



2017 – RESEARCH AND ANALYSIS: GREEK FLEET STATISTICS
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PETROFIN RESEARCH © – 20 year anniversary of Greek fleet analysis
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RESULTS AT A GLANCE

- I. The overall number of Greek vessels has gone up to 5281 from 5230.
- II. Tonnage has again climbed up by 25,276,695 tons DWT to 387,210,742, from 361,934,047 in 2016, an increase of 7%. Last year the increase in tonnage was 10.26% and the year before it was 7.52%.
- III. Age for the average vessel has again fallen to 11.8 years from 12.19 in 2016, 12.73 in 2015, 13.26 in 2014, 14.05 in 2013 and 14.7 in 2012.
- IV. Using a 20,000 DWT cut-off, the average age of the Greek fleet, we note that there is a small increase in the age to 8.6 for the first time in the last years. This reflects the remarkably vigorous S&P activity of the year, which focused mainly on the acquisition of quality, young second hand tonnage. However, the shift to second hand tonnage, as opposed to newbuildings, has had a small impact on the average age of the fleet (more prominently, in particular sectors).
- V. The dry bulk fleet (vessels over 20,000 tons DWT) has gained 129 vessels compared to 111 last year. The average bulker vessel age has gone slightly up to 8.33 years for the first time in 7 years. The Dry bulk tonnage is up by 12.7m tons DWT compared to an increase of 7.2m tons DWT in 2016 and it is still run by the same number of companies.
- VI. The large Container fleet (vessels over 20,000 tons DWT) is also just less than a year older than last year, at 10.12 years of age compared to 9.34 years old in 2016. 2017 has been a year of intense activity and for Containers this seems to have been leaning towards selling rather than buying. Tonnage is down to 23.5m DWT for the large ones, compared to 25.3m tons DWT last year, when it had scored a substantial increase from 17.6m tons DWT. Companies that run them are down to 30 from 32.
- VII. The large Tanker fleet (vessels over 20,000 tons DWT), on the other hand, has shown a substantial increase in vessels from 851 to 1004 and its tonnage is up from 131.6m tons DWT to 149.4m tons in 2016. Also remarkable is the increase in the companies that run tankers from 85 to 92. The sector has picked up pace and has renewed, as well as, increased its fleet, whose age is down to 9.11 years from 9.35 in 2016
- VIII. LPGs continue their fast increase in tonnage and numbers. Vessels up from 66 to 76,, tonnage up from 2.9m DWT to 3.7m tons DWT. However, this vigorous activity involved the acquisition of slightly older vessels, so its age has gone up from 4.3 to 6.7 years.
- IX. The LNG fleet is showing an internal reshuffle, where smaller vessels have been acquired bringing down the tonnage to 7.11m DWT from 7.14m DWT, but with an increase in vessels from 74 to 82. The age has remained almost the same, albeit slightly older.
- X. The expansion of the Greek fleet is continuing, following the market situation of each sector.



SECTION A: VITAL STATISTICS OF THE ENTIRE GREEK FLEET ENTIRE GREEK FLEET

Freights remain low, vessel prices are low and bank lending is restricted to the very few. The Greek fleet is, however, expanding, in terms of numbers, age and size. Confidence in shipping is still evident and strategic considerations are at work to render owners ready when the market recovers. The data obtained from our research is indicative of a very active market, a positive outlook for the future and continuous emphasis towards larger and younger vessels.

The overall number of Greek vessels continues to increase.

TABLE 1

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Number of vessels in the Greek-based, Greek-owned fleet	4110	4142	4085	4184	3970	4164	4346	4545	4763	4655	4714	4577	4573	4707	4909	5230	5281
Change from previous year		32	-57	99	-214	194	182	199	218	-108	59	-137	-4	134	202	321	51

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The fleet's DWT grew by 25.3m tons DWT and it stands at 387,256,616 in 2017, compared to 361,934,047 tons DWT in 2016.

These vessels are managed by 597 companies, down from 638 companies in 2016 and 648 in 2015. (1st Part of Petrofin Research ©). In Table 2 we note the main developments.

TABLE 2

YEAR	DWT	AVERAGE AGE	AVERAGE VESSEL DWT
2001	150,978,565	21.41	36,734
2002	166,931,748	20.58	40,302
2003	171,448,133	20.51	41,970
2004	184,288,917	20.12	44,046
2005	176,411,750	19.9	44,436
2006	194,486,455	19.14	46,707
2007	208,001,159	18.7	47,860
2008	222,368,331	18.4	48,926
2009	237,288,216	17.6	49,820
2010	242,802,092	16.4	52,160
2011	256,174,041	15.92	54,343
2012	263,635,420	14.7	57,600
2013	281,467,983	14.055	61,550
2014	303,579,176	13.252	64,495
2015	328,254,495	12.729	66,868
2016	361,934,047	12.186	69,203
2017	387,256,616	11.8	73,330

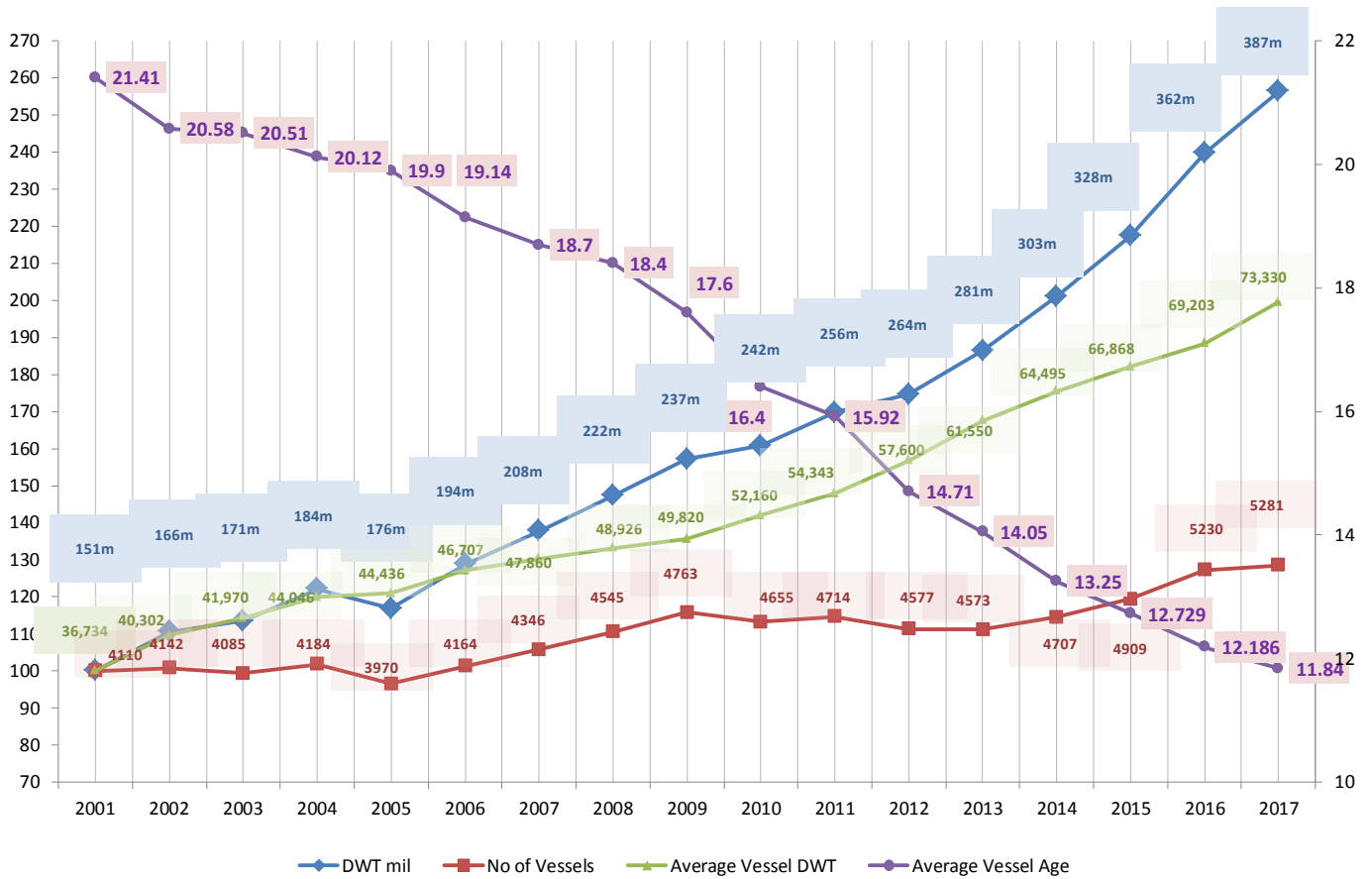
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GRAPH 1



Evolution of the Greek fleet since 2001, in terms of Fleet Age, Fleet DWT, Average vessel DWT, Number of vessels



DWT, Average Vessel DWT, and Number of Greek vessels figures are shown on an index scale using year 2001 as 100. The actual figures are also marked for each year.



SECTION B: FOCUSING ON THE LARGER VESSELS

In order to concentrate on the real strength of Greek shipping, we use two cut-off DWT points, one of vessels over 10,000 tons DWT and the other of vessels over 20,000 tons DWT. This way, the Greek fleet is stripped of a large number of usually overage very small vessels of relatively little impact that operate mostly locally. Hence, we concentrate on the global aspect of the Greek fleet.

VESSELS OF OVER 10,000 TONS DWT

COMPARISONS BETWEEN 2003 AND 2017

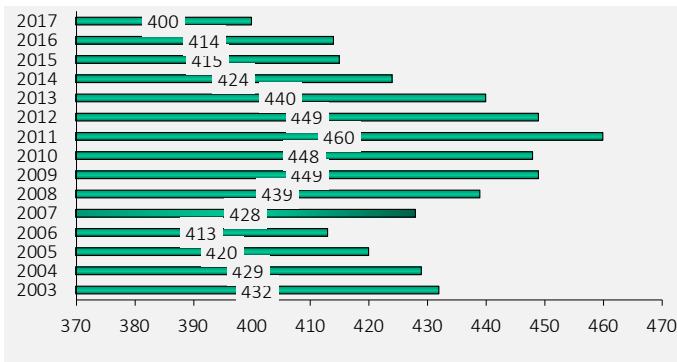
Graph 2 below shows the fluctuation in the number of companies that manage vessels over 10,000 tons DWT, the number of ALL these vessels over 10,000 tons DWT, their age and their DWT. ('ALL vessels' means everything of commercial purpose that floats and is under Greek control):

GRAPH 2

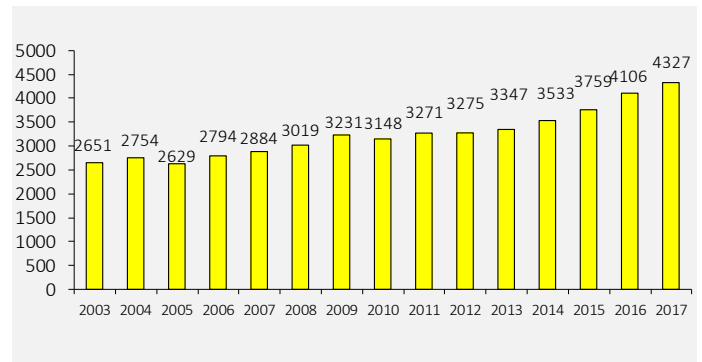
Vital Statistics of the GREEK FLEET VESSELS over 10,000 DWT – 2017



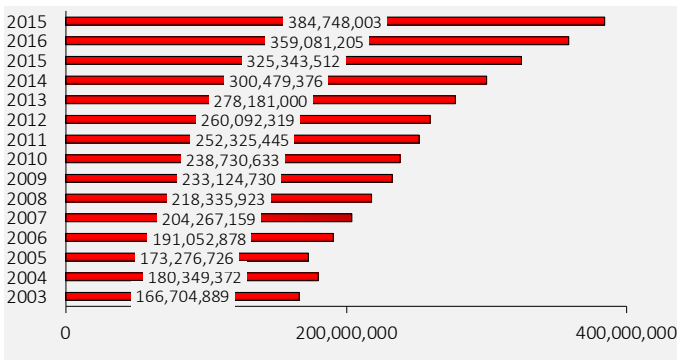
Number of Shipping Companies managing VESSELS over 10000 DWT



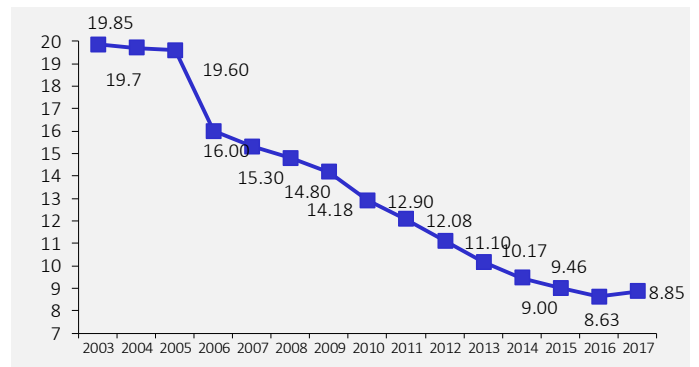
Number of vessels over 10000DWT



Total DWT of VESSELS over 10000 DWT



Average Age of VESSELS over 10000 DWT





- 221 units of over 10,000tons DWT have been added to the fleet, representing an increase in tonnage by 25.7m tons. The percentage this tonnage holds in the overall Greek fleet tonnage is 99.35% up from 99.21% in 2016, compared to 99.1% in 2015, 98.97% in 2014 and 98.83% in 2013.
- The rise in tonnage continues its unimpeded climb since 2005.
- The average vessel DWT is now 88,917 tons DWT compared to 87,453 in 2016, 86,551 in 2015, 85,049 tons DWT in 2014, 83,113 tons DWT in 2013, 79,417 tons DWT in 2012, 77,140 in 2011, 75,836 in 2010.
- But this year, bigger does not mean younger. The vigorous exchange of second hand vessel tonnage has been the main feature of 2017, where owners are positioning themselves strategically, cautious of the very recent and still impacting newbuilding surplus crisis.

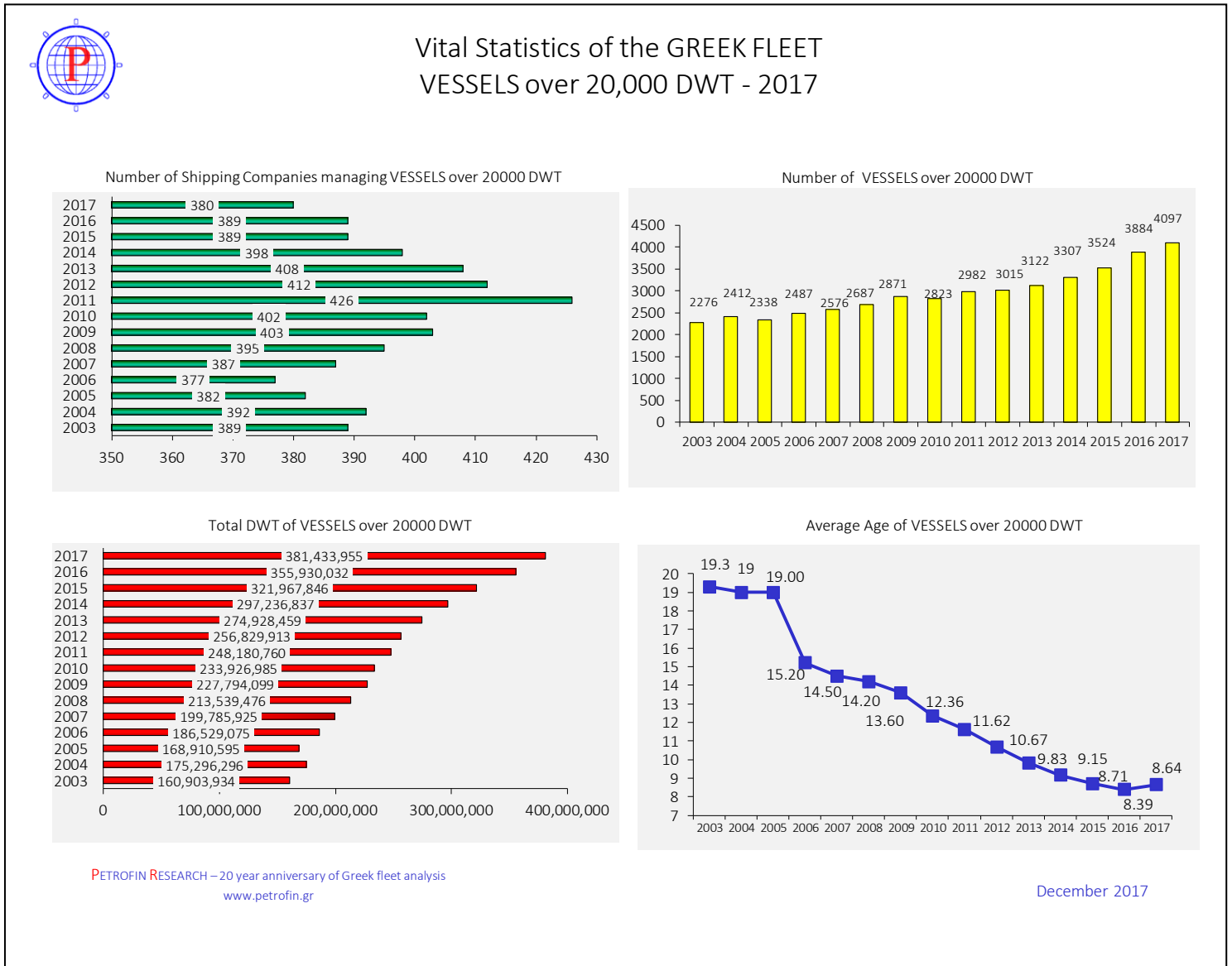


VESSELS OF OVER 20,000 TONS DWT

COMPARISONS BETWEEN 2003 AND 2017

Graph 3 below shows the fluctuation in the number of companies that manage vessels over 20,000 tons DWT, the number of ALL these vessels, their age and their DWT. ('ALL vessels' means everything that floats for commercial activities and is under Greek control):

GRAPH 3



- Similar results for the over 20,000 tons DWT. 213 vessels have been added
- The number of companies are down by 9. The sector now holds 98.5% of the Greek fleet compared to 98.34% in 2016.
- The average DWT of each vessel is 93,100 tons compared to 91,640 in 2016, 91,364 in 2015, 89,881 in 2014.
- Again, the age is slightly up due to much second hand tonnage exchanging hands



SECTION C: ANALYSES BY TYPE OF VESSEL

THE GREEK BULKER FLEET OF VESSELS OVER 10,000 TONS DWT EACH

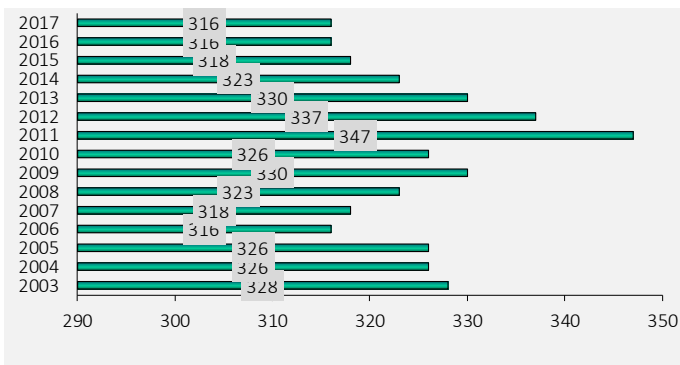
COMPARISONS BETWEEN 2003 AND 2017

GRAPH 4

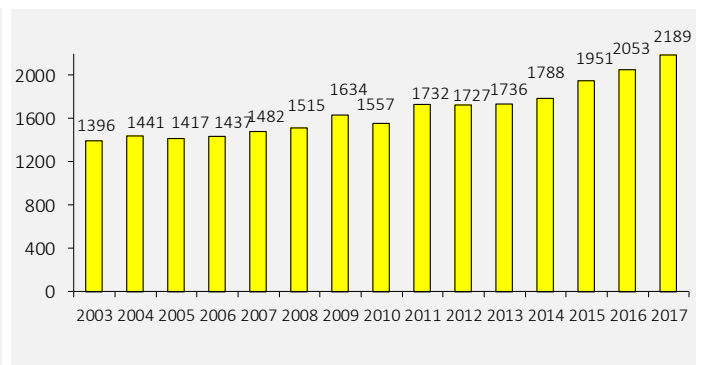


The Greek Bulker Fleet BULKER VESSELS over 10,000 DWT – 2017

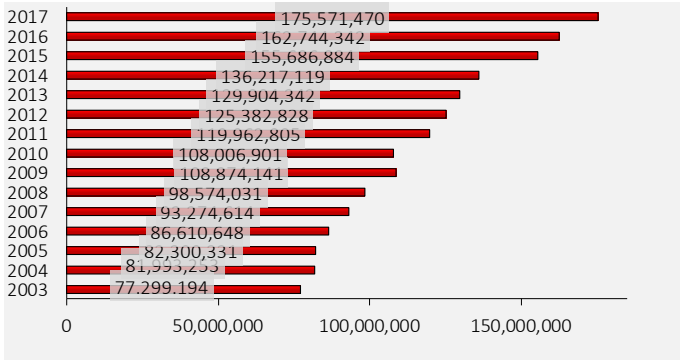
Number of Shipping Companies managing BULKER VESSELS over 10000 DWT



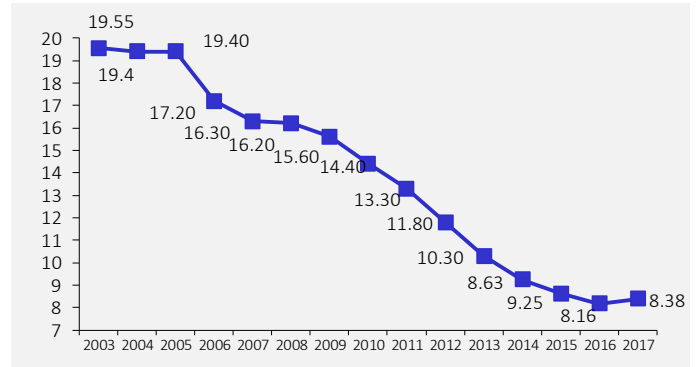
Number of BULKER vessels over 10000 DWT



Total DWT of BULKER VESSELS over 10000 DWT



Average Age of BULKER VESSELS over 10000 DWT



Dry has been at the centre of trust of Greek owners. 136 vessels have been added to the fleet and as their age has gone up from 8.16 to 8.38 years of age, we note that the new additions are primarily larger second hand modern vessels (DWT is up by 12.8m tons, about half of the total tonnage increase in 2017). The average bulker weighs 80,206 tons DWT compared to 79,271 in 2016.



THE GREEK BULKER FLEET OF VESSELS OVER 20,000 TONS DWT EACH

COMPARISONS BETWEEN 2003 AND 2017

Similar trends here also. Company numbers have remained the same. 129 bigger bulkers were added compared to 111 in 2016, 163 in 2015, 59 in 2014, a rise of 14 in 2013, 6 in 2012 and 179 units in 2011. So the bulk of the fleet is indeed bigger bulkers. Average vessel size is up to 80,795, compared to 79,663 tons DWT in 2016 and 80,507 tons DWT which reflected the shopping spree of 2015.

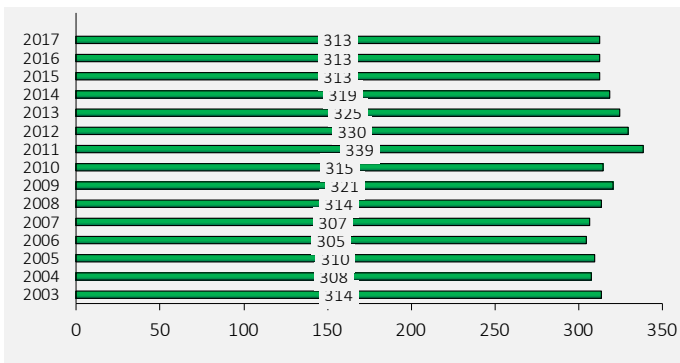
Furthermore, tonnage is up by a remarkable 12.7, which countered the small increase of 7.2m tons DWT in 2016, when prices still had some way to go downwards - something that was not the case in 2015, when 19.46m tons DWT were added at what retrospectively proved to be quite high prices. Age also reflects the addition of second hand tonnage and is up to 8.33 compared to an unbroken drop to 8.13 in 2016 since 2004.

GRAPH 5

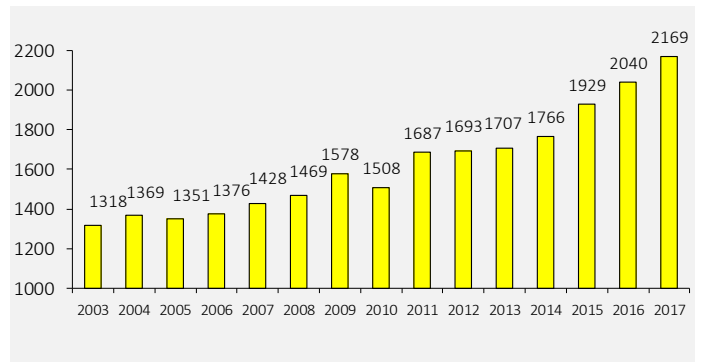
The Greek Bulker Fleet BULKER VESSELS over 20,000 DWT - 2017



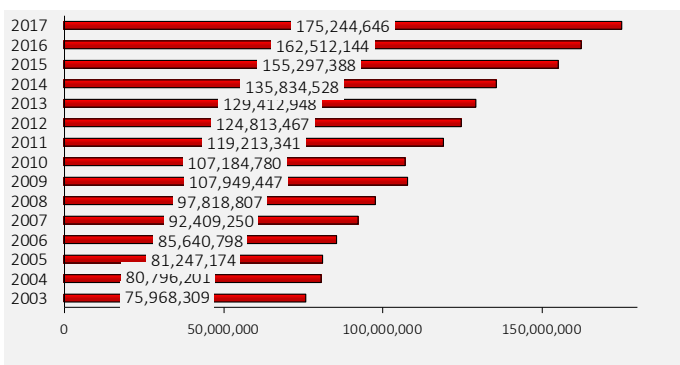
Number of Shipping Companies managing BULKER VESSELS over 20000 DWT



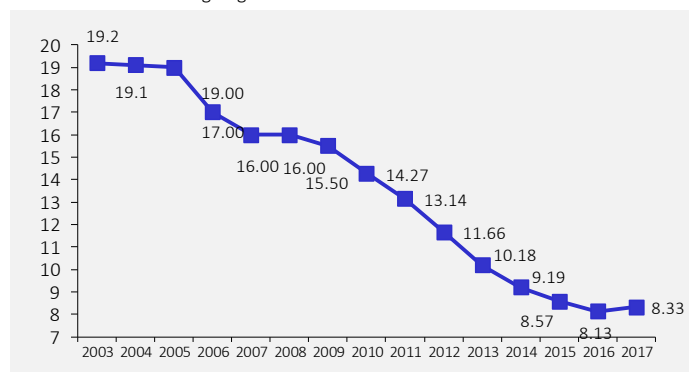
Number of BULKER VESSELS over 20000 DWT



Total DWT of BULKER VESSELS over 20000 DWT



Average Age of BULKER VESSELS over 20000 DWT





THE GREEK CONTAINER FLEET OF VESSELS OVER 10,000 DWT EACH

COMPARISONS BETWEEN 2003 AND 2017

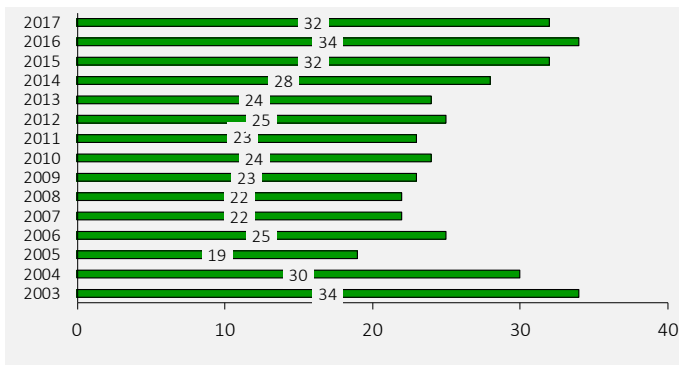
The container sector remains a highly volatile market. The exchange of hands in Greek container ownership has been in the headlines for a while during 2017. Companies are down to 32, in their 2015 levels, vessels are down to 406 and so is tonnage. Thus, the picture that emerges when we add the increase in age, is that more selling has occurred than buying and there has been little evidence that there was an effort to renew the fleet.

GRAPH 6

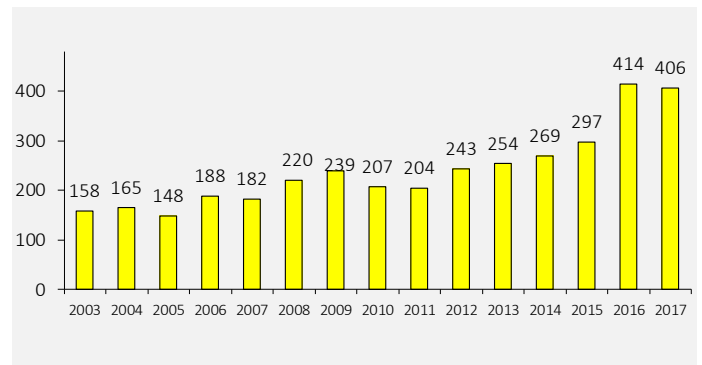
The Greek Container Fleet CONTAINER VESSELS over 10,000 DWT - 2017



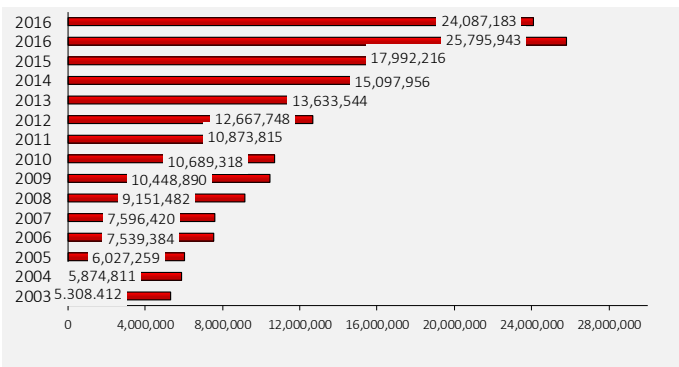
Number of Shipping Companies managing CONTAINER VESSELS over 10000 DWT



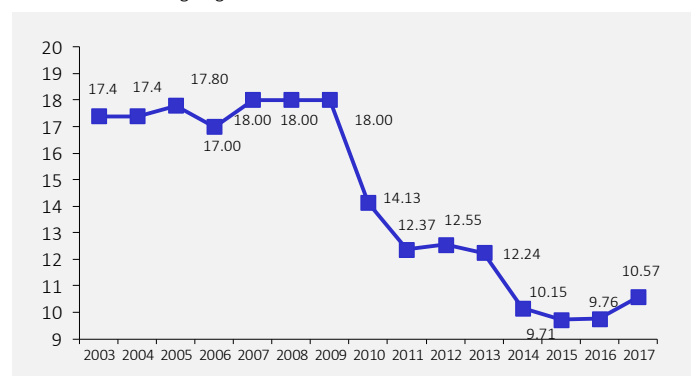
Number of CONTAINER VESSELS over 10000 DWT



Total DWT of CONTAINER VESSELS over 10000 DWT



Average Age of CONTAINER VESSELS over 10000 DWT





THE GREEK CONTAINER FLEET OF VESSELS OVER 20,000 TONS DWT EACH

COMPARISONS BETWEEN 2003 AND 2017

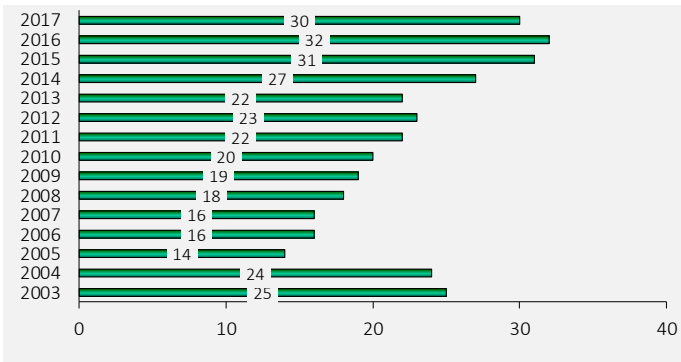
18 large containers less is the latest count of 2017. Due to the volatility and prospects of the market, there has not been any activity towards either renewal or enlargement of the fleet.

GRAPH 7

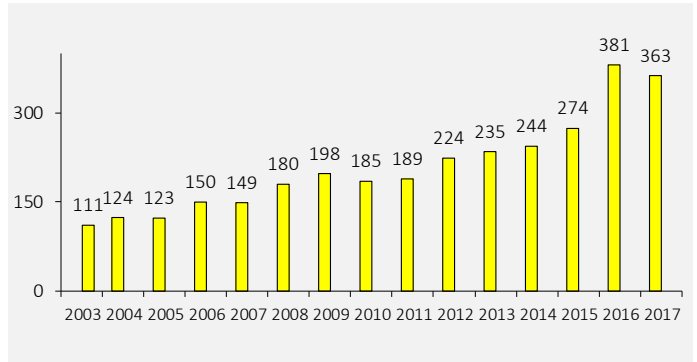
The Greek Container Fleet CONTAINER VESSELS over 20,000 DWT - 2017



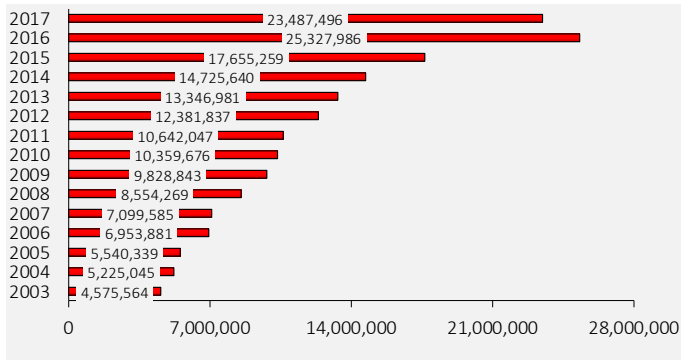
Number of Shipping Companies managing CONTAINER VESSELS over 20000 DWT



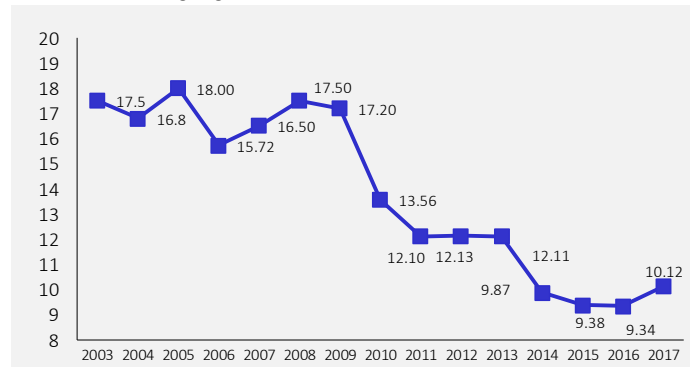
Number of CONTAINER vessels over 20000 DWT



Total DWT of CONTAINER VESSELS over 20000 DWT



Average Age of CONTAINER VESSELS over 20000 DWT





THE GREEK TANKER FLEET OF VESSELS OVER 10,000 DWT EACH

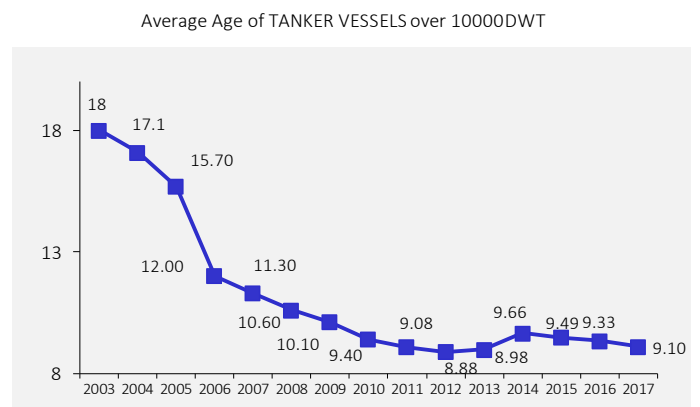
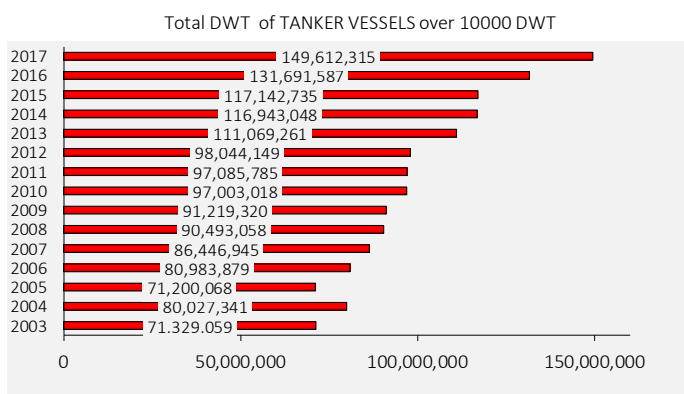
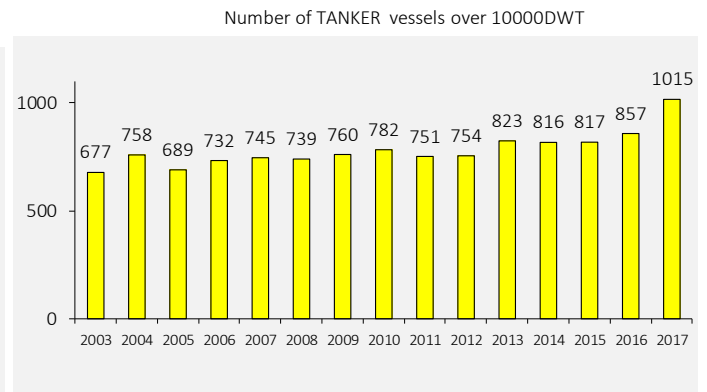
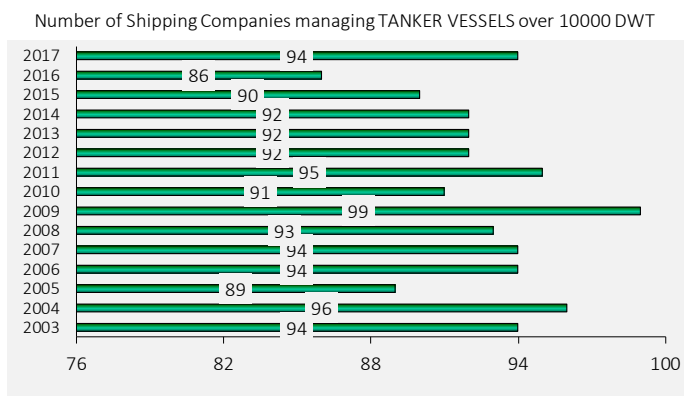
COMPARISONS BETWEEN 2003 AND 2017

39% of the fleet is now tankers compared to 36.39% in 2016 and 35.7% in 2015. The number of units is up by 158. The number of companies running tankers has leaped to 94 from 86, showing that owners, operating traditionally other types of vessels, are now engaging in the sector. Tonnage is up by 18m tons DWT compared to last year's increase by 14.54m tons DWT in 2016 and 199,687 tons DWT in 2015. Age is slightly down to 9.1 years, the only sector of the 4, that we look into in detail, that has shown a renewal tendency. Tankers seem to account for the overall drop in the Greek fleet age.

GRAPH 8



The Greek Tanker Fleet TANKER VESSELS over 10,000 DWT - 2017





THE GREEK TANKER FLEET OF VESSELS OVER 20,000 TONS DWT EACH

COMPARISONS BETWEEN 2003 AND 2017

As only 9 tankers is the difference between the 10,000 and 20,000 sector, all the above observations are pertinent here.

GRAPH 9

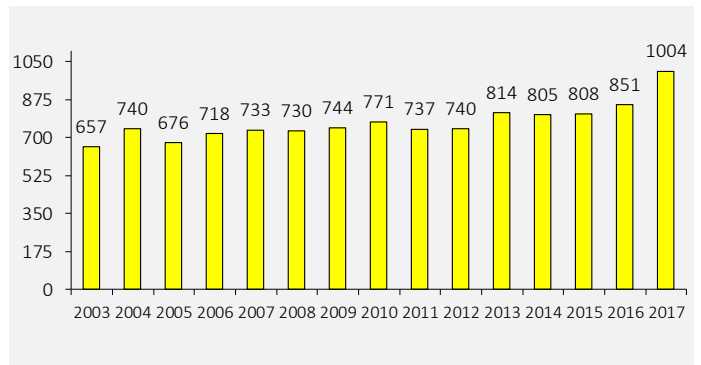
The Greek Tanker Fleet TANKER VESSELS over 20,000 DWT - 2017



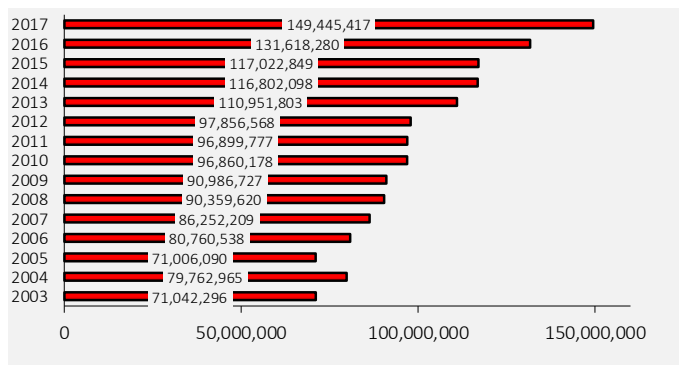
Number of Shipping Companies managing TANKER VESSELS over 20000 DWT



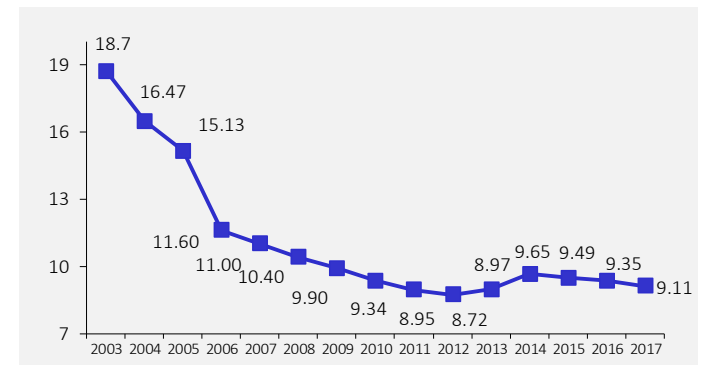
Number of TANKER vessels over 20000DWT



Total DWT of TANKER VESSELS over 20000 DWT



Average Age of TANKER VESSELS over 20000 DWT





THE GREEK LNG FLEET

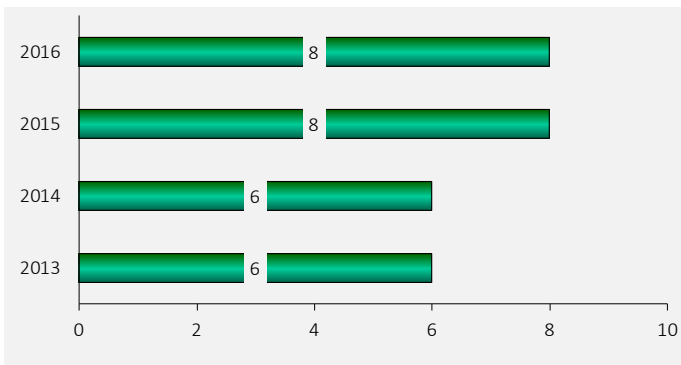
The LNG market has been experiencing a lot of volatility and some adverse trading conditions. Interestingly, the sector seems to have added vessels of smaller tonnage, as the number of units has gone up but tonnage is slightly down. Age also is slightly higher.

GRAPH 10

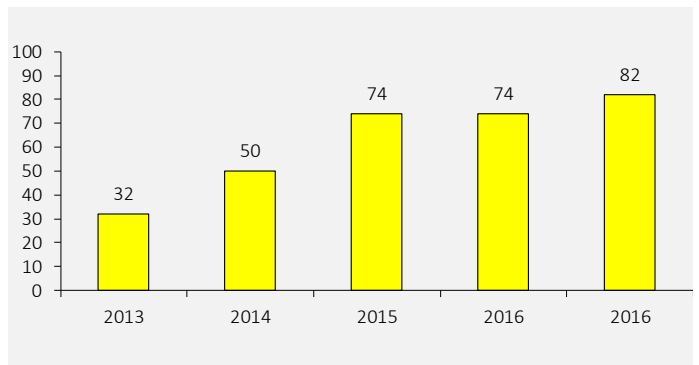
The Greek LNG Fleet - 2017



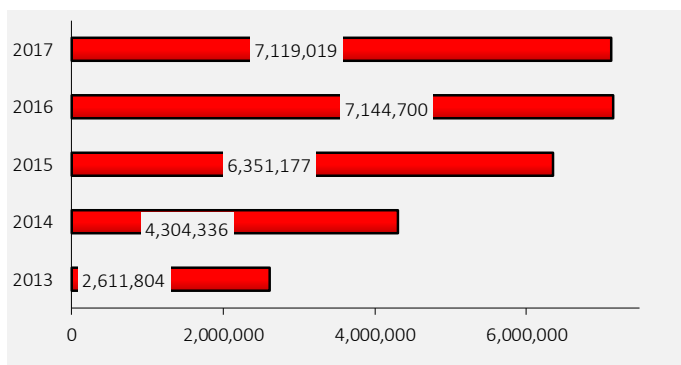
Number of Shipping Companies managing LNG vessels



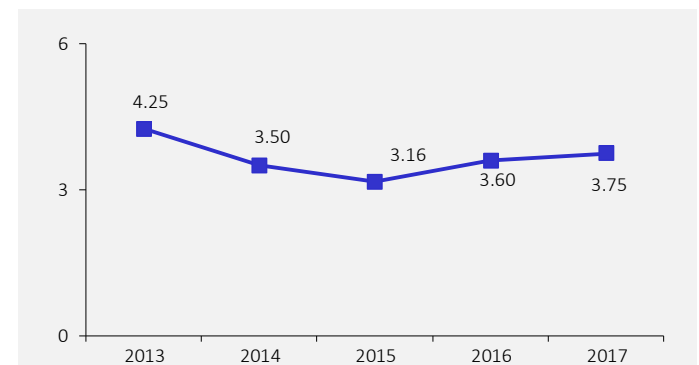
Number of LNG vessels



Total DWT of LNG vessels



Average Age of LNG vessels





THE GREEK LPG FLEET OF VESSELS OVER 10,000 DWT EACH

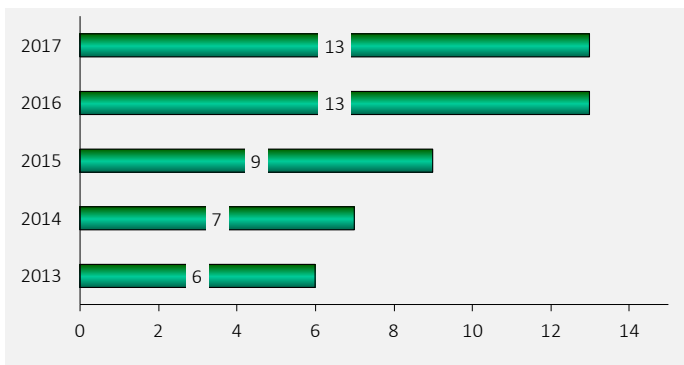
LPGs continue their upward move, albeit at a more cautious pace. The increase of tonnage by less than a million is carried by an increased fleet by 15 vessels. As the fleet is now more than 2 years older than last year, some smaller and older tonnage has been acquired to carry out the trade.

GRAPH 11

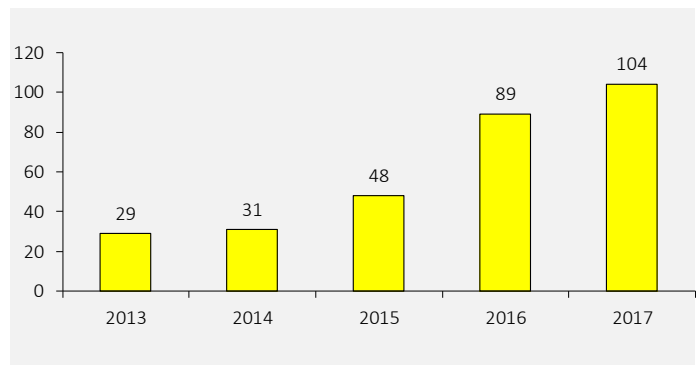


The Greek LPG Fleet – LPGs over 10,000 DWT - 2017

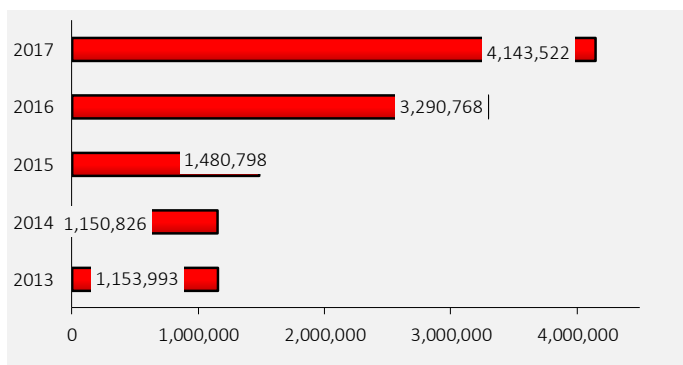
Number of Shipping Companies managing LPG vessels of over 10,000 DWT



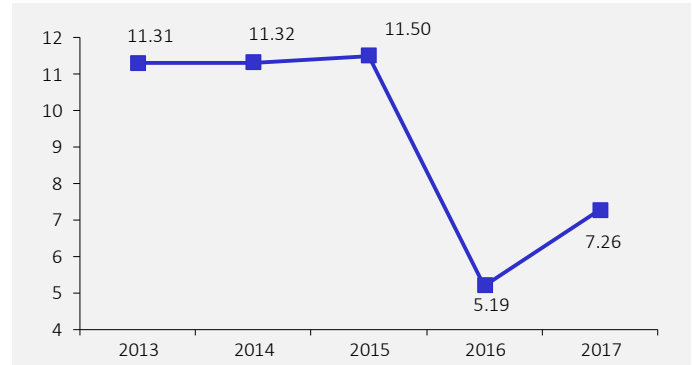
Number of LPG vessels of over 10,000 DWT



Total DWT of LPG vessels of over 10,000 DWT



Average Age of LPG vessels of over 10,000 DWT





THE GREEK LPG FLEET OF VESSELS OVER 20,000 DWT EACH

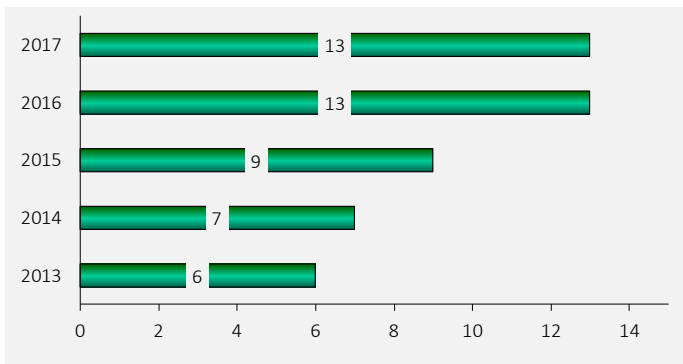
Similar results for the bigger LPGs.

GRAPH 12

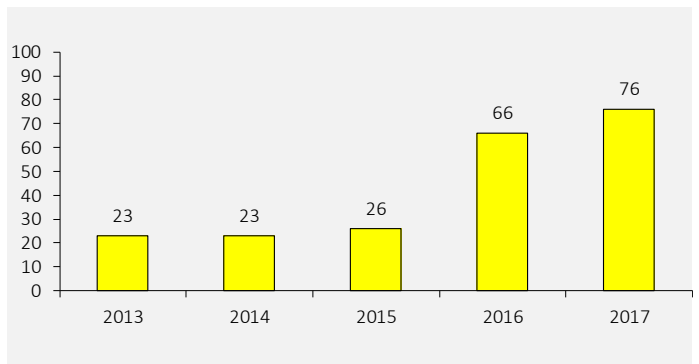


The Greek LPG Fleet – LPGs over 20,000 DWT - 2017

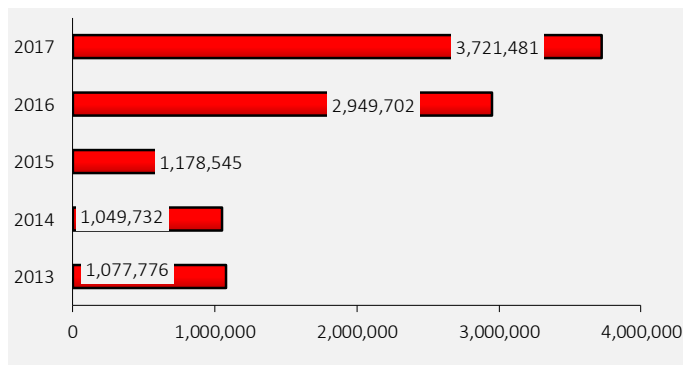
Number of Shipping Companies managing LPG vessels of over 20,000 DWT



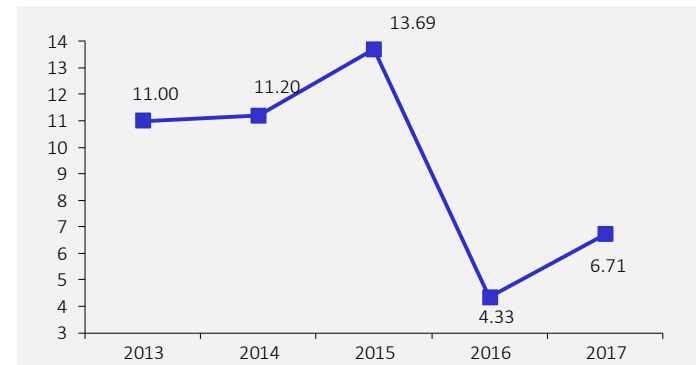
Number of LPG vessels of over 20,000 DWT



Total DWT of LPG vessels of over 20,000 DWT



Average Age of LPG vessels of over 20,000 DWT





TRENDS AND PROSPECTS

Growth has been the key feature, last year, in the Greek fleet, growing from 361.5m DWT to 387.3m DWT or 7%. This took place during a period when almost all shipping markets, with the exception of dry bulk, were poor with uncertain prospects and with bank finance being relatively scarce for all owners but more noticeably, for the small to medium owners. Admittedly, the number of vessels comprising the Greek fleet grew more moderately in numbers from 5230 to 5281. However, the average size of vessel in the Greek fleet continued to grow from 69,203 to 73,330 or 6%.

This growth, in the light of rather adverse shipping markets, is remarkable and indicative of the commitment to growth by Greek owners “against all odds”. It signifies the belief that last year’s vessels’ prices represented attractive levels and it appears that thus far, this view seems to bear fruit, especially in the dry bulk market with rises both in vessels’ values and incomes. However, there was a difference in how the above growth was achieved. Greek owners’ order book fell last year from 502 to 326 vessels and so did vessel deliveries from 181 to 156 vessels. What made a telling difference is the switch of interest by Greek owners towards second hand vessels that represented value for money and more importantly, could be secured immediately. This can be borne from the second hand vessel purchases by Greek owners, which grew from approx. 200 to 260 vessels.

The switch of emphasis towards the second hand market, as opposed to newbuilding last year, can account for the slowdown in the improvement of the average age of the Greek fleet with some segments showing a small increase for the first time. As long as market and cost dynamics favour second hand vessel acquisitions, it is possible that the Greek fleet’s age will remain largely unchanged. This “breather” has to be seen in the light of the fall in average age from 21.41 years in 2001 to 11.84 last year. A further reason for the switch towards modern second hand vessels has been that eco type second hand vessels have become available, as eco vessels remain the focus of most Greek owners.

As can be seen from the different sectors’ analysis, whereas the dry bulk, tanker and LPG sectors grew last year, the container fleet experienced a slight fall and the LNG fleet was static.

The recorded growth in the Greek fleet must be contrasted to the adverse financing developments last year, whereby an increasing number of prominent banks stopped or slowed down or disposed part of their loan portfolios. Bank finance is a lower loan cost financing option, preferred by Greek owners. As the prospects for bank ship finance remain relatively poor and only the very big owners (private or public) have access to bank finance, Greek owners turned to other means of financing their vessel purchases.

On the whole, the public markets remained inactive last year, although prospects appeared to pick up as the year progressed. With dry bulk share performances recording healthy rises and with market projects turning to positive the public markets are expected to provide increasing capital to Greek shipping, in 2018.

The Norwegian market showed a remarkable rise last year and attracted an increasing (but still small) number of Greek owners.

The main provider of finance has been Chinese leasing with Japanese and Korean leasing reentering the market. The number of Chinese lessors and their commitment has risen last year and this rise included Greek owners, mainly for newbuildings but also increasingly for second hand purchases. The Chinese only vessel approach was relaxed last year but the Chinese state has tried to restrict this development recently, in order to support local builders.



Another major finance provider has been the alternative finance market, which re-embraced shipping and has been very active, last year. An increasing number of Greek owners accepted the considerably higher costs involved and entered into such 'alt finance' transactions, in the hope that the markets shall rise and justify the higher cost of capital.

Export finance has continued to provide solid finance support to Greek owners, especially in China and Korea.

On the capital side, Greek owners have continued to pour substantial fresh equity into acquisitions. Private investment funds have increased their role and interest in joint ventures, with the larger owners.

The options available for the smaller owner have been few and consist of the smaller banks that have entered the market with low advance ratios and higher margins or Chinese leasing or act finance at costs that are often in the 10% plus area.

Higher finance cost represents a substantial risk for owners, especially in the light of rising of US Dollar interest rates and requires a robust rise in vessels' cash flows (and values), to justify itself.

The challenges to Greek shipping remain i.e. technological, regulatory, compliance and financial. However, the key to meeting these challenges and continuing with the remarkable growth and quality story lies in the performance of the shipping markets.

Currently, international trade is expected to grow in excess of 4% in 2018 (IMF forecast), at a time when fleet growth is slowing down in the absence of accelerated newbuilding ordering. There seems to be some light at the end of the tunnel across the board for all sectors, with the dry bulk, product carrier, LPG and container sector appearing to be in a better position than the tanker sector, which needs to absorb the rise of capacity, as well as volatile oil prices, as a result of geopolitical and supply side considerations.

Lastly, a mood of confidence is prevailing in Greek shipping that the huge investment decisions and commitment in shipping will bear fruit in the next few years. As such, it is expected that the growth of Greek shipping shall continue unabated, certainly over the next few years.



METHODOLOGY – SOURCES - RESEARCH CRITERIA

In this 2nd part of Petrofin research, the Greek Fleet Statistics, we analyse the composition of the Greek fleet, in terms of vessel size, vessel type and vessel age.

Our sources are the Greek Shipping Directory (2017), printed and on-line database, Newsfront Greek Shipping Intelligence, as well as Clarkson's World Fleet Register, Clarkson's Shipping Intelligence Weekly and numerous market sources.

Research Criteria:

- a. All Greek-owned / Greek-based vessels, of whichever flag are taken into account.
- b. The Greek-based / Greek-owned fleet is analysed and presented initially as a whole, in terms of Numbers of Vessels, Age of Vessels and DWT.
- c. Then a cut-off DWT is used of 10,000DWT to measure the number of companies that run vessels above this tonnage. This is done for the whole fleet, then for Bulkers, Tankers, LNGs and LPGs. This cut-off eliminates the vast number of very small and usually over-aged vessels that unduly influence the Greek fleet analysis.
- d. A further cut-off DWT point of 20,000DWT is used for the whole fleet, the Bulkers, the Tankers and the Containers. This shows the effect that a higher cut-off has on the fleet and its main sectors.
- e. Newbuildings are only taken into account if they have a scheduled delivery year of up to and inclusive of 2018. This results in a more accurate assessment of today's fleet closer to reality. In the current economic climate, a very substantial number of newbuilding orders may be susceptible to cancellations, postponements and re-sales, and may thus distort the current picture of the size of Greek companies, the age of their fleets and of vessels actually trading or about to be delivered to Greek-based / Greek-owned companies.
- f. Under the "Tanker" term we have included only crude oil Tankers, ULCCs and VLCCs and not other types of tankers. Bulk carriers include bulkers only and not general cargo vessels. Container vessels are pure cellular vessels. Consequently, this 2nd part of our research does not produce data for other types, such as chemical tankers, product carriers, OBOs, Container/bulkers, etc.