



**TOPIC 2**  
MARITIME  
TRANSPORT (SIG)

## **ANTICYCLICAL INVESTMENT STRATEGIES IN SHIPPING: THE GREEK CASE**

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### **Abstract**

Traditionally Greek shipowners are believed to move in the sale and purchase market opposite to the state of the respective freight markets. This paper relates such a pattern of investment, among other factors, to the increased resilience of Greek shipowners to the last major shipping crisis and to the considerable improvement of the share of the Greek-owned fleet in world shipping after the revival of the markets.

## **INTRODUCTION**

After the mid 1970s major traditional OECD fleets started to shrink at unprecedented degrees and rates. European shipping was particularly badly hit. The resort of European shipowners—even of those who traditionally closed their ears to the Sirens of open registries—to flags of convenience was unable to halt a declining process which in most cases was evident even in terms of beneficial ownership as was the shift of western shipping toward more specialized, technologically advanced categories of tonnage in this context (Thanopoulou 1995). The Greek fleet followed a different course. During the past two decades the Greek-owned fleet succeeded in surviving through a period of crisis in shipping that lasted almost a decade and a half. Until the beginning of the 1980s both the national registry and the Greek-owned tonnage under all flags were definitely increasing, although the fleet remained essentially oriented to the rather traditional categories of tonnage. While the second main slump in freight markets, that followed in the 1980s, seems to have had a direct impact on the total tonnage under the Greek-flag, the beneficially-owned tonnage was affected in a very limited extent especially comparing to the case of other major traditional maritime countries.

It has been argued elsewhere (Thanopoulou 1992) that the ascent of the Greek-owned tonnage to the first place in the world fleet prior to the first oil shock should be largely attributed to a lower fixed cost compared to other European and Western fleets, due mainly to the older average age of the Greek fleet. The Greek fleet and the Greek-owned fleet in general remained older in average than the other major European fleets, such as the fleets of Norway and of Great Britain, throughout the period after 1973 to the revival of the markets in the late 1980s. However, while age differences between the Greek fleet and the two other major western cross-traders seem to have progressively diminished in the course of that period (3), the same is not true for the overall evolution of the respective fleets even in terms of beneficially owned tonnage, nor for patterns of investment. The “anticyclical” move in the Sale and Purchase markets can be identified as another characteristic of Greek shipping that differentiates it drastically from that of the other major European cross-traders. Different patterns of investment seem also to be reflected in a different ranking within the Greek-owned fleet. Between 1973 and the early 1990s, the list of the top 10 Greek shipowners underwent an upheaval. Most names have vanished completely from the list and in one case from shipping as well.

This paper attempts to test indicatively the existence of an anticyclical investment behaviour of Greek shipowners on the basis—at this stage of research—of data from the tanker market. It also suggests a framework for examining further the relationship between the degree to which such a strategy was followed—or was not followed—and the course of the various Greek-owned company fleets.

## **GREEK SHIPPING AFTER 1973: A TREND APART**

At the eve of the first oil shock and of a long period of crisis in shipping, in 1973, the Greek-owned fleet was the largest in the world in terms of beneficial ownership. In terms of national registry the Greek flag ranked fifth, with more Greek-owned tonnage under the Greek flag than under flags of convenience for the first time—essentially—after World War II, a ratio which was not to be reversed until the beginning of the 1980s.

The course of the Greek-owned fleet during the 1980s is clearly distinguishable from that of other Western and in particular European fleets. Shortly after the first oil-shock, the fleets of the other two main Western cross-traders, namely Great Britain and Norway, began to shrink rapidly, while transfers to open registries were far from substituting for tonnage withdrawn from national registries. In the case of Great Britain this trend was more than significant while a similar trend was evident, although to a lesser extent and on a less permanent basis, in the case of Norway. While the Greek registry started to shrink rapidly after 1981—ie half a decade later than the

British and the Norwegian ones—the Greek-owned tonnage continued to increase, with only occasional and minimal cutbacks, until the mid 1980s. Registering a decline of only 1 to 1.5% between 1973 and 1981, the share of the Greek-owned fleet remained rather stable to somewhat less than 14% of the world fleet until the revival of the market in 1987. Decreases in the overall owned-tonnage (see Table 1) were very limited during the 1980s, especially in comparison to the other two major cross-traders of the OECD group. In the worst times of the last major shipping crisis, between mid-1981 and mid-1984, while the net loss in terms of beneficially owned tonnage amounted to more than 5 million dwt for Norway and little less than 15 million dwt for the U.K., the net increase of the Greek-owned fleet was approximately 2.5 million in terms of dwt—non comparable end-year figures showing a very limited decrease in grt terms (see Table 1)—despite the difficulties a number of Greek shipowners were facing at the time. A considerable part of this increase was the result of increased acquisitions of second-hand tonnage, the year 1983 being a record year in this regard over the preceding 20 years.

Table 1 Greek owned tonnage under national and foreign flag

	Tonnage under Greek flag	Var %	Tonnage in FOC (b)	Var %	Total Greek- owned	Var %	in FOC % tot
1973	21,831,877	...	20,793,086	...	42,624,963	...	48.8%
1974	22,740,935	+4.2	22,627,108	+8.8	45,368,043	+6.4	49.9%
1975	25,108,441	+10.4	23,189,995	+2.5	48,298,436	+6.5	48.0%
1976	28,660,875	+14.1	21,923,713	-5.5	50,584,588	+4.7	43.3%
1977	33,752,076	+17.8	19,111,751	-12.8	52,863,827	+4.5	36.2%
1978	36,314,066	+7.6	16,193,615	-15.3	52,507,681	-0.7	30.8%
1979	38,570,128	+6.2	14,379,967	-11.2	52,950,095	+0.8	27.2%
1980	41,421,925	+7.4	12,203,959	-15.1	53,625,884	+1.3	22.8%
1981	42,289,117	+2.1	12,028,656	-1.4	54,317,773	+1.3	22.1%
1982	38,057,112	-10.0	15,397,870	+28.0	53,454,982	-1.6	28.8%
1983	37,707,377	-0.9	18,431,381	+19.7	56,138,758	+5.0	32.8%
1984	35,781,076	-5.1	17,820,386	-3.3	53,601,462	-4.5	33.2%
1985	27,765,421 (b)	...	19,143,454 (b)	+7.4	46,908,875 (b)	...	40.8%
1986	24,183,381 (b)	-12.9	20,920,969 (b)	+9.3	45,104,350 (b)	-3.8	46.4%
1987	21,006,751 (b)	-13.1	26,529,937 (b)	+26.8	47,536,688 (b)	+5.4	55.8%
1988	19,759,053 (b)	-5.9	28,287,135 (b)	+6.6	48,046,188 (b)	+1.1	58.9%

Notes:

(a) End year

(b) Cargo-carrying ships of 1,000 grt and over

Source: *Naftika Chronika* data

The overall different course of the Greek fleet in the 1970s and the 1980s may be attributed to a variety of factors relating to cost levels, especially fixed cost. Fixed cost in the case of Greek shipping can rather safely be calculated to be significantly lower, due to the important resort of Greek shipowners to second-hand ships exploited for an extended period of time. This is reflected in the age structure of the Greek fleet especially compared to that of its European competitors. While the comparative age of the Greek fleet can also directly explain the record lay-up percentages in the case of the fleet under the Greek flag—the total Greek-owned tonnage being of a similar age structure—paradoxically, if a number of conditions are met, resistance to long-lasting depression periods in shipping may be positively correlated to an advanced fleet age. Older vessels tend to have less to nil financial obligations to lending organisations. The knowledge of the cyclical nature of the market may lead thus to the preservation of the asset the only consideration being lay-up costs. This attitude in conjunction with the inevitably higher running cost of older vessels, can explain the co-existence of the high to record percentages of laid-up tonnage for the Greek fleet—compared to most Western fleets—and of the high degree of resilience of Greek shipping during the last crisis. It does not seem thus “unnatural” that the traditionally young—by far younger than the Greek—British and Norwegian fleets quickly succumbed under the pressure of a large number of newly-delivered ships and of high fixed cost in general—a result of the conditions prevailing in the early 1970s—they soon had to cope with after the first oil shock. A very important factor of survival in depressed markets seems thus to be the overall financial position of

the company (see also Stopford 1988), directly related to past investment strategies, older fleet age conditionally turning to a favourable survival factor. However, a most significant condition in this regard seems to be the consideration, by the charterers, of vessels as more or less homogeneous regardless of age, a condition which at least in the tanker market seems to have been quite shaken recently, with rates seeming clearly to differentiate between ships of different age. If this proves to be a real change in the one of the main features of the market, then the old-fleet/low-cost strategy may prove inapplicable or with clear limitations in the future. Asset play could also be influenced by this factor, at present limited to essentially one sector of the market. However, this is a development that belongs rather to the post-crisis period. Its influence remains to be evaluated in the years ahead.

## **INQUIRING INTO S&P MARKETS: ACQUISITIONS AND SALES OF LARGE TANKERS BY GREEK SHIPOWNERS 1973-1989**

During the period examined here the Greek participation in the second hand markets was definitely strong. In the worst years of the crisis Greeks were clearly the protagonists in S&P, their participation in purchases exceeding by far their share in the world fleet. The Scandinavians and British also played leading roles or rather the necessary supporting parts, being usually at the opposite side of the transaction, often under pressure due from the factors already noted hereto, rather than to what is sometimes thought to be the cause, namely their higher running costs compared to the Greek fleet. Given the older average age of Greek vessels—normally entailing higher fuel consumption rates and maintenance costs—such differences in variable costs should be attributed mainly to lower labour costs. However, differences in manning costs have not always been significantly in favour of the Greeks during the past two decades; even when such favourable differences existed they tended not to be so significant as to allow vessels to operate during periods of low freight rates, as the extremely high lay-up percentages for the Greek fleet suggest.

As Table 2 clearly shows, in the most depressed years of the shipping markets—with freight rates and vessel prices hitting rock-bottom levels—Greeks maintained their activity in the S&P market, their gains materializing as soon as the revival of the market reversed the roles of the main players. While during the depressed early 1980s sellers could be considered as being victims of market conditions, record-high increases in the price of ships during the second half of the decade are to be attributed to a rush—often of former sellers—broadly explained by very traditional investment patterns; thus did Greek profits swell from trading in the S&P market. It is quite characteristic that the Greek-owned fleet showed a net decrease in 1989 due to reduced acquisitions of all categories of tonnage and heavy selling, exceeding purchases by more than 1 million grt. A major come-back to acquisitions was recorded after 1991, as second-hand prices dropped considerably.

**Table 2** Main purchasers of tonnage by country of origin 1980-1984

million dwt	1980	1981	1982	1983		1984	1985	
	total	total	total	1st	2nd	total	1st	2nd
Greece	7.8	7.4	8.6	9.8	5.6	13.3	7.1	8.9
Scandinavia	1.1	1.7	2.9	1.8	1.9	3.2	1.0	2.2
EEC-GR(2)	3.9	1.6	1.5	1.5	1.0	2.9	1.8	2.1
Japan	0.9	0.8	0.9	0.1	0.0	1.8	0.3	1.6

*Notes:*

- (1) Only OECD countries by importance of purchasing activity. Known purchases where the identity of the purchaser did not remain undisclosed as in some years eg 1981 it was the case for about 45% of the total volume of transactions.
- (2) EEC owners excluding Greeks.

*Source:* Lambert Brothers, *Trade Review and Outlook*, various issues

**Table 3 Main sellers of tonnage by flags 1980-1984(a)**

year halves (million dwt)	1980	1981	1982	1983		1984
				1st	2nd	1st
FOCa)	11.5	9.1	11.5	7.1	5.1	4.7
EEC-GR(1)	8.1	7.6	6.3	2.6	1.9	2.6
Scandinavia	3.7	3.4	6.7	2.6	2.4	3.1
Greece	4.5	2.4	2.1	1.2	1.0	2.2
UK	n.a	n.a	n.a	2.2	1.8	1.6
Japan	1.7	1.7	3.1	1.1	1.1	0.9

*Notes:*

(a) Known sales where identity of the purchaser did not remain undisclosed as in some years. Origins of owners selling vessels under FOC differ with every year but for a number of years the source of data attributes this part of sales to Scandinavian and Japanese owners. However, Greeks should not necessarily be excluded.

(1) EEC flags excluding Greece

*Source:* as Table 2, various issues.

**Table 4 Greek-owned tonnage under all flags (in million dwt and million grt)**

year	million dwt	var%	million grt	var%
1987	87.9 (a)	.....	47.5(c)	.....
1988(b)	85.0	.....	47.3	.....
1989(b)	81.9	-3.7%	45.6	-3.6%
1990(b)*	84.4	+3.1%	46.6	+2.3%
1991 (b)	87.1	+3.2%	47.9	+2.8%
1992(b)	98.2	+12.8%	53.9	+12.5%
1993(b)	104.0	+5.8%	56.9	+5.6%

*Notes:*

\*February

(a) Tonnage registered in the registries of Greece, Liberia, Panama, Cyprus, Bahamas and Bermuda. Ships of 100 grt and over.

(b) Ships of 1,000 grt and over

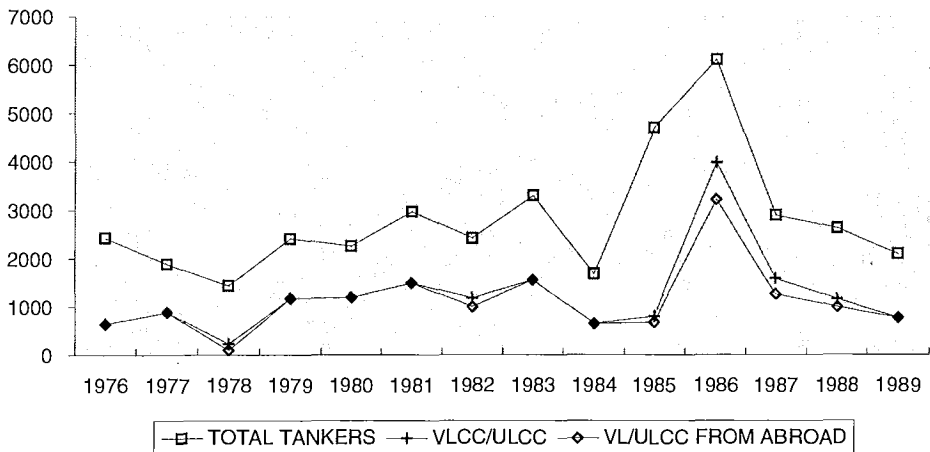
(c) Cargo-carrying ships of 1,000 grt and over

*Source:* On the basis of UNCTAD data, data in *Naftika Chronika* and data by Mikelis N. Greek Controlled Shipping, an Information paper, London March 1994, (LRS data)

Comparative advantage alone does not seem to justify the increase in terms of market share achieved in recent years by the Greeks, who owned 16% of the world fleet in early 1994, the course of lower cost competitors not being necessarily analogue. Asset play is the other factor that can explain, together with the extension of the economic life of ships under Greek ownership, the considerable recent gains of Greek shipowners in terms of share in the world tonnage. Comparative advantage can be either entirely or partly substituted by dynamic asset play where whatever is lost in terms of comparative advantage and therefore in terms of profit margins, is gained in terms of speculation profits made on ships, shipping serving in some cases mostly as the base for trading assets. As the recent course of the Greek-owned fleet suggests however, results of successful asset play seem to have returned to shipping operation *per se* to a most considerable extent.

The activity of the Greeks in the market for second-hand tankers illustrates clearly their move against the mainstream as shown in Figures 1 and 2. Figure 1 refers to purchases of tankers. Total tanker acquisitions and large tanker acquisitions seem to be strongly correlated during the period in question. As can be clearly seen, both total purchases of tankers and acquisitions of large tankers reached peak levels in 1983, 1985 and 1986, all three years marking the most significant troughs in the tanker freight markets, 1982 being the only year where yearly averages of freight rates for large tankers dropped to lower levels. However, in no other year than 1983 second-hand did real tanker prices reach such bottom-rock levels. While the feverish activity of Greek

shipowners is part of the explanation for the final rise of prices in 1986, tanker prices were also especially low during early in that year, so that the annual average tanker prices for 1986 remained at "real bargain" levels compared with prevailing second-hand prices throughout the fifteen years covered by Figure 1. Breaking the data for the first and second half of the year could definitely contribute to further elucidation of the response of Greek shipowners to rising prices and the role of expectations related to future developments in the market. As Figure 1 also suggests, for most years the totality of purchases of large tankers during this period refers to ships bought from foreign shipowners although the nationalities involved in a number of transactions remained undisclosed even after cross-checking entries and deletions from registries (Greek and open). The evolution of tanker tonnage sold by Greek shipowners is shown in Figure 2. The volume of sales rose to peak levels in 1986 as large tanker prices doubled within the year (data: Lambert Bros 1986).



**Figure 1** Tanker tonnage bought by Greeks 1976-1989

*Notes:*

- (a) Year totals in grt.
- (b) Ships of 80,000 grt and over. Ships in the range between 80 and 100,000 grt were rather rare, for many years no transaction in this range being recorded.
- (c) A total of 814 ships—out of a much larger volume of data on new registrations double checked with deletions/departures of tanker tonnage from all registries used by Greek shipowners—were processed regarding total tanker tonnage acquired, while acquisitions of tanker tonnage >80,000 grt include a total of 139 transactions for the 14 years covered by this Figure, 129 of which were acquisitions of vessels from foreign shipowners.

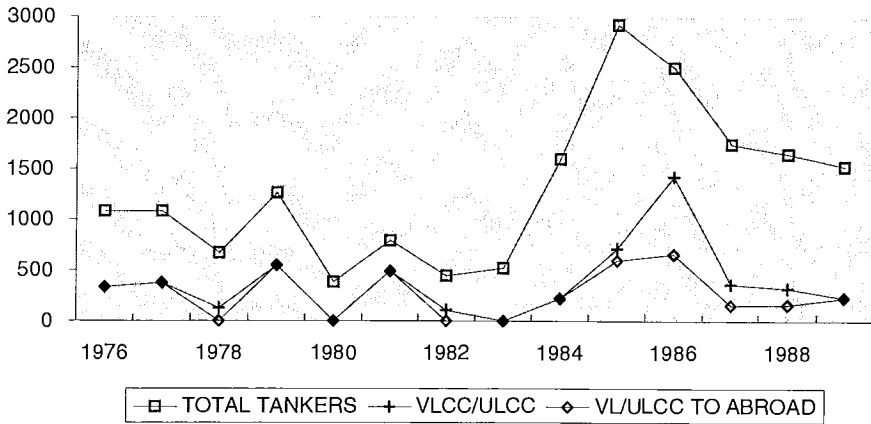
*Source:* Calculated from data in *Naftika Chronika* year review January issues, various years, initial data including registrations to and departures from registries for the total Greek-owned fleet. Data after 1985 include ships of 1,000 grt and over.

The analysis that follows, to be considered as a first indicative attempt to test the hypothesis of an anticyclical investment strategy on the basis of simple assumptions, concerns Greek sales and acquisitions of large tankers of approximately 160,000 dwt or over. Only data for second-hand tonnage were included thus avoiding complications due to time lags existing between new orders and deliveries—especially significant for the first half of the 1970s—as well as complications due to cancellations of orders. Possible effects on new building prices of factors inherent in the shipbuilding sector are also avoided thus. In the Greek case, the strong presence of the Greek shipowners in second-hand markets, where they often constituted major—and often the most—important participants, strongly supports the choice of the second-hand market as a first step in investigating statistically the existence of an anticyclical strategy among Greek shipowners. Large

tankers were selected not only because of the availability of data but also because it was clear that this category—due to size—included only crude carriers since no detailed vessel description was available from the primary data source. Moreover, the surplus in this segment of the tanker market and the extremely high lay-up rates throughout the period examined here tend to support the view that acquisitions of tankers of this size, especially in the early 1980s can only be explained on the basis either of erratic and “erroneous”—compared with traditional ones—investment behaviour or of a conscious anticyclical investment strategy with a view to both further use and further ship trading. In the latter case numerous examples can be recorded of ships having been further traded again within extremely short periods of time, often within less than a year at times of fast rising prices (Theotokas and Thanopoulou 1994). The gains from such a strategy are not limited, however, to asset play although the high profits involved often focus the attention on it. Lower capital cost in comparison to competitors following opposite strategies, creates a base not only for increased resistance to depressed market conditions, as mentioned supra, but also for the accumulation of much higher overall returns in revived markets. Anticyclical investment strategy, as long as investment capital can be made available, proves thus the basis for achieving an overall lower cost in the long run even in this highly internationalized sector where most elements of cost, excluding labour, can essentially be conceived with rather small differences between rationally operating firms.

Two simple equations were basically used to test the existence of a negative relation between the shipping cycle and ship investment by the Greek shipowners. The first relates second-hand ship purchases by Greek shipowners to the level of five year-old VLCC prices. The attempt to include the level of freight rates as an explanatory variable was quickly abandoned, results being not significant both when money of the day and real voyage freight rates or T/C hires were used. In the second equation the explanatory variable used was again five year-old VLCC prices, the dependent variable being sales of large tankers by Greek shipowners. The nature of the data referring to yearly averages of large tanker prices, in conjunction with the high volatility of prices sometimes even on a monthly basis, necessarily implies that the results of the regressions can be regarded being only indicative. The main impediment was the lack of data regarding the distribution of acquisitions and sales within 1986 during which prices fluctuated strongly, from very low and in some cases declining tanker values early in the year to significantly higher toward the end (data: Lambert, Clarkson). Splitting the observation period in two seemed a simple but Procrustean solution at this stage. Moreover, splitting the observation period and limiting the number of observations made all tests seem redundant, although in some cases results were very satisfactory especially regarding F-ratios. Not disregarding the indicative nature of the results, the fact remains that they suggest the existence of a clear cut between the 1970s and the 1980s. The anticyclical trend in the investment behaviour of Greek shipowners seems to be significant after 1981, the year marking the start of most depressed market conditions. Of whatever limited value these results should be considered, the negative algebraic sign of the coefficient of the independent variable in the case of the first equation was consistent with the hypothesis that Greek shipowners followed an anticyclical pattern of investment in this sector after 1981. Prices and sales were found to be positively related, as expected.  $R^2$  adjusted for degrees of freedom, estimated by Ordinary Least Squares, ranged in all cases from 0.70 to 0.99—decreasing to 0.56 in one case for the first equation when all changes in registration particulars were considered as indicating a change in ownership resulting from intra-Greek S&P—with regression coefficients significant at the 0.05 level and in one case at the 0.1 level, results improving when current prices were used. When the net position of the Greeks in the second-hand market for large tankers was related to vessel prices in a third equation, purchases and sales being intra-cleared, although—the lower— $R^2$  was still relatively high, all results worsened. Of whatever value all previously mentioned results were, this was an indication consistent with the hypothesis that the strategies of the Greek shipowners were not uniform, some of them with little choice under the pressure of their liabilities.

**TOPIC 2**  
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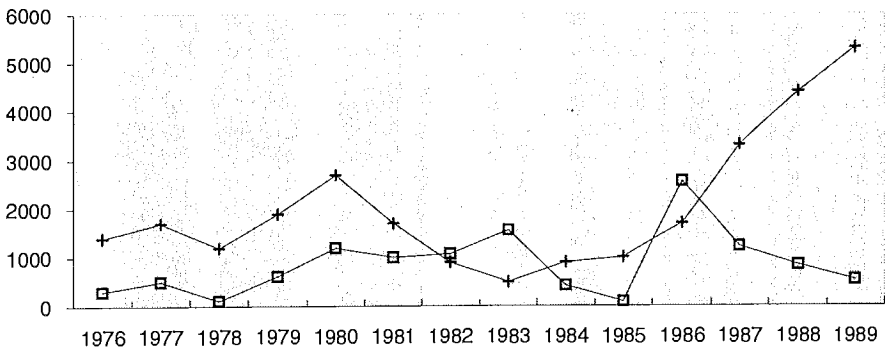


**Figure 2 Tanker tonnage sold by Greeks 1976-1989**

*Notes:*

- (a) Year totals in grt.
- (b) Ships of 80,000 grt and over.
- (c) A total of 493 ships—out of a much larger volume of data referring to departures of tanker ships from all registries used by Greek shipowners—were processed regarding total tanker tonnage sold, while sales of tanker tonnage >80,000 grt include a total of 41 transactions for the 14 years covered by the Figure, of which almost all were initially found to be acquisitions of vessels from foreign shipowners. Cross-checking with data for purchases showed certain significant discrepancies but only for 1985-1988 where there is some disorder in the initial data used, thus creating problems mainly in estimating the intra-Greek S&P.

*Source:* Calculated from data in Naftika Chronika year review January issues, various years, initial data recording registrations to and departures from registries for the total Greek-owned fleet. Data after 1985 include ships of 1,000 grt and over only.



**Figure 3 Net position of Greeks in second-hand tanker market 1976-89**

*Notes:*

- (a) Net position in grt. (series □). Year averages of VLCC prices in tens of thousand dollars. As also noted by the initial source of the data used for this Graph, price differences were often most high within the same year

*Source:* Data used for Fig. 1 and 2, and Clarkson Research Studies Ltd, Oil Tanker Databook, (1993), London, Clarkson Ltd, part of Table IV-1, for VLCC prices.



Relating prices to sales and acquisitions, of this type of tonnage at least, by Greek shipowners could probably be improved if the role of expectations was to be taken into account, expectations perhaps more in relation to ship prices and less to freight rates, not necessarily implying that all Greek S&P should be regarded as falling in the asset play category since future expectations could influence and speed up investment decisions related to tonnage expansion. The problem that appears is what type of expectations can be hypothesized and upon what criteria can they be assumed to formulate. The existence for instance of "a hunch", as often referred to by the Greek shipping milieu, triggered by a rock-bottom situation in the shipping markets cannot be attributed to any Greek oracle tradition. The level of second-hand prices, especially compared to scrap prices, in conjunction perhaps with the evolution of overall scrapping, always under the restriction of sufficient liquidity, obtained partly from past successful—or at least due to the absence of unsuccessful—investment decisions could be on the basis of this type of—sometimes regarded as "metaphysical"—predictions which should not in any case be considered as an exclusive privilege of the Greek shipowners as suggested by various data (Lambert Bros 1986 and Isachsen 1992). If Greek shipowners are known to be almost entirely empirical, past *empiria* (experience in Greek)—especially in a closed community such as that of the Greek shipowners (Harlaftis 1993)—may have led to the recognition of signs alerting them of future shifts of market conditions. In one analysis of investment criteria in dry bulk Greek shipping, the role of leaders in S&P has been underlined, suspected to lead also to a rise in prices and the distortion of the market equilibrium (Grammenos et al. 1992). While the latter point could certainly be valid in the case of a generalized trend supported by similar attitudes of other shipowning communities as recorded in the late 1980s, the results based on data from the tanker sector clearly indicate that while an anticyclical investment trend can be traced it concerned—during the period this paper refers to—a significant, yet a fraction, of the Greek shipowners.

## THE IMPACT OF DIFFERENT INVESTMENT STRATEGIES ON THE COURSE OF GREEK SHIPPING FIRMS

The decrease of the value of  $R^2$  that resulted after the intra-clearing of data for Greek acquisitions and sales can be conceived as an indication of much more than the result of data fitting better into the equations referring to uncleared totals: Unless centrally imposed, the economic behaviour of firms is not uniform. The case of Greek shipping is no exception. A higher  $R^2$  with significant values of parameters in this last equation would support the hypothesis that investing against the mainstream was more a uniform attitude of the Greek shipowners rather than a significant trend directly connected to the successful course of a large number of Greek shipping companies. If statistical confirmation remains of an indicative value in supporting the latter hypothesis, reality clearly does not confirm the former.

During the 1970s and the 1980s the list of the larger Greek companies underwent major changes [data in Harlaftis (1993)]. Only two out of the ten larger Greek companies in 1975 figure in the 1992 list, overall changes in the list being far more limited within the four years of the present decade [data in Naftiliaki (1992-4)]. Out of the three leading names in both 1992 and 1994 albeit not always in the same order—all of them having acceded to the list in the past two decades—all three can be equally traced among the principal buyers between 1982-1985, one of them in both tanker and dry bulk ship markets, the others being more limited to the former being mainly or exclusively tanker operators. Research conducted by the author in 1986, referring to 40 of the most prominent Greek shipping companies, owning in total a little less than two thirds of the Greek-owned tonnage at the time, revealed that 13 of them—over 40% of the total number of companies for which data on VLCC/ULCC acquisitions were made available on VLCC/ULCC acquisitions—had gone into buying large tankers after 1981. The majority of these companies had been established after the mid 1960s. Combining these data with S&P data reveals another three of the first Greek shipping companies in the 90s among the buyers of large tankers during the depressed 1980s; one of them was not even traditionally involved in this market. Another major Greek shipowner has disappeared from the list due to massive sales of his large tankers—acquired before 1986—between 1990 and 1992, diversifying into other activities.

Inquiring into other categories of tonnage seems to relate more major Greek shipowners, of those figuring in the top 10 list in the early 90s, to bold moves in the S&P market and strong asset play (S&P data in Theotokas op.cit.). Regarding most recent developments, a new entry on the list of the major 10 Greek shipowners was recorded in 1994 the company marking a comparatively rapid rate of expansion after ranking considerably lower in the early 1990s. Between 1992 and 1994 the tonnage of this particular company almost doubled, taking advantage of lower tanker prices in 1992.

While, on the one hand, an investment strategy based on second-hand acquisitions during periods of low ship values and/or dynamic asset play seems to characterize the most aggressively expanding Greek shipowning firms, on the other hand, a first examination of available data seems to indicate that the course of companies following a conventional way of immediate positive response to market developments was far less bright, especially when this was also connected with new buildings.

Further confirmation of the hypothesis adopted in this paper requires an also further investigation of all major aspects of the strategies followed by Greek shipowners in the past two decades, the main task being the incorporation of data regarding new orders. It remains, however, that—although detailed data regarding all types of tonnage are rather sporadic at the present stage of research—there are clear indications that anticyclical investment strategy, asset play profits and the course of Greek shipping companies are strongly related.

## **CONCLUSIONS AND FURTHER RESEARCH**

While lower fixed cost, due to Greek shipowners' resort to second-hand vessels and to the extended time of economic exploitation of ships, seems to have been the most important factor on which the sustained growth of the Greek-owned fleet until the end of the 1970s and its increased resilience through the depressed 1980s were based, there are clear indications that astute investment strategies seem to be a most—if not the most—important factor in the successful passage of Greek shipping through the “purgatory” of the second period of the last major shipping crisis and for its fierce come-back after the revival of the markets. As indicated on the basis of data from one of the major sectors of bulk shipping in which Greek shipowners are traditionally involved, successful results from asset play and overall investment strategy can be correlated to the ascent of the names currently at the top of Greek shipping; conservative and at first sight “rational” investment behaviour seems to have swept away others from that same top. Including data for new orders could contribute to further testing this hypothesis at this stage of the research.

Although at any given time gains and losses from asset play in shipping cannot be directly identifiable nor quantified, time clearly points out winners and losers. Thus asset play in shipping can be conceived as an excellent example of games theory. Over a period of time this “game” falls into the maximin category where the gains of one player are offset by the losses of the other players (Von Neumann and Morgestern 1947). Bluntly put, asset play requires at least two players. But seemingly no more than one shrewd enough.

However, as the skill showed in this “game” and in overall investment strategy by a significant number of Greek shipowners could not be attributed to the knowledge of better techniques, as Greek shipowners have been with few exceptions notoriously empirical, nor to any “natural” intellectual superiority of the Greek shipping community, as both explanations are self-complacent and equally naive, further research is needed in order to determine the factors underlying successful Greek S&P and in general anticyclical investment strategy to the extent followed by Greek shipowners. Further research could point to their extensive use of external financing of new investment “allowing” more risky investment strategies, to the typical organization and management style of the Greek shipping firm and to the traditional mode of operation of Greek shipowners in the freight markets, with an emphasis on the relation between chartering and cooperation strategies and asset play possibilities.

The anticyclical investment strategy seems also to have resulted in strengthening the Greek presence in world shipping during the 1930s crisis often recalled by the Greek shipping milieu as a

parallel to the maritime crisis of the 1970s and the 1980s. Although there are clear analogies between the final effects of both periods, parallels cannot be drawn automatically. Further research is also needed in order to identify the impact of their differences in nature in order to establish the continuity of an anticyclical Greek pattern of investment in shipping and to define the effect of a first successful experience on subsequent investment behaviour.

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## REFERENCES

- Clarkson, *Shipping Intelligence Weekly*.
- Clarkson Research Studies Ltd (1993) *Oil tanker databook*, Clarkson Ltd, London.
- Grammenos, C. et al. (1992?) Investment Criteria and behaviour in the Greek Dry Bulk Shipping, *Almanac* '92.
- Harlaftis, G. (1993) *Greek shipowners & Greece 1945-1975*, The Athlone Press, London.
- Isachsen, F. (1992) Crude Oil shipping, *SNF-Report No 51/1992*, NHH, Bergen.
- Lambert Bros, Trade Review and Outlook.
- Mikelis, N. (1990) An Overview of Norwegian Shipping, *Naftika Chronika*, 1/11/90.
- Mikelis, N. (1994) *Greek Controlled Shipping*, An information paper, London.
- Naftiliaki*, quarterly, Piraeus.
- Thanopoulou, H. (1995) The growth of the fleets registered in the newly-emerging maritime countries and maritime crises, *Maritime Policy and Management* 22 (1).
- Thanopoulou, H. (1992) Changes in the international division of labour in shipping. The case of The Greek fleet, Ph.d thesis, Dept. of Maritime Studies, University of Piraeus.
- Theotokas, J. with the cooperation of Thanopoulou, H. (1994) Research paper on Greek pools, *Report Piraeus*.
- Von Neumann, J. and Morgenstern, O. (1947) *Theory of Games and Economic Behaviour*, Princeton University Press, Princeton.

