidence related to the general attitude of the traditional bulk shipping sector towards risk can be summoned, and recent research (Stott, 2013) has put once more the emphasis on understanding investment patterns, especially with the advent of new players in the world maritime scene, such as China, with a strong participation of the state in fleet ownership. The role of the pattern of development of Chinese imports is also an additional research direction in relation to the course towards the crisis.

While defining what level of orderbook may be considered as not immediately threatening the market is open to debate, the main conclusion of the paper remains that it is perhaps henceforth essential that prospective investors should take into account outlier values of new orders in relation to the tonnage stock on the supply side while also looking for signs of abnormally and abruptly tightening liquidity.

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