Transportation Research Part E 61 (2014) 212–234

Contents lists available at ScienceDirect

Transportation Research Part E

journal homepage: www.elsevier.com/locate/tre

Mergers and acquisitions in shipping

George Alexandrou [a,*], Dimitrios Gounopoulos [b], Hardy M. Thomas [c]

[a] Kingston Business School, Kingston University, London KT2 7LB, UK
[b] School of Business, Management and Economics, University of Sussex, Brighton BN1 9RH, UK
[c] Essex Business School, University of Essex, Colchester CO4 3SQ, UK

ARTICLE INFO

Article history:
Received 5 October 2012
Received in revised form 16 April 2013
Accepted 26 October 2013

Keywords:
Takeovers
Mergers
Shipping
Abnormal returns
Wealth effects

ABSTRACT

In this comprehensive study of all shipping mergers and acquisitions from 1984 to 2011 we document that the shareholders of both acquirers and targets realise average abnormal gains of 1.2% and 3.3% respectively and both parties gain more from diversifying than focus-increasing deals. Acquirers gain more when paying with stock, in cross-border deals and from taking over public targets. Targets gain more from cross-border and focus-increasing deals. Regulatory interventions, like the EU repeal of exemption from competition and the US Ocean Shipping Reform Act, affect the marginal merger propensity and this propensity differs significantly across regions.

1. Introduction

The world's largest shipping company, AP Moller-Maersk, operates in more than 135 countries around the world, employs 117,000 employees and controls over 16% of the global market with more than 500 container vessels and 2.6 million TEU[1] generating nearly US$60 billion in revenues. The group has established its dominance with fast growth fuelled by a series of mergers and acquisitions. In 2005, AP Moller-Maersk acquired Royal P&O Nedlloyd N.V. in a deal that added 156 container vessels and 13,000 employees to the group. In its long line of mergers, some of the largest deals are: the acquisition of TORM Lines in 2002, the takeover of the containers division of Sea-Land Services Inc. in 1999 and the acquisition of Safmarine Containers Lines (SCL). The P&O Nedlloyd container line was itself previously another shipping giant that was created in 1997 by the merger of the container-shipping liner divisions of Royal Nedlloyd (Dutch) and P&O Containers (British). This level of rapid growth of the shipping companies through mergers and acquisitions is beyond the reach of organic expansion pathways and has shaped the maritime industry over the last 30 years.

The shipping industry has experienced significant consolidation which has led to a notable increase in the level of concentration through mergers and acquisitions and an equally important process of integration is occurring among upstream and downstream transportation firms (Van de Voorde and Vanelslander, 2009). Mergers and Acquisitions (M&As) are an important mechanism of fast growth used by shipping firms, which has lead to increased levels of consolidation and integration in the maritime sector (Cariou, 2008; Frémont, 2009). Little is known, however, about the shareholder wealth

* Corresponding author. Tel.: +44 20 8417 5435.
E-mail address: g.alexandrou@kingston.ac.uk (G. Alexandrou).

[1] TEU: Twenty foot Equivalent Unit is a typical unit of shipping trade volume and 1 TEU denotes approximately one container.

1366-5545/$ - see front matter © 2013 Elsevier Ltd. All rights reserved.
http://dx.doi.org/10.1016/j.tre.2013.11.007

implications of these important decisions by shipping firms and their economic value effects.[2] These important corporate events are expected to produce significant price effects as investors respond to M&A announcements.[3]

M&A deals are prominent in the maritime sector with over US$200 billion spent over the last 30 years on more than 4,100 deals and the opportunity to achieve large economies of scale among deep sea liners have forced periodic rationalisations (Heaver et al., 2000). A distinctive feature of the shipping sector is that both regulation and technology have major impacts on the operations of the constituent firms. While technological innovation and evolution allowed the construction of ever larger ships with higher economies of scale (such as the Triple-E 18,000 TEU container ships of MAERSK that is expected to save the company around £750,000 per typical voyage from Shanghai to Rotterdam and emitting only 0.5% of the CO_2 of equivalent freight by air), regulation has also progressed apace. In Europe, regulation initially exempted shipping from competition considerations though this is no longer the case (Cariou, 2008) and similar deregulatory considerations apply in the US following the introduction of the Ocean Shipping Reform Act 1998 (OSRA hereafter) and its implementation by the Federal Maritime Commission. The processes of consolidation within the maritime sector and integration along globally networked supply chains noted above are, therefore, expected to continue and M&As are strategic means deployed in these processes (Van de Voorde and Vanelslander, 2009). The literature has, however, failed to supply global and comprehensive evidence of stock markets' responses to maritime M&As.

There are several reasons for studying M&As in the shipping industry. Firstly, most large shipping firms have recently embarked on M&As because the alternative option of growing organically is relatively slow given the need for global scope in shipping operations (Das, 2011). Secondly, a closer examination of the maritime M&As is warranted due to their implications for the structure of companies, the level of competition in the maritime sector and the costs of transportation services on international trade. Thirdly, shipping firms are seeking, through M&As, increasing economies of scale both in larger ships and bigger fleets, as well as economies of scope in fleet composition, extended trade routes and market coverage. Fourthly, a new generation of ship owners who better understand the capital markets, are prospecting for growth opportunities through the raising of financing via equity markets and the pursuit of fast expansion via M&As (Merikas et al., 2009; Grammenos and Papapostolou, 2012). Furthermore, Andreou et al. (2012) argue that, one benefit of studying M&As by focusing on a single industry, such as shipping, is the mitigation of possible inter-industry variations. They note that studies that span several industries will report aggregate effects that potentially mask the performance variation across industries.

Although there have been prior M&A studies in transportation, these have mostly been in the airline industry and they demonstrated that M&As can be strategic game changers.[4] The maritime sector has only limited literature on M&As from an equity market perspective. Previous studies in shipping do not provide comprehensive evidence and either employ unsatisfactorily small samples, are constrained by short sample periods, span few maritime sectors or restrict their investigations to specific countries and regions.[5] Panayides and Gong (2002) study two mergers in the 'liners' shipping sector whereas Samitas and Kenourgios (2007) explore fifteen mergers in the 'trampers' shipping sector. Andreou et al. (2012), investigated intermodal freight transportation but do not focus on shipping – only 30–48 firms in their sample are related to shipping – and report results that are specific to the US. Furthermore, other earlier studies have been mostly descriptive in nature and provide little market-based evidence that documents the equity markets' evaluation of shipping M&As (see Brooks and Ritchie, 2006).

In this light, several interesting questions remain unanswered and require investigation. Do the shareholders of acquirers and targets in maritime M&As experience positive wealth effects and do these effects vary by region and sector? What factors determine such wealth effects? Do these factors vary across Asian, European and North American firms and do they display sector-wise variations?[6] For instance, does integration between two port operations firms affect market valuations similarly to integration between a port operator and a deep sea liner firm? In this context, this study has four objectives: firstly, to establish the wealth effects on shareholders of acquirer and target firms in shipping M&As; secondly, to investigate whether there are variations in the wealth effects across regions or sectors; thirdly, to determine which firm and deal characteristics can explain the announcement period wealth effects and finally to estimate the marginal effects of the factors driving the likelihood of shipping firms engaging in an M&A and whether these marginal effects vary across different regulatory regimes and regions.[7]

Our study makes several contributions to the shipping transportation literature. Initially, the study includes all M&A announcements involving shipping firms, in contrast to the prior fragmented evidence and examines all shipping sub-sectors, which provides generalisable findings. Country-specific studies suffer from potential biases arising from the effects of

[2] This is not surprising since the maritime sector has traditionally not been associated with extensive use of the financial markets for the raising of finance. The primary reasons are claimed to be mutual lack of knowledge and firms' reluctance to operate with less than full personal control and the markets' presumption of industrial instability in shipping (Stokes, 1996).

[3] Unlike the situation noted much earlier by Stokes (1996), Grammenos and Papapostolou (2012) report that in recent years, shipping firms are increasingly raising capital via IPOs and claim that shipping firms are now better known among institutional investors with increased analyst coverage.

[4] See Zhang and Aldridge (1997), on mergers; Gong et al. (2008), for industry dynamics and stock market reactions; Merkert and Morrell (2012) examine optimal airline size and economies of scale.

[5] See for example, Midoro and Pitto (2000), Panayides and Gong (2002), Samitas and Kenourgios (2007).

[6] Simulation evidence of multi-port vs. hub and spoke port calls by container ships shows marked variation between N. America, Asia and Europe where multi-port calls with smaller ships lead to lower cost in most countries while hub and spoke port calls using mega-ships lead to lower cost in European container shipping (see, Imai et al., 2009). While we do not directly test for network architectures we argue that M&As that seek out such cost reductions are occurring across regions and they seek economies of scale and of scope and hence test for differences due to focus and diversification.

[7] Wealth effects are typically measured using Cumulative Abnormal Returns (CARs) and the computation of CARs is described in detail in the methodology section.