



SHIP MANAGEMENT SURVEY

July – December 2014

1. SHIP MANAGEMENT REVENUES FROM NON-RESIDENTS¹

Ship management revenues increased to €421 million during the second half of 2014. A similar level of revenues was recorded during the second half of 2013. Germany's share in revenues declined by 4%, while for most other countries in the ranking list, shares increased. Most companies (60%) reported revenues of less than €5 million. However, the top 29% of the companies accounted for 84% of the industry's revenues, indicating a relatively concentrated industry.

Ship management revenues increased during the second half of 2014, following a decline during the first half of the year (**Chart 1**). Total revenues rose to €421 million, following a trend similar in the second half of 2013. As a percentage of GDP, total revenues correspond to 4,7% of Cyprus's GDP, which also increased during the same period to €8.877 million². In **Chart 2**, the industry's revenues are decomposed by country of payment. Germany's share in revenues declined by four percentage points to 50%. In contrast, increases in share contributions were recorder for most other countries, including the UK.

CHART 1 Ship management revenues

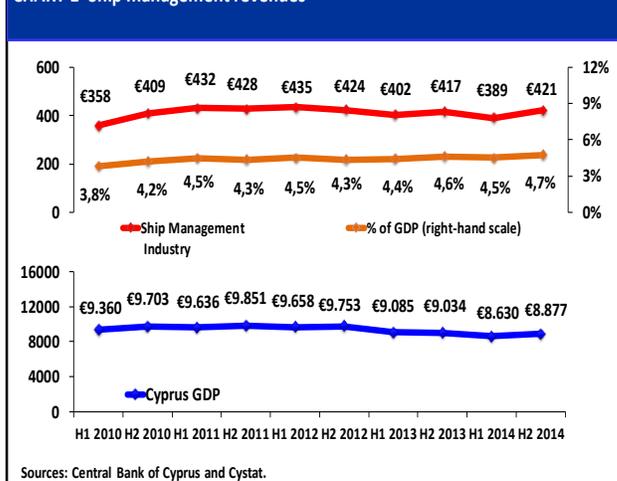
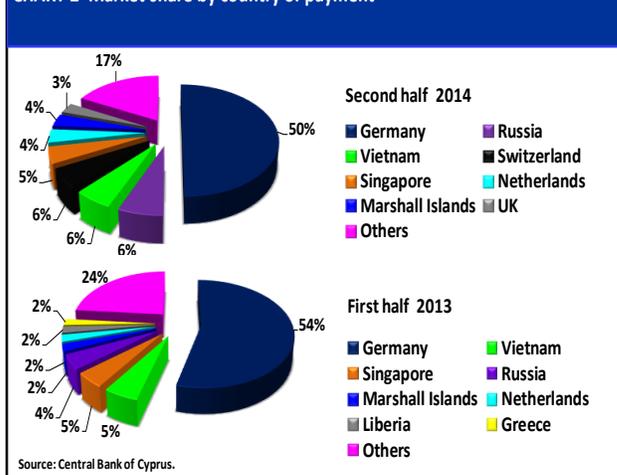


CHART 2 Market share by country of payment



¹ The survey is conducted by the CBC's Statistics Department and concentrates primarily on transactions between resident ship management companies and nonresident owners/shipping related entities. Please refer to the **Appendix** for more details.

² GDP figures have been revised and therefore differ from previous editions of the report.

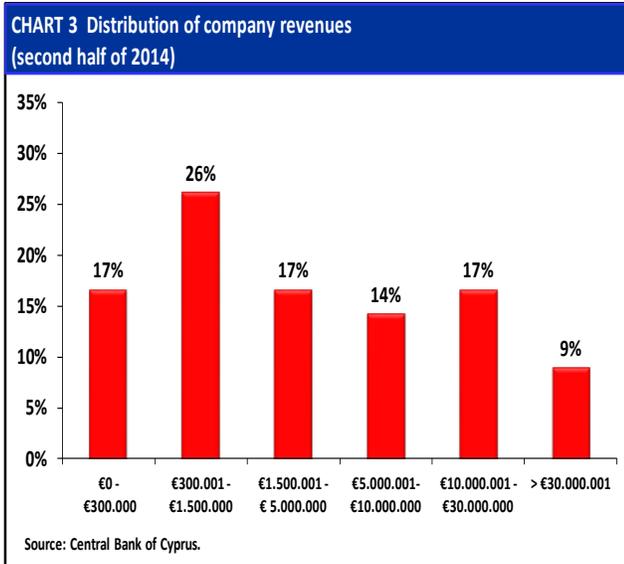


Chart 3 classifies companies based on their revenues for the period July-December 2014. The horizontal axis segments the range of revenues into six distinct groups and the vertical axis measures the percentage of companies belonging to each group. Each bar illustrates the percentage of companies belonging to each revenue segment. Most companies (60%) reported revenues below the €5 million threshold. Only 9% of the companies managed to generate revenues in excess of €30 million. When compared with previous periods, these figures do not suggest a shift in the composition of the population.

The curve in **Chart 4** depicts market concentration for the ship management industry. The ranked cumulative percentage of companies contributing to ship management revenues is measured on the horizontal axis (e.g. the 29% level corresponds to the top 29% of companies in the industry in terms of six-monthly revenues). The vertical axis measures the respective (cumulative) percentage revenue

contribution of these companies. The turning point³ marked on the chart suggests that the top 29% of the companies accounted for 82% of the industry's revenues. It highlights the presence of a small number of large companies in the industry, which is consistent with the analysis in **Chart 3**.

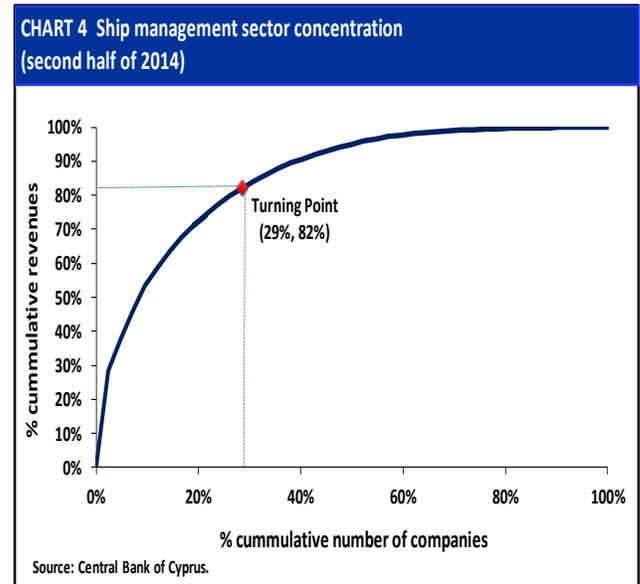


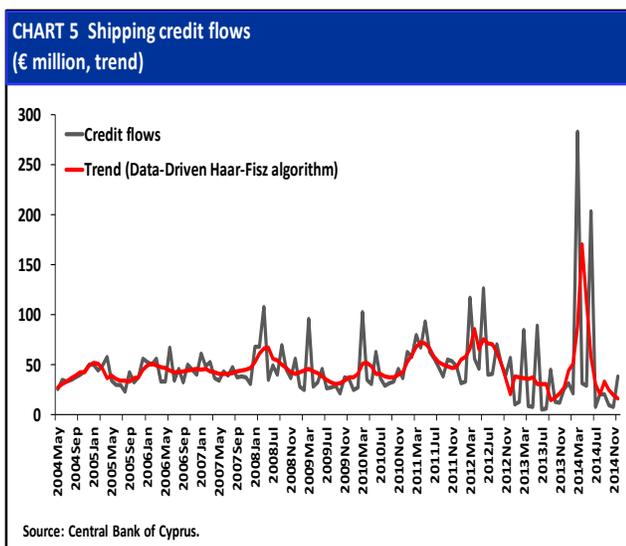
Chart 5 illustrates the historical development of the aggregated inward (credit) ship management and ship owning transaction flows. These transactions concern aggregated revenues from the provision of shipping services abroad and were compiled from data collected from a variety of sources. This chart is useful in order to examine features such as the long-run trend, seasonality and the volatility of revenues in shipping.

Transactions concerning shipping contracts are most commonly completed gradually within the scope of a financial year. They do not always coincide with the time the service is provided and are usually

³ The turning point indicates the level at which a decline in the marginal contribution of companies to the industry's revenues is observed. Specifically, a 1% increase in the number of companies beyond the turning point provides

less than a 1% increase in the cumulative revenues of the industry.

completed towards the end of the respective financial year. It is, therefore, of interest to estimate the underlying long-run trend of the series, which illustrates long-run movements in the volume of revenues and not just short-term payments.



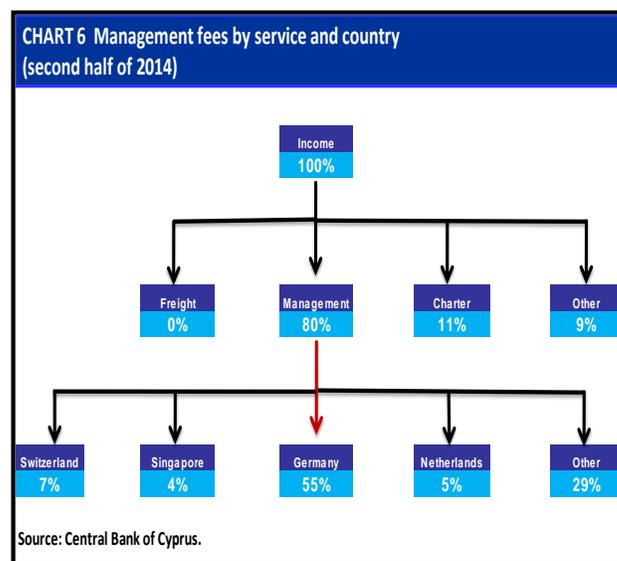
Since the raw data consist of highly volatile transaction records, a data-driven Haar-Fisz transform⁴ was applied, which enables the identification of the key characteristics of the series. The trend estimate suggests that the level of shipping revenues declined towards the end of 2012, with the exception of some very large transactions recorded during the period December 2013 – March 2014.

2. SHIP MANAGEMENT SERVICES

Ship management services (crew, technical and full management) accounted for 80% of the industry's revenues during the second half of 2014. Germany contributed more than half of these revenues but its contribution has declined in line with the reduction in crew management services. There was also a

⁴ Algorithm developed by Motakis, E.S., Nason, G.P., Fryzlewicz, P. & Rutter, G.A. (2006) "Variance stabilization and normalization for one-color microarray data using a data-driven multiscale approach", *Bioinformatics*, 22,

decline in the contribution of full management services, which are not accounted for by one particularly country.

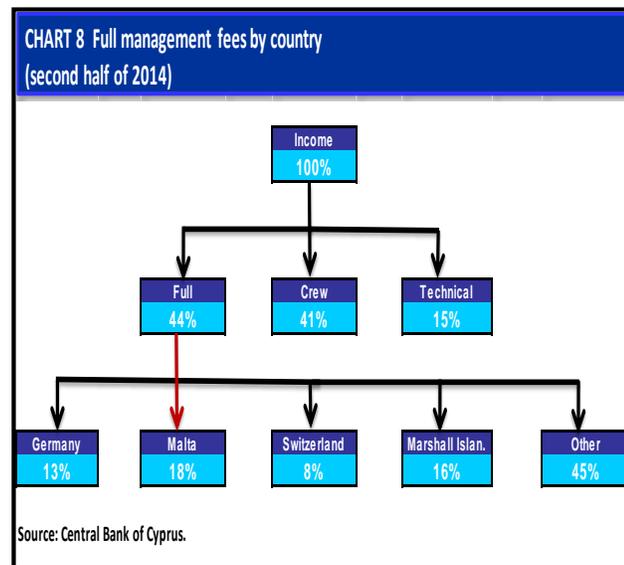
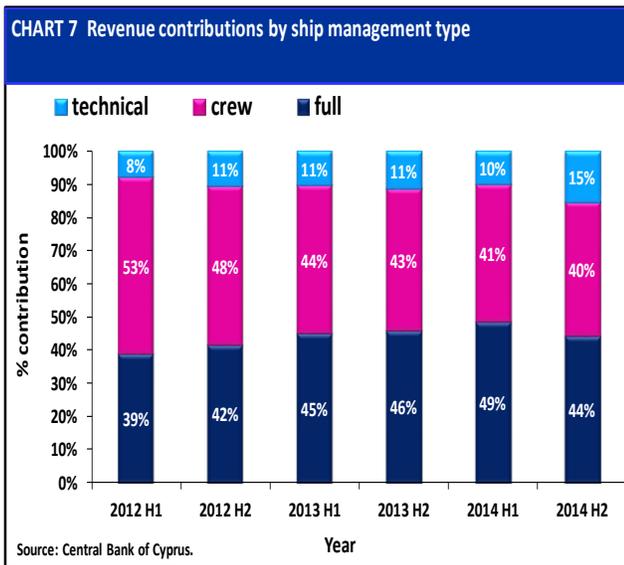


The industry's revenues are simultaneously broken down by type of service and country in **Chart 6**. The first level of the tree diagram provides a decomposition by type of ship management service. Crew, technical or full management services accounted for 80% of the industry's revenues, while chartering services were limited to just 11%. The second level of the tree diagram splits the ship management revenues by country. Germany's contribution decreased to 55%, down from 59% during the first half of 2014.

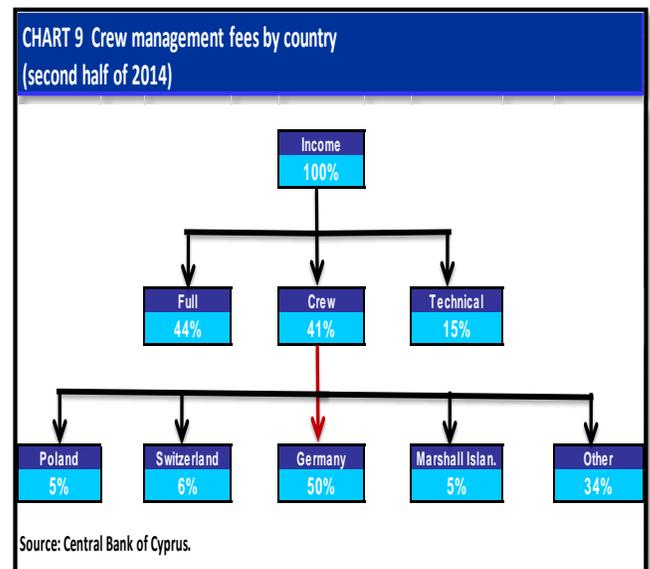
The different types of services covered by ship management operations are presented in terms of their share contribution in **Chart 7**: technical, crew and full management services. Crew management services have been declining since 2012. From 53%

2547-2553. Computations were performed using the 'DDHFm' package written by Efthimios Motakis, Guy Nason and Piotr Fryzlewicz. CRAN archive: <http://cran.rproject.org/web/packages/DDHFm/>.

during the first half of 2012, their contribution shrunk to 40% towards the end of 2014. There was also a decline in the contribution of full management services during the second half of 2014. In contrast, the contribution of technical management services increased to 15%. However, it should be noted that full management contracts encompass both technical and crew management services, therefore crew management operations remain the primary specialisation of the industry.



Full and crew management services are further analysed by country of payment in **Charts 8** and **9**, respectively. The provision of full management services is not accounted for by one particular country. The most important contributions in this segment come from Malta (18%), the Marshall Islands (16%), Germany (13%) and Switzerland (8%). In contrast, the provision of crew management services is mainly accounted for by Germany (50%), as illustrated in **Chart 9**. The contributions by the other major countries in this segment are significantly smaller (between 5% and 6%).



3. COUNTRY PORTFOLIOS

Only 15% of the ship management revenues originate from the provision of services to ships carrying the Cyprus flag. There is a positive relationship between client portfolio size and market share performance. Companies with portfolios consisting of more than 40 ship owning companies scored an average market share of 11%. During the second half of 2014 there were declines in the revenue contributions from Germany, Singapore and the Netherlands.

In modern day ship management, the choice of flag has implications for operations, such as crew selection and recruitment, the training and development of seafarers and, more generally, human resource management. **Chart 10** provides information regarding the flag registration of the ships that were under management by the industry during the second half of 2014. Only 15% of the ship management revenues originated from the provision of services to ships carrying the Cyprus flag. Similar contributions were also recorded during the previous two periods.

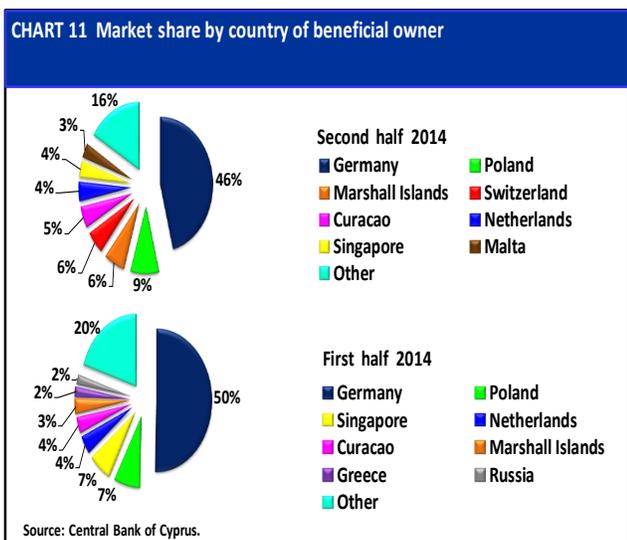
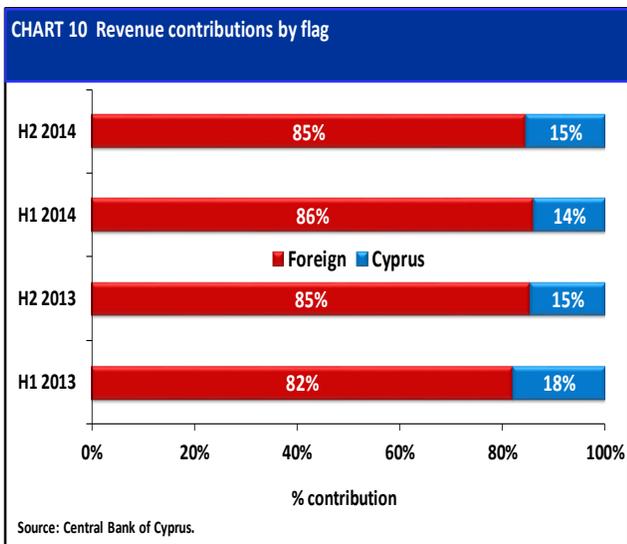


Chart 11 splits the revenues earned by country of residence of the beneficial ship owners whose ships are managed by Cypriot companies. The results bare a strong resemblance (and the share contributions are similar) to those of **Chart 2**. The contribution of German ship owners dropped from 50% during the first half of 2014 to 46% during the second half of 2014. In contrast, there were increases in the percentage contributions of most other countries in the ranking list, most notably for Poland and Malta.

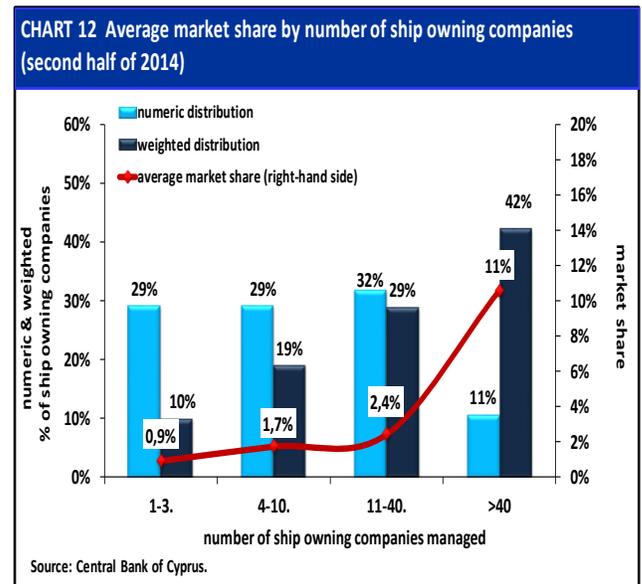


Chart 12 examines graphically the relationship between portfolio size (number of ship owning companies managed) and market share (in ship management revenues) during the second half of 2014. The horizontal axis is segmented into four different size ranges (groups) in increasing order. Specifically, ship management companies that managed:

- (i) between 1 and 3 ship owning companies
- (ii) between 4 and 10 ship owning companies
- (iii) between 11 and 40 ship owning companies
- (iv) more than 40 ship owning companies.

The vertical axis on the left-hand side of the chart, measures the numeric and weighted distribution of

each group of companies. The right-hand vertical axis measures the average market share in each group.

Companies managing between 1-3 ship owning companies accounted for 29% of the total population of ship management companies and generated 10% of the industry's revenues. The average company market share in this group was 0,9% for the period under review. Companies managing between 4-10 ship owning companies accounted for 29% of the population of ship management companies, generated 19% of the industry's revenues and scored an average share of 1,7%.

The last two segments suggest that 43% (32% + 11%) of the companies provided services to more than ten ship owning companies during the period under consideration and accounted for 71% of the industry's revenues. Furthermore, 11% of these companies provided management operations to more than 40 ship owners and shared 42% of the industry's revenues. The average market share in this group was 11%. Consequently, there is a positive relationship between client portfolio size and market share performance.

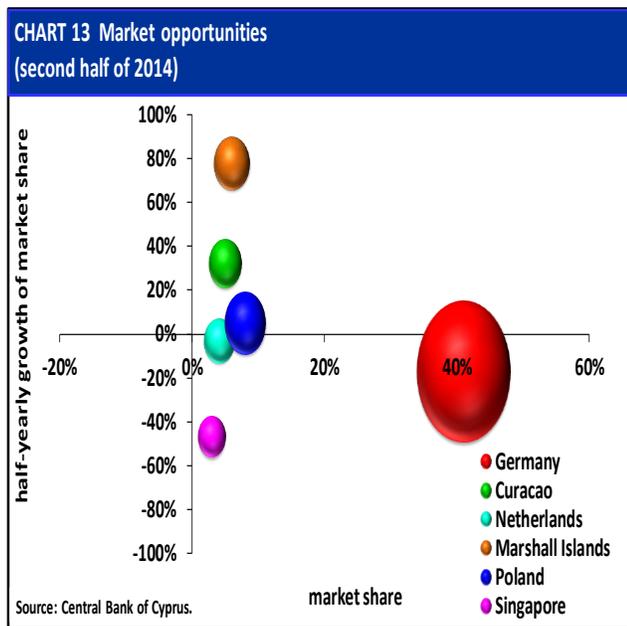
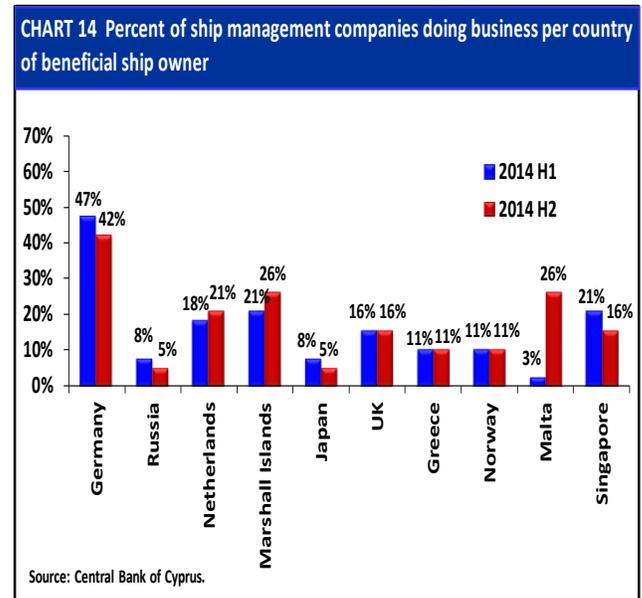


Chart 13 examines the relationship between market share and revenue growth by country. It highlights both the countries that provide opportunities for higher revenues as well as the countries with a considerable change in terms of their revenue contribution to the industry. The horizontal axis measures each country's share in revenues for the period under consideration. The vertical axis measures the percentage change in the share of each country. The size of each bubble is proportional to the amount of revenues extracted from each country.

In line with previous results, Germany is associated with the highest share in revenues. However, there is a decline in its contribution when compared with the previous period. Declines in market shares were also recorded in the cases of Singapore and the Netherlands. In contrast, ship owners from Curacao, Poland and the Marshall Islands increased their acquisition of ship management services from companies based in Cyprus.



Competitive presence and international diversification in the provision of ship management services are important considerations and laudable objectives for the industry. **Chart 14** provides useful

insights concerning these two aspects of the ship management operations during the second half of 2014. Each country bar designates the percentage of ship management companies registered in Cyprus that have offered services in the specific country.

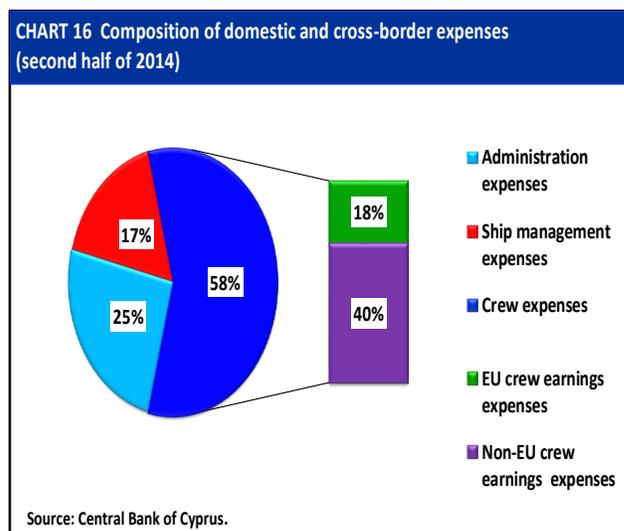
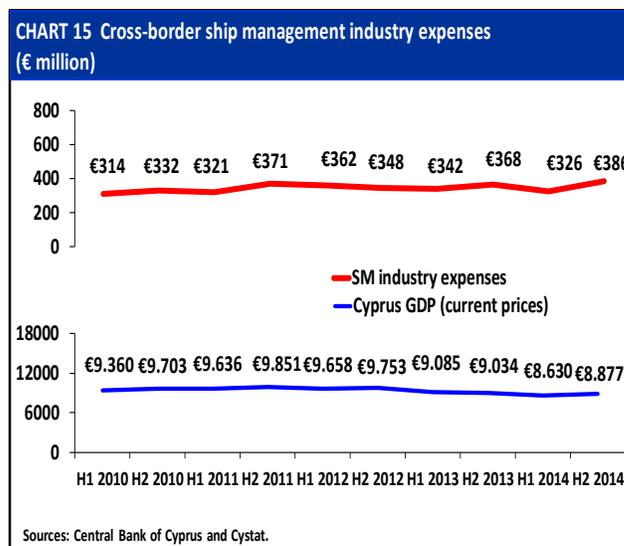
There are strong links with German ship owners as suggested by the large percentage of companies offering services to German ship owners (42%). There is also strong presence in the Netherlands (21%) and Malta (26%). Few companies provide services in the other countries and it should be a long-term strategic objective to geographically expand the operations of the industry. The benefits in terms of revenues and diversification would be substantial.

4. SHIP MANAGEMENT EXPENSES AND FEES

Ship management expenses increased to €386 million during the second half of 2014, which is the highest level recorded since 2010. These concerned mostly crew wages (58%) paid to non-EU citizens. Of the crew wages paid to seafarers, only 18% corresponded to EU citizens. Most of the expenses paid in Cyprus concerned primarily administration (e.g. audit, legal, social insurance etc.) and ship management expenses (e.g. spare parts, lubricants, dry-docking etc.).

Chart 15 provides information regarding the level of cross-border expenses⁵ associated with the operations of the ship management industry. Total expenses increased to €386 million during the second half of 2014, which is the highest level recorded since 2010. This is in line with the increase in revenues reported in chart 1.

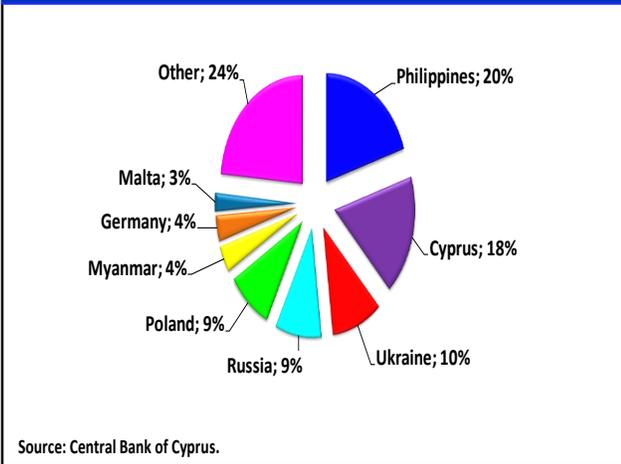
⁵ The figures reported in Chart 15 exclude expenses paid in Cyprus and are therefore comparable and consistent with the revenues reported in Chart 1.



An analytical decomposition of the industry's expenses, including amounts paid in Cyprus, is provided in **Chart 16**. Most payments concerned crew expenses and corresponded to 58% of the total amount. Of these, 40% were paid to non-EU citizens. The other two categories concerned administration and ship management expenses (e.g. spare parts,

lubricants, dry-docking etc), which accounted for 25% and 17% of the total, respectively.

CHART 17 Breakdown of expenses by country of payment (second half of 2014)



Like most of the other main aggregates, the total expenses of the industry are also analysed by country in **Chart 17**. With the exception of Cyprus, expenses paid to all other countries represent imports of services from abroad and are used to compile Cyprus’s current account in the balance of payments. Most of these expenses concerned crew wages paid to seafarers from the Philippines, Ukraine and Poland. In the case of Cyprus (18%), the expenses concerned primarily administration (e.g. audit, legal, social insurance) and ship management expenses.

The main categories of expenses paid by the ship management companies in Cyprus are presented in **Chart 18**. Half of these expenses concern salaries paid to staff employed ashore. Significant amounts are also paid for management fees (7%), social insurance, insurance and provident fund contributions (7%) as well as travelling expenses (7%). It is also worth noting that 6% of the total amount of expenses/losses reported in the survey concerned exchange rate and depreciation expenses.

CHART 18 Breakdown of expenses paid in Cyprus (second half of 2014)

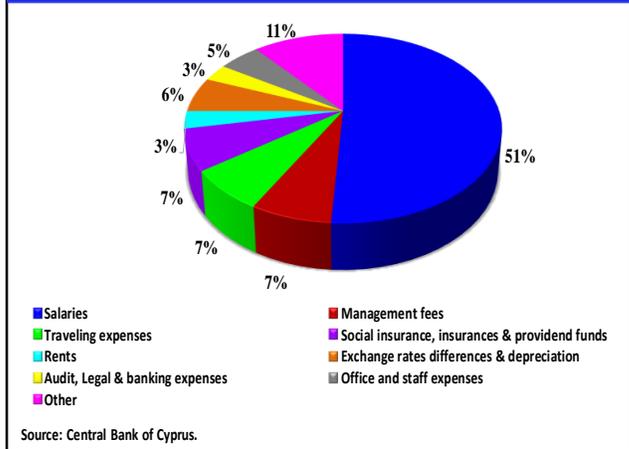


CHART 19 Shipping debit flows (€ million, trend)

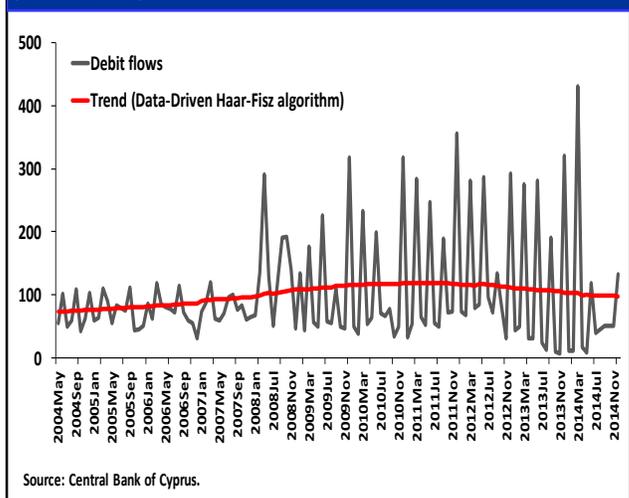
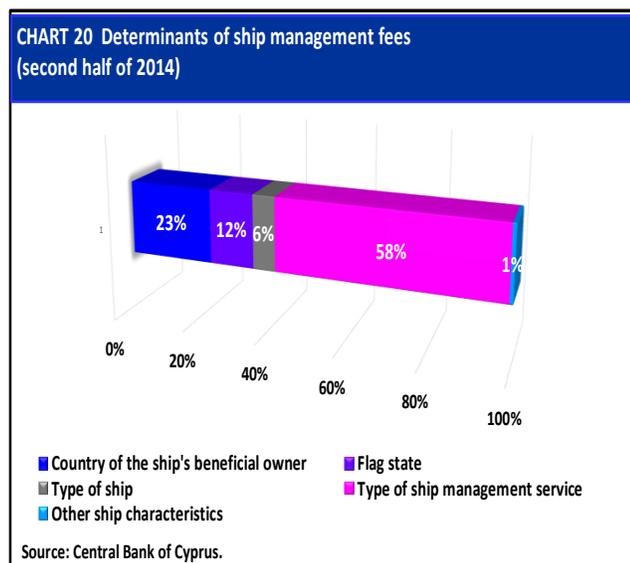


Chart 19 supplements the analysis with historical time series information regarding the level of outward (debit) transaction flows. These transactions refer to expenses associated with the provision of shipping services abroad (both ship management and ship owning). Similarly with **Chart 5**, the trend of the series was estimated with the data-driven Haar-Fisz transform algorithm. The results suggests two main findings:

- (i) the volatility of transactions increased considerably after 2008, when Cyprus adopted the euro;
- (ii) shipping expenses were increasing until the beginning of 2012, but have declined slightly in subsequent periods.

Chart 20 provides information regarding the factors that determine the level of ship management fees in the market. The analysis was performed using a hedonic regression model. During the second half of 2014, the fees charged by the industry were mainly influenced by the type of ship management service provided and the country of the ship’s beneficial owner. Additional factors include the choice of flag state (which is important primarily for crew expenses) and the type of ship under management (e.g. tanker vs. container).



APPENDIX: SHIP MANAGEMENT SURVEY

The Ship Management Survey is conducted biannually by the Balance of Payments Section of the Statistics Department. The survey was launched in March 2009 and covers residents of Cyprus who provide ship management services to ship owning companies registered both in Cyprus and abroad.

The survey collects data from a representative sample of financial transactions (revenues and expenses) carried out between resident ship management companies and non-residents of Cyprus. In particular, the survey requires, among other things, the submission of:

1. Revenues by type of service provided to non-resident ship owning companies.
2. Revenues received from non-resident ship owning companies, by country from where the revenue is derived.
3. Revenues by country of flag registration of the ships whose ship management is performed by the resident ship management companies.
4. Revenues by country of residence of the ship owner, whose ships are managed by the resident ship management companies.
5. Payments made by resident ship management companies, by country of residence of the recipient.

The results of the survey include additional economic analysis, such as:

- Size of the ship management industry as a percentage of the Cyprus GDP (not in value added terms but as turnover).
- Level of concentration in the industry.
- The size of client portfolios of the ship management companies.
- Percentage of resident ship management companies which operate in different countries (analytically by country).
- Magnitude of total expenses in the industry.
- Identification of countries which offer market opportunities for further revenue growth.