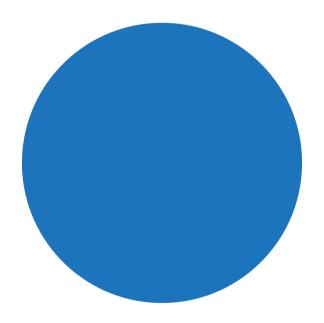
# GREPORT 2016



Report on Greek Ports G.K. Vaggelas - A.A. Pallis

by P&S Advisory

# GREPORT 2016

GREPORT 2016 -Report on Greek Ports G.K. Vaggelas - A.A. Pallis

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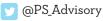
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Special thanks to all those who contributed to the provision and selection of data and to all those employed in the Greek port system.

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#### PRESENTING GREPORT 2016

Greek ports stand at the verge of a major reorganisation. A number of key developments reshaped the structures of the Greek port system in recent times. The first terminal concession ever (2008), the arrival of COSCO Pacific Limited in Piraeus, initially as a terminal operator (2009) and most recently (2016) as a port owner, form major advances that continue to generate international interest.

The last months have been particularly eventful. The sale of Piraeus Port Authority's (P.P.A.) SA majority shareholding to COSCO Pacific Limited was completed in August 2016; the corresponding procedure for Thessaloniki Port Authority SA has commenced; the transfer of the shares of the Port Authorities operating as Sociétés Anonymes to the Hellenic Republic Asset Development Fund (HRADF) has been associated with further privatisation plans. The way that secondary ports should be administered, as well as the reform of national level monitoring institutions are also part of the agenda. A Public Authority for Ports is under formation. The established in 2013 Regulatory Authority for Ports is redefined as an independent authority. All these create new conditions for the Greek port system, whereas a long-term governance framework is found wanted.

Analysing developments in Greek ports is even more important in the light of the severe economic and social crisis that has hit the country since 2010 and the structural changes of the Greek economy that this crisis implied.

The 12 ports operating as corporate entities recorded in 2014 an aggregate throughput of 6,36 million tones general cargo, 3,98 million TEUs, 28,32 million coastal shipping passengers and 2,07 million cruise passengers. Evidently these are key contributors to the operation of the national and local economies.

**GREPORT 2016 (Report on Greek Ports)** is the first comprehensive report analysing the Greek port industry. It details the developments observed in the ports of national interest operating as corporate entities, as well as the evolution of Piraeus Container Terminal SA, the single private terminal operator in Greece.

**GREPORT 2016** presents (a) the major port policy developments at national and European level; (b) the evolution of cargo and passengers throughput in the ports under examination; (c) the major financial data recorded by the port authorities and operators and (d) the latest developments in each port case.

- The analysis focuses first on the overall trends and then concentrates at each port as follows:
- Section I reviews the major national and European port policy developments for the period 2014-2015;
- Section II presents the evolution of cargo and passenger throughput in Greek ports for the last decade;
- Section III presents the aggregate financial performance of the 12 Greek port SAs; and
- Section IV details the situation at each port, reporting the types and size of throughput recorded since 2010, the financial

performance of the corporate entity governing the port over the same period, as well as the key developments that took place since 2014.

The report focuses on the decade 2005-2014 and, whenever data are available, it incorporates developments referring to 2015. The emphasis is on what happened in recent years. Yet, comparisons of what happened in the second half of this decade (2010-2014) with the earlier part (2005-2009) aim to understand the implications of the economic recession that the country experiences since 2010. One port has been excluded from this analysis. This is the Evia Ports Authority SA, which was established in 2013 and, thus, neither throughput nor financial data are available yet.

GREPORT 2016 is a publication of P&S Advisory. P&S Advisory is a consulting company established in 2014 to offer quality services to the port industries and the maritime sector. Its partners and associates are a dynamic team having extensive knowledge of maritime transportation and experience in related contract research in Europe, North America, Africa and Asia. Along with a network of associates in Greece and beyond, it has successfully developed a number of projects focusing on the development of ports and maritime transport systems.

We are pleased to present GREPORT 2016, expressing our gratitude to all those that supported its publication. Our ambition is this to be the first edition of a periodical publication that will inform and facilitate the work of port professionals, policy-makers, and all those involved or interested in the Greek port industry.

**Enjoy the reading,** Athanasios A. Pallis & George K. Vaggelas

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# Major port policy developments in Greece & Europe

## **Greek Port Policy**

A milestone in Greek port policy evolution since 2013 is the Legislative Act entitled "Reconstruction of the Ministry of Shipping and the Aegean". Law 4150/2013 introduced several provisions concerning the organisation and operation of the national port system, the three most important provisions being:

- a) The establishment of the Regulatory Authority for Ports (RAL in Greek); and
- b) The merging and transformation of one more port authority (Evia Ports Authority) to a corporate entity (Société Anonyme);
- c) The ability of existing port authorities and policy makers to configure networks of Greek ports operating under the same authority, via the merging of respective port management entities.

## Structure of the Greek port system (December 2015)

Management and Operating Entities	December 2015
Sociétés Anonymes	13
Port Funds	13
Port Funds formed through jurisdiction transitions according to Law	37
Public Port Funds	32
Port Bureaus	2
Sited Marinas / Touristic ports	59
Harbors and anchorages	84
Ports belonging to hotel units	11
Private port facilities (concessioned)	???
"Orphan" port facilities	555

## Regulatory Authority for Ports ("RAL")

Implementing the requirements of the structural adjustment programs agreed with international institutions, Greece established in April 2014 the Regulatory Authority for Ports (RAL in Greek). The enactment of Law 4150/2013 formed RAL as a public entity with administrative and financial autonomy that operates under the control of the Ministry of Shipping and Island Policy.

In 2016, RAL was converted to an independent regulatory authority supervising commercial methods and practices of port service providers (Law 4389/2016). RAL is responsible for:

- a) Supervision of ports, in terms of legislation compliance;
- b) Monitoring and controlling port services provision and the proper operation of the relevant markets;
- c) Proposing measures enhancing the applicability of competition principles; and
- d) Supervising the process of licensing port services provision.

RAL is eligible to endorse regulatory measures for the provision of port services to users in line with the European Union and national legislative frameworks, monitoring the market in cooperation with the Hellenic Competition Committee. In addition, RAL shapes the framework for defining port charges, identifies and investigates infringements of relevant legislation, and ensures compliance with state aid rules, so as to guarantee the satisfactory operation of the port markets.

Port Authorities (either corporatized entities or Port Funds) finance RAL through transfers of annual revenues (0,2% and 0,3% respectively), whereas the Ministry of Marine and Island Policy might also contribute up to a maximum 10% of its annual budget. Since February 2016, RAL has the capability to hire personnel in order to fulfil its tasks.

### **Port Privatisation**

The privatisation of Greek ports, and particularly the privatisation of the two major ports of the country, Piraeus and Thessaloniki, is in the spotlight since 2010, not least because this reform has been among the priorities detailed in the structural adjustment programs for the Greek economy. Four years later, in 2014, the Hellenic Republic Asset Development (HRADF) proposed a plan, the cornerstone of which has been the sale of 67% of the shares of Piraeus Port Authority (PPA) SA. This was the starting point for the selection of the preferable investor via an international tender. In August 2015, the government decided to continue the process for the sale of the 51% of PPA shares, with the remaining 16% planned to be sold to the investor within the next four years and subject to the completion of specific investments.

The bidding process completed in January 2016 with China COSCO Shipping Corporation Limited standing as the preferable investor. The Chinese company offered €368,5 million for buying 67% of shares (€280,5 million for buying the 51% stake at the first phase and an additional €88 million for a further 16% stake in a transaction to be completed after meeting certain investment targets). In addition, China COSCO Shipping Corporation Limited committed to invest €500 million into the port, in addition to its contracted amounts. HRADF and China COSCO Shipping Corporation Limited signed an agreement in April 2016 and the Greek Parliament endorsed the agreement in July 2016. The acquisition was formally completed on August 10, 2016.

As regards the selling of the shares of Thessaloniki Port Authority (THPA) SA, the corresponding bidding process is underway and expected to conclude by the end of 2016. During the first phase of the process, eight investment schemes, mostly international terminal operators, have expressed the unsolicited interest in submitting financial offers. These companies, or consortiums, are: APM Terminals; Deutsche Invest; Duferco; ICTS; Mitsui; P&O; a consortium led by Russian railways RZD and involving Greek constructors GEK-Terna; and Yilport Holding. The submission of the binding financial offers is expected to complete in late 2016.

## Monitoring the Greek Port System

Following the decision to privatise the ports of Piraeus and Thessaloniki via the sale of majority stakes, the Greek government decided to establish a Public Authority for Ports (DAL in Greek). As in August 2016, the establishment of this institution is pending.

According to the provisions of the Legislative Act "Reform of Supervision and Control System of the Greek Port System", endorsed in 2016 (Law 4389/2016), the Public Authority for Ports is designed as a separate and independent organisational entity that operates under the supervision of the Ministry of Shipping & Island Policy. This entity is responsible for advancing the following objectives of the Greek port system:

- a) Contribution to local, regional, and national economy, and to social cohesion;
- **b)** Contribution to prosperity, given the key macro-economic importance of ports;
- c) Environmental protection in line with the applicable legislation;
- **d)** Uninterrupted availability and provision of reliable and quality services to ships, passengers and cargoes, without discrimination, and the presence of any exemptions only as foreseen within the applicable legislation.
- e) Provision of quality services to users and the general public, in cooperation with the Regulatory Authority for Ports, and the General Secretariat of Ports, Port Policy and Maritime Investments.
- f) Cooperation with relevant bodies of the Greek Republic for the enforcement of port labour and trade union rights including the adopted collective agreements and the application of the related provisions of Law 2688/1999, the provisions of the ratified International Labour Conventions and all relevant provisions of the European Union legislation.
- **g)** The application of port related legislation, in cooperation with the Regulatory Authority for Ports and the General Secretariat of Ports, Port Policy, and Maritime Investments.











Liquid bulk



Coastal shipping



DAL is responsible for the entire Greek port system. The establishment of Regional Office is explicitly foreseen in the case of Piraeus; with this procedure scheduled to follow the completion of the tender process for the sale of THPA SA majority stake.

The operation of the Public Authority for Ports will be funded, via contributions equal to the 1/7 of the total of the amount received annually by the Greek government by the concessions to private operators.

## **Establishing Evia Ports Authority SA**

In 2013, all port authorities of the island of Evia, merged and established the Evia Ports Authority SA, which is the 13th Port Authority in Greece operating as a Société Anonyme (Law 4150/2013). The new entity is the result of the conversion of the Port Fund of Halkida to SA and thereinafter the merging of the Port Funds of Aidipsos, Aliveri, Eretria, Karystos, Kimi, Limni, Marmari, Styra and Orei

## Configuration of port networks

A legislative act endorsed by the Greek Parliament in 2013 envisaged the creation of four core port networks in Greece, each of them developed via the merging of existing ports and their authorities. Law 4150/2013 detailed explicitly that the existing corporate entities might decide to merge to four port networks under the respective port authorities:

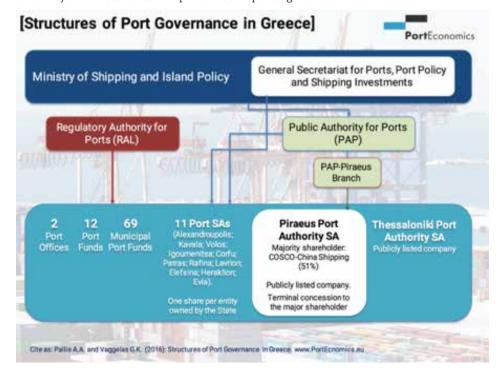
- 1) The Attica Port Network, following the merging of the ports of Piraeus, Lavrio, Elefsina and Rafina;
- 2) The Northern Greece Port Network, following the merging of the ports of Thessaloniki, Kavala, Alexandroupolis and Volos;
- 3) The Western Greece Port Network, following the merging of the ports of Patras, Igoumenitsa and Corfu; and
- **4)** Heraklion Port Authority, which would continue operating as is and possibly merge with nearby Port Funds.
- **5)** Law 4150/2013 also foresees that Municipal and Governmental Port Funds might also become part of the proposed port networks, or proceed in mergers creating new corporate entities (Regional Port Networks).

Despite the relevant provisions of the Law, until now the process has yet to progress. Given the completions of the selling of the PPA SA, and the pending selling of the THPA SA, it seems that the realisation of this prospect becomes less likely.

### Structures of Greek Port Governance

Following the completion of the transfer of the ownership of Piraeus Port Authority to China COSCO Shipping Corporation Limited, the structures of the Greek port system are those detailed in the following scheme.

A number of key developments are expected to take place within the next months. These include the completion of the procedure for the selling of 51% of the shares of the THPA SA, and the decision of the HRADF on how to best exploit the potential of the other ports of national interest operating as corporate entities. The reorganisation of the numerous Port Funds is also under discussion, with proposals indicating mergers of local entities and further corporatisation. All these urge the formation of a long-term port policy aiming to further the efficiency and effectiveness of operations and port organisation.



1999

Piraeus Port Authority (PPA) and Thessaloniki Port Authority (TPA) converted to Société Anonyme (S.A.) (Law 2688/1999)

10 Port Authorities converted to S.A. (one share owned by the state) (Law 2932/2001)

Establishment of the General Secretariat of Ports and Port Policy (Law 2932/2001)

TPA S.A. listed in Athens Stock Market (state retains 74,27%, of shares)

2003

PPA S.A. listed in Athens Stock Exchange (state retains 74,14% of shares)

2001

2008

2011

2013

Public tenders for concessioning (i) Thessaloniki Container Terminal & (ii) Piraeus

Container Terminal Pier II (operation) & Container Terminal Pier III (greenfield)

2009

Piraeus Container Terminal (PCT) S.A., a COSCO Pacific subsidiary, commences operations of Pier II

PPA commences operations of Container Terminal Pier I

2012

"Friendly agreement" between PPA S.A. and PCT S.A. to revise concession terms

One more port is transformed to S.A. (Evoia Port Authority)

All shares of Port SAs transferred to Hellenic Republic

port is transformed to S.A. (Livola 1 of t Addiofity)

Non S.A. ports capacity to operate under a Port Authority S.A. (Law 4150/13)

Asset Development Fund (HRADF)

2014

Establishment of Ports Regulatory Authority (controlled by Ministry of Mercantile Marine)

Second "Friendly agreement" between PPA S.A. and PCT S.A. to revise concession terms

2016

China COSCO Shipping Corporation Limited wins a tender call for 67% of the shares of PPA

Transforming Ports Regulatory Authority to independent authority

Establishment of Public Port Authority (PPA) having one branch (Piraeus, PPA)

# European Ports Policy developments

A European ports policy has been for long a key part of the transport agenda of European institutions, recognising in practice the importance of port industries for the European economy. Since 2013, the European scene has been marked by the renewed efforts of the European Commission to promote the so-called 'Port Regulation", an initiative that redefines the rules of access to most port services provision markets. Other issues of importance include port labour and the social dialogue that is in progress, the use of renewable energy in ports, and the efforts to promote coastal and marine tourism and cruise as major activities throughout Europe.

## **Port Regulation**

In 2013, the European Commission put forward a proposal for a Regulation "Establishing a framework on market access to port services and financial transparency of ports". Following two failed attempts to agree on the adoption of a relevant Directive in the 2000s, the EU institutions return to the issue of liberalising the access to port services markets in European ports. This time the discussion had a reference to a more general approach, in an attempt to avoid the controversy generated by its earlier (unsuccessful) proposals.

In June 2016, the European Council and the European Parliament agreed on a final regulatory text to apply to all 329 seaports listed in the trans-European transport network guidelines ('core network' and 'comprehensive network'). These ports transit 96% of all freight and 93% of all passengers through EU ports. EU member states are free to decide whether to apply the regulation to other ports as well.

The Port Regulation applies as a general principle the freedom to provide services to all 329 TEN-T ports, with no discrimination, and brings the port sector in line with other transport modes and the internal European market functioning. In particular, it foresees transparent and open procedures to select the providers of port services. These are accompanied by exemptions, provisions for public service obligations, as well as rules to prevent possible price abuses by operators with exclusive rights. In addition, the Regulation has extensive reference to transparency rules as regards the financing of ports by the state, and the charging practices applied.

Cargo handling and passenger services will be subject to the financial transparency rules, but are exempted from the access provisions. Member states will remain free to decide how to organise these services, in compliance with the European Court of Justice case law. In order to avoid disproportionate administrative burdens, member states may decide not to apply the rules on the separation of accounts to small ports, subject to certain conditions. Member states may also decide to apply the access rules to pilotage services. In such cases they should inform the Commission. Dredging will only be covered by the rules requiring separate accounts for publicly funded activities.

European ports have welcomed the outcome, which is expected to have a moderate effect on existing practices, as it strengthens the principle of autonomy of the port authority to set its own charges and allows a flexible framework for the organisation of port services respecting the diversity of ports in Europe.

## **Port Financing**

The European Union has adopted two major financial tools facilitating investments in the transportation sector including ports.

The first one relates to priority investments under the "Connecting Europe Facility" initiative (€26,25 billion) and develops in collaboration with the Cohesion Fund and the European Regional Development Fund. This tool provides ports financing opportunities for the period 2014-2020 for infrastructure projects concerning Trans-European Transport Networks (TEN-T), in order to connect to rail, inland waterways and roads.

The second tool is the so-called "Juncker Package" (€315 billion), which aims to boost growth and create jobs in the EU by funding projects in key areas of the European economy. These areas explicitly refer to transport and therefore ports. The Juncker Package does not subsidise investments, but provides loans on favourable terms.

Financial transparency is emerging as a key priority, as also detailed in the Port Regulation. In early 2016, the European Commission adopted three decisions regarding respective schemes of taxation at three European member-states (Netherlands, Belgium and France). It appears that these three member-states allowed several exemptions from corporate taxation, for a number of publicly owned ports, with the Commission asking member-states to explicitly exclude these provisions in order to avoid competition distortions and align with the regime on EU state aid rules.

## Social dialogue

Since 2013, European institution and stakeholders have been engaged in a social dialogue Committee for Ports set up to discuss and agree on port labour related issues. The work is in progress with the participation of interest groups representing port authorities (European Sea Port Organisation - ESPO), private terminal operators (Federation of Private Port Operators -FEPORT), trade unions (European Transport workers Federation - ETF and International Dockworkers Council - IDC) and all key stakeholders.

The aim of the social dialogue is to contribute to the improvement of the competitiveness of the port industry and the creation and maintenance of employment via a stable environment that involves modern organisation of work and social provisions. Topics already included are those of training and certification, health and safety at work, and gender issues. Given the gradual approach of discussions, as the social dialogue progresses additional issues are expected to be included in the discussions. The European Commission provides technical and administrative support to the social dialogue and will evaluate progress at the end of the year 2016. Any agreements reached might later be turned into legislation.

## Providing ships with alternative energy sources

In 2014, the EU adopted a Directive on the "Deployment of alternative fuels infrastructure" (Directive 2014/94), aiming to ensure the development of relevant infrastructures throughout the EU territory. The related initiativethat constitutes a European alternative fuels strategy for clean Power for Transport, has identified electricity, hydrogen, biofuels, natural gas, and liquefied petroleum gas (LPG) as the principal alternative fuels with a potential for long-term oil substitution, also in light of their possible simultaneous and combined use by means of, for instance, dual-fuel technology systems.

The EU directive aims to eliminate the infrastructure deficit that exists in European ports regarding the possibility of providing ships with alternative energy sources, such as liquefied natural gas (LNG) supply and electricity (cold ironing). The initiative sets as priority the development of the necessary infrastructure in order to provide ships with electricity and the existence of LNG ship refuelling stations in ports which are included to the main ports network (TEN-T Core Network) by 2025.

As a result each EU member-state is expected to adopt a national policy framework for the development of the market as regards alternative fuels in the transport sector and the deployment of the relevant infrastructure. A European group of experts has been set up with the mandate to propose standards for marine LNG as ship fuel covering technical, operational, safety, security, training and environmental aspects of LNG bunkering. As a result, delegated acts on requirements on the bunkering of LNG, including the safety aspects reltated, might be adopted and applied in European ports in the near future.

Whether such adaptation necessities have been served in recent times can be understood via the systematic monitoring of the evolution of the traffic volumes served, and the trends of the economic and financial figures recorded. It is precisely these two issues that are analysed in the coming sections of GREPORT 2016.

## **Container Weighting**

The way to apply international requirements, referring to the verification of container weight by port terminal operators and ships when exporting a loaded container, has been recently in the spotlight, as part of the measures preventing the transportation of overweight containers. A number of international maritime associations submitted a relevant proposal to the International Maritime Organisation (IMO) with any final decisions expected to affect the practices of container terminals in seaports.

# Cargo & Passenger Traffic









The analysis for the markets of containers, liquid bulk cargo, cars and cruise is based on traffic data for the period 2005 - 2015.





The analysis for the markets of dry bulk cargo and coastal shipping is based on traffic data for the period 2005 – 2014, since data for the year 2015 are not available.

## 8. Corfu

- Coastal Shipping
- Cruise

- 6. Thessaloniki
  - Containers
  - Dry Bulk
  - Liquid Bulk
  - Coastal Shipping

## 1. Alexandroupolis

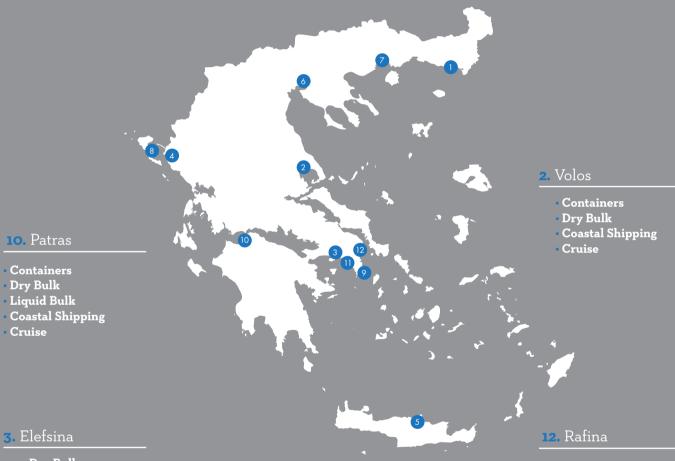
- Dry Bulk
- · Coastal Shipping
- Cruise

## 4. Igoumenitsa

- Coastal Shipping
- Cruise

## **7.** Kavala

- Containers
- Dry Bulk
- Coastal Shipping
- Cruise



- Dry Bulk
- Coastal Shipping

Coastal Shipping

## 9. Lavrio

- Containers
- Dry Bulk
- Coastal Shipping
- Cruise

## 5. Heraklion

- Containers
- Dry Bulk
- Liquid Bulk
- Coastal Shipping
- Cruise

## 11. Piraeus

- Containers
- Dry BulkLiquid Bulk
- Coastal Shipping
- Cruise
- · Ro/Ro

The decade 2005-2014 has been a period marked by significant challenges for Greek ports of international and national interest. The need to adjust to a new operational framework (as since 2001 they operate as Sociétés Anonymes) has been followed by the first concession of a container terminal to an international terminal operator, the advent of the global financial crisis in 2008 and the national one in 2010, the subsequent restrictions on public spending, and the presence of increased competition by speedily developed ports in neighbouring countries.

The trends of the aggregate cargo and passenger traffic in the ports under examination diverse per market segment. On the one hand, container throughput and cruise passenger movements have excelled, evidently unaffected by the trends in the national economy and the downturn of the country's GDP by 25% the same period. On the other hand, the general cargo throughput and coastal passenger movements have experienced a decline, confirming thus the correlation between such traffic and the development of the national economy.

Year 2009 has been a significant milestone for the container market in Greece. Piraeus Container Terminal SA (PCT SA), a subsidiary of COSCO Pacific Limited, started operating the Piraeus container terminal in October of that year. This has been followed by a significant increase of container traffic, great part of which being transshipment volumes. This growth reversed the stability and/or decreased the transported volumes of containers to and/or via Greece. This redirection had been further fuelled by lengthy and repeated industrial actions in the ports of Thessaloniki and Piraeus.

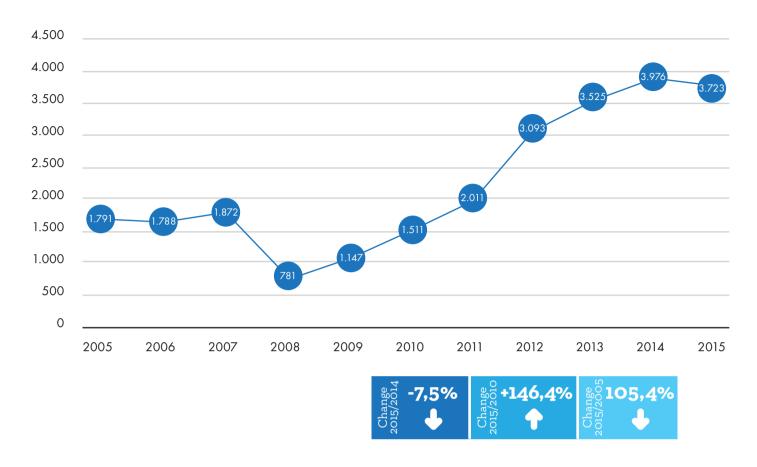
The volumes of the dry bulk cargo throughput have been closely related to the levels of imports of raw materials to be used by the Greek industries. During 2009 - 2011 dry bulk cargo transported by Greek ports decreased by almost 40%, a result of the decrease in domestic demand, as well as of the levels of production by those industries operating in the construction materials markets or steel. The transported volumes stabilised recently - adjusted to the domestic demand trends - whilst some ports have managed to substitute the loss of import volumes with transit cargoes transported for new clients in neighbouring countries.

**Liquid bulk cargo throughput also dropped.** The annual traffic reduced by 2/3 since 2010, as the downturn of domestic consumption has weakened the demand for oil products. While oil refineries increased their exports since then, imports of raw materials are adjusted to lower domestic demand levels. Some ports have decided to cease the respective operations, shifting their focus to other more profitable markets - the most illustrative example being Piraeus Port Authority SA.

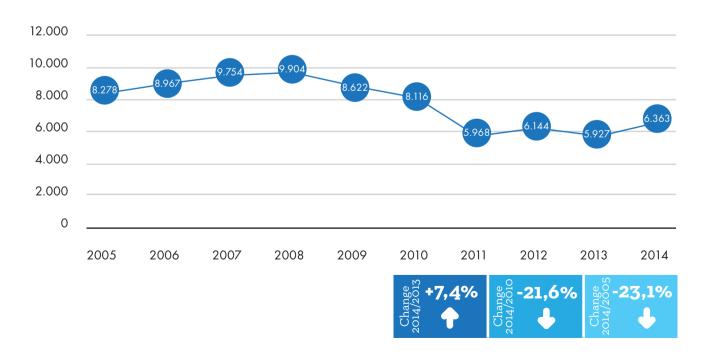
The national economic and social crisis has equally affected the coastal shipping market. With the movements of people and cars strongly correlated with income levels, the decline of the latter led several coastal shipping companies to opt for cancelations and/or rearrangements of itineraries, and fuelled decisions to sell ships in order to cope with the new conditions. A positive element though shined in 2014, and this is the noticed increase of passenger traffic by +4,9%, the first rise after five years of decline.

The cruise market has been shaped in a most positive way, unrelated to the trends of the national economy. The continuously growing cruise market in the Mediterranean Sea has been present in Greek ports as well. This increase though has been halted in recent years, when an unstable political environment in the nearby non-European countries affected cruise in all East Mediterranean ports. The resulted redeployment of cruise ships and the reorganisation of itineraries eventually ended up to a decrease in the total number of passengers. In 2016, Greek ports are expected to record increased numbers of cruise calls and passenger movements. This is partially due to the exclusion of Turkish destinations from cruise itineraries and the rescheduling of them towards Greek destinations - a shift regularly experienced since late 2015.

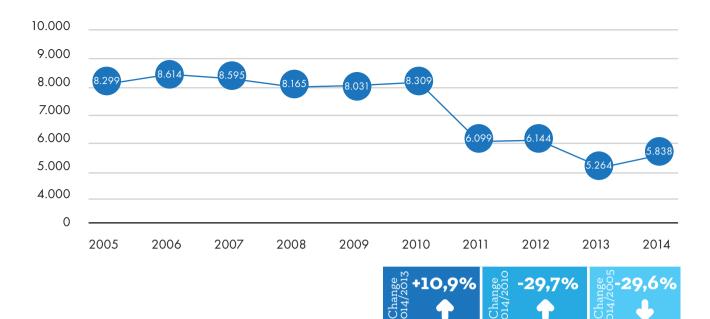
## Containers (.000 TEUs)



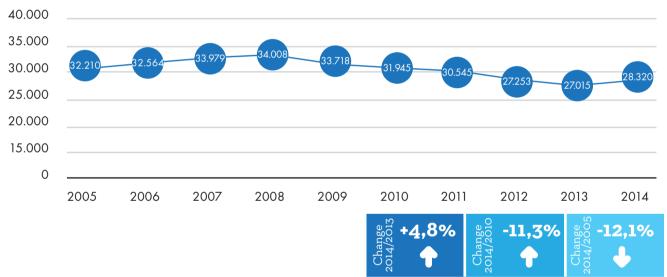
## Dry Bulk Cargo (.000 tons)



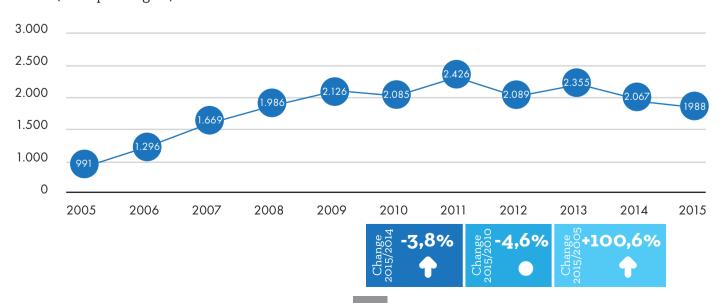
## Liquid Bulk Cargo (.000 tons)



## Coastal Shipping (.000 passengers)



## Cruise (.000 passengers)



## **Containers**

The port of Piraeus dominates the Greek market with the two container terminals serving a share of 90% of the containers handled in Greek ports. In the second position comes the port of Thessaloniki, which is also under privatisation. Three other Greek ports also handled a small number of containers.

The concession of the right to operate Pier II container terminal to PCT SA in 2009, the following reorganisation of services provision processes, the significant investments by PCT SA to upgrade Pier II terminal - and construct the Pier III terminal - have contributed to an impressive and consecutive course of the market. Within the five years period 2010-2014, the private terminal operator managed to increase the capacity of the terminal Pier II and attract significant container volumes, serving mostly the transshipment market. The completion of rail infrastructure and the use of cargo trains to transport containers to broader -beyond the country- hinterlands, contributed to the skyrocketed total number of handled containers. Piraeus port "climbed" 54 positions in the world ranking of the biggest container ports in terms of number of TEUs handled, reaching in 2014 a position among the 40 biggest container ports (39th) and emerging as the fourth biggest Mediterranean port - following only Valencia, Algeciras and Port Said.

These positive dynamics are followed by further concentration as regards the shares of Greek ports in this particular market segment. The cargoes handled in Piraeus by PPA SA were dramatically diminished in 2015, while the port of Thessaloniki regained the cargoes lost during the 2000s, the domestic and transit cargo volumes remained stable during the last five years. Meanwhile, the changes of the TEU volumes handled per annum in the rest of the Greek ports have not been such to affect the overall shares. Following these trends, PCT SA handles alone more than 80% of the total container traffic handled in Greek ports.

It is worth mentioning the diversity of types of container traffic handled by the two major ports of the country. Piraeus is handling mostly transit cargo volumes (78,1% in 2015 versus 44,7% in 2010), whereas a double-digit percentage is domestic cargoes traffic (11,7% in 2015 versus 33,7 in 2010). In the case of Thessaloniki port, the dominant type of handled containers is domestic traffic (61,3%) with most of the rest being transit container. An entirely distinct market, that of empty containers, represents one out of 10 containers in the case of the port of Piraeus and one out of four containers handled at the port of Thessaloniki.

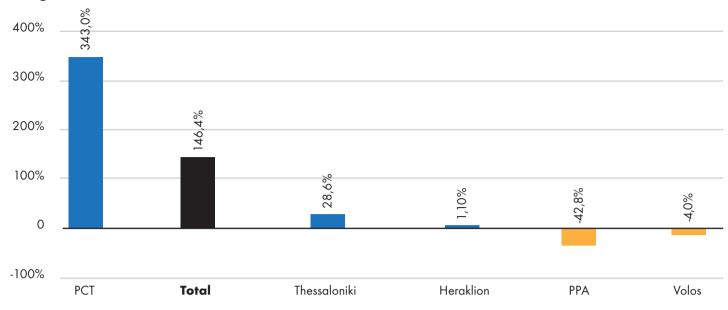
The factors to determine the volumes of containers handled by Greek ports in the near future include the level of investments by China COSCO Shipping Corporation Limited the new owner of the port of Piraeus, which is also the owner of PCT SA, the completion of the selling of the major share of the stocks of THPA SA.

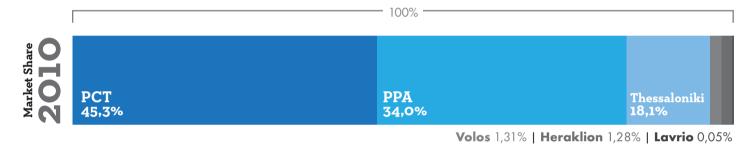
The inclusion of the country in the schedules of more shipping lines and/or alliances, the improvements of the country's connectivity with the landside transport networks and the organisation of the logistics chains are factors that would undoubtedly contribute to a further increase of container throughput in Greek ports. According to the Liner Shipping Connectivity Index (LSCI) of UNCTAD, in 2014 Greece stands at the 27th position in the world in terms of connectivity with the world shipping network (30th position in 2010), whereas, according to the Logistics Performance Indicator (LPI) of the World Bank, Greece was standing at the 44th position in the world (54th position in 2010).



	2015	Change 2015/2014	
Piraeus			
PCT SA	3.034.428	1,6%	•
PPA SA	293.353	-51,0%	•
Thessaloniki	351.407	0,5%	•
Heraklion	19.551	4,4%	•
Volos	19.046	9,0%	•
Lavrio	5.273	6,8%	•
Total	3.723.058	-7,46%	•

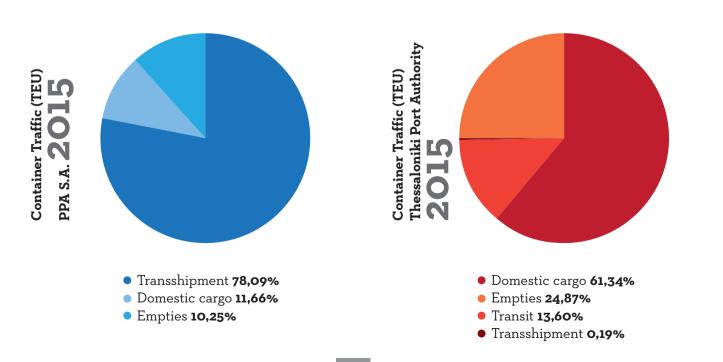
## Change in Traffic 2010 - 2015







Heraklion 0,53% | Volos 0,51% | Lavrio 0,14%



## Dry Bulk (tons)



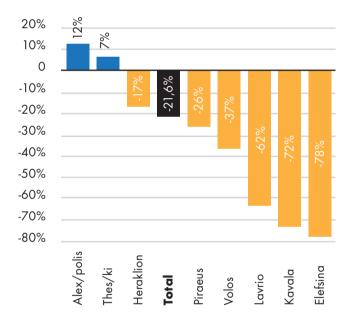
	2014	Change 2014/2013	
Thessaloniki	4.341.950	13,9%	•
Volos	718.899	-6,5%	+
Piraeus	425.151	-11,6%	•
Kavala	423.656	-15,2%	•
Alexandroupolis	244.959	36,2%	•
Elefsina	107.395	13,4%	•
Heraklion	91.615	5,2%	•
Lavrio	9.727	287,6%	•
Total	6.363.352	7.36%	1

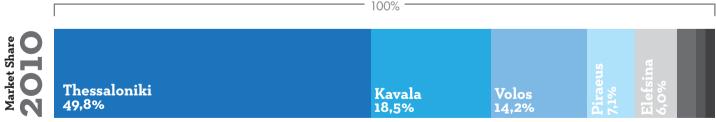
Eight port authorities of the country operate in the dry bulk market. The dry bulk traffic relates mostly to raw material imports for the Greek industry. Some exports also exist, especially clinker, agricultural products, scrap and cement. Market concentration in dry bulk sector is significant and expanding.

The port that handles the major percentage of dry bulk cargoes is Thessaloniki, which facilitates imports of raw materials for the industries of Northern Greece, but also for the steel industry of FYROM. Volos, Kavala, Piraeus and Alexandroupolis facilitate also substantial volumes of dry bulk cargo, but only the port of Alexandroupolis handled in 2014 more cargo volumes than those handled in 2010. All other ports recorded a double-digit decrease, whereas in some ports this decrease has been quite dramatic.

Market concentration has increased since 2010 as other ports than Thessaloniki experienced a decline of dry bulk cargo throughput. It is expected that Thessaloniki, as well as the rest of ports in Northern Greece ports, will phase intense competition from neighbouring ports. Thus, their competitive position is subject to timing completion of the scheduled port investments, but also depended on the development of landside transport networks that will offer better access to those willing to use Greek ports and then direct their dry bulk cargoes towards the Northern Balkans destinations.

### Change of Traffic 2010 - 2014





Alex/polis 2,7% | Heraklion 1,4% | Lavrio 0,3%

Market Share 2014

Thessaloniki 68,2% Volos 11,3% Volos 11,3%

Alex/polis 3,8% | Elefsina 1,7% | Heraklion 1,4% | Lavrio 0,2%

# Liquid Bulk (tons)



Change 2014/2013 port of Thessaloniki: 10,9% Change 2015/2014 port of Thessaloniki: 27,2%

	2005	2010	2014	2015
Thessaloniki	8.206.051	8.289.724	5.838.107	7.424.217
Heraklion	71.137	19.317		
Piraeus	21.773			

A number of Greek ports have progressively abandoned the liquid bulk cargo market, since most of these cargoes are handled by private port self-handling facilities operated by refineries. As a result, out of the 12 Greek port authorities the port of Thessaloniki is today the only port that facilitates liquid bulk cargo. Notably even within the port of Thessaloniki a private facility serves area of the Thessaloniki port authority jurisdiction. In the absence of significant liquid bulk cargoes, this specific market will continue to be mostly based on crude oil and related products and is not anticipated to record major changes throughout the coming years.

Thessaloniki
99,8%

Thessaloniki

Heraklion 0% | Piraeus 0%

Heraklion 0,2% | Piraeus 0%

## **Car Terminal**

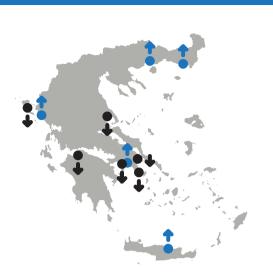


	2005	2010	2014	2015
Piraeus	379.589	380.346	359.665	341.386

The specialised car terminal at the port of Piraeus is the only one in Greece. The terminal, which has a capacity of 600.000 vehicles per year and has recently (2013) been connected to the railway network, facilitates the total of the domestic demand, but also a significant volume of transshipment. The recession of the national economy has led to a major decrease in car sales in Greece, the domestic cargo decreased by 60% compared with the pre-recession period.

Nevertheless, the port of Piraeus has managed to maintain the handled number of cars, as the ratio of domestic volumes to transshipment ones stand at 1:3. Significant transhipment traffic of cars is expected to sustain, even though during the past years competition intensified (i.e. Koper, Slovenia).

## **Coastal Shipping**



	2014	Change 2014/2013	
Piraeus	16.780.579	9,15%	•
Igoumenitsa	2.512.981	0,80%	1
Rafina	2.040.921	-1,30%	+
Kavala	1.821.595	7,40%	1
Heraklion	1.627.538	11,90%	•
Corfu	1.545.432	-1,90%	+
Patras	555.453	-23,30%	+
Elefsina	533.512	-20,80%	+
Lavrio	390.860	-10,30%	+
Volos	344.708	-2,70%	+
Alexandroupolis	141.490	4,10%	1
Thessaloniki	24.795	-25,36%	+
Total	28.319.864	4,90%	

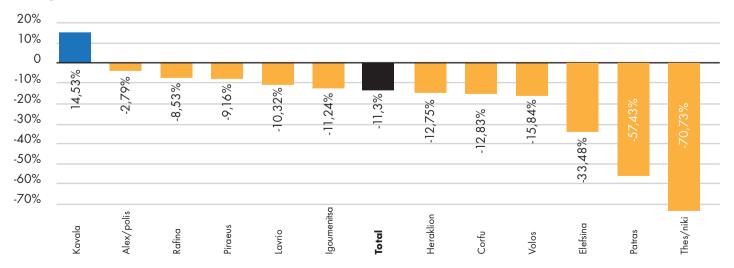
Calls of coastal shipping vessels are happening in all Greek ports. Being the central hub of the Greek coastal shipping network, Piraeus is the port with the major market share. The ports of Igoumenitsa and Rafina are the two other ports recording more than two million passenger movements per year, while in three other ports the coastal passengers' traffic exceeds 1,5 million passengers. The passenger traffic in Thessaloniki is notably low, while in Elefsina operates a ferry line.

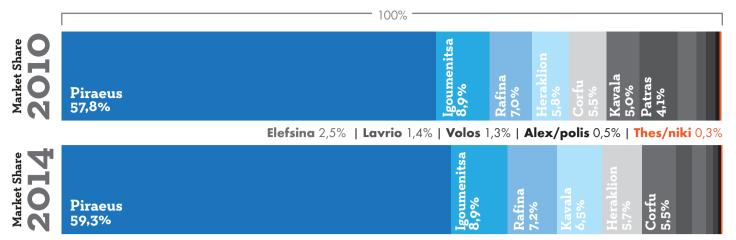
The volumes of coastal shipping passenger increased by 4,8% in 2014, with Heraklion registering a two-digit percentage increase, Piraeus approaching a similar level of growth

in percentage and the ports of Kavala and Alexandroupolis experiencing a one-digit percentage increase. Shipping lines serving the Greece-Italy connections have reacted to a decrease in traffic by reducing the frequency of their calls and reorganised deployment patterns. As a result, coastal passengers' movements at the port of Patras have dramatically decreased over the five-year mid-term period 2010 - 2014. Kavala and Rafina are the two ports where in 2014 more passengers recorded than the in the beginning of the financial crisis (2010), whilst the respective change recorded in the ports of Alexandroupolis, Volos and Igoumenitsa was comparatively marginal.

As regards the potential of the coastal shipping market, Lavrio and Rafina will continue to stand as the main competitors of Piraeus. The two ports try to capture the interest of more coastal lines given their proximity to destinations in Cyclades and the Northern Aegean, and the shorted time need to reach these islands comparing to trips departing from Piraeus. The long awaited implementation of the designed expansion of the rail network towards the port of Lavrio could affect the structures observed in the specific market.

#### Change in traffic 2010-2014





Patras 2,0% | Elefsina 1,9% | Lavrio 1,4% | Volos 1,2% | Alex/polis 0,5% | Thes/niki 0,1%

## **Cruise Shipping**



	2015	<b>Change</b> <b>2015/2014</b>	
Piraeus	980.149	-7,1%	•
Corfu	647.346	-3,7%	•
Heraklion	219.805	-3,1%	•
Volos	67.096	16,0%	•
Lavrio	30.493	74,2%	•
Thessaloniki	26.356	33,7%	•
Kavala	12.783	-2,3%	•
Igoumenitsa	3.090	-0,2%	•
Patras	1.090	46,3%	•
Alexandroupolis	278		
Total	1.988.486	-3,8%	+

Cruise shipping has emerged as a key activity at the majority of Greek ports. 10 out of the 12 Greek port authorities are hosting cruise calls. All of them develop strategies to attract more calls, aiming to enjoy the economic benefits generated by cruisers for the port, the port-city and the linked destinations.

The total of cruise passenger movements in these 10 ports appears to be lower in 20015 comparing to the numbers registered in 2014. The trends observed vary however when comparing individual cruise ports. The three major cruise ports, namely Piraeus – among the 10 biggest Mediterranean ports - Corfu and Heraklion recorded lower cruise passenger movements than the year before. As the three of them host more than 90% of the market share, they also determine the overall trends of the market. However, the three next biggest ports accomplished significant (Volos), impressive (Lavrio), and notable (Thessaloniki) increase of cruise passenger movements. The biggest increase of all was observed in the case of Lavrio, as the port attracted home-porting traffic and has expanded its operations in a market where until recently was inactive. Kavala and Igoumenitsa have seen cruise traffic remaining

stable, whilst limited are the relevant passenger volumes registered at Patras and Alexandroupolis.

Notably during the last decade the average number of cruise passenger movements per call has been doubled, standing at more than 1.500 passengers per call in 2014 (comparing to 718 passengers in 2005). Significant deviation might exist per port, whereas this average is lower than the one recorded across Mediterranean cruise ports (according to MedCruise data in 2015 this stands at 2.050 passengers per call). Yet, this increase remains impressive demanding maritime and landside operational adjustments. The continuation of the increase of size of cruise ships is indicative of the necessity for further improvements and adjustment of cruise ports infrastructures and related operations.

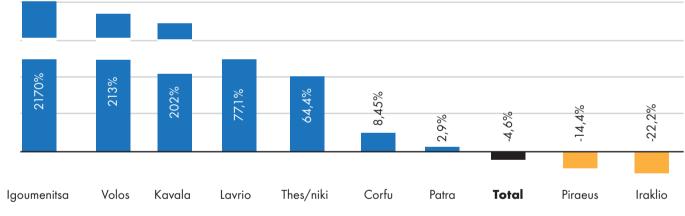
As regards the mid-term trends (2010 - 2015), the change of cruise passenger movements has been marginal, despite the dynamic of the global cruise market. Yet, this fact remains encouraging, since the local cruise market sustains its attractiveness in conditions of serious economic crisis in Greece and, most importantly in conditions of serious political, social and financial

instability throughout the wider South Eastern Mediterranean market. Taking into account the fact that, comparing to a decade before, cruise activities at the ports under examination doubled (from less than 991.000 passengers to more than two million passengers), the emphasis given by port authorities at the cruise market sector appears justifiable.

Greek ports are today major player in a cruise market defined by the presence of a large number of ports and nearby destinations. These two elements, in combination with the geography, history, civilisation, and hospitality associated with Greece, offer unique positive potential for further growth. Yet, there are concerns regarding the immediate prospects. First, because of the continuous political and social difficulties encountered in several non-European countries in nearby regions; cruise lines tend to develop itineraries that include more than one country. Second, because of the emphasisthat has been recently given by cruise lines to new destinations and the development of cruise in other regions, mostly the Asian market and Cuba. The development of modern infrastructure, especially the construction of new berthing positions at the port of Piraeus, the application of berth allocation systems, the improved cooperation between ports and port-cities and the communication of Greek ports potentials to cruise lines itinerary planners can significantly contribute to the increase of cruise vessel calls and passenger movements in Greek cruise ports.

Pax per Call	2010	2011	2012	2013	2014	2015
Corfu	1.388	1.370	1.352	1.551	1.702	1.591
Piraeus	1.434	1.587	1.570	1.832	1.742	1.578
Total	1.328	1.412	1.419	1.597	1.587	1.446
Heraklion	1.144	1.070	1.228	1.369	1.436	1.293
Volos	650	1.193	568	652	1.091	1.177
Thessaloniki	729	606	728	811	636	753
Kavala	385	271	432	473	503	581
Igoumenitsa	136	156	457	332	238	515
Patras	530	752	125	632	373	363
Alexandroupolis	0	242	0	474	0	278
Lavrio	689	242	913	671	973	575

### Change in traffic 2010-2015







Volos 3,4% | Thes/niki 1,3% | Lavrio 1,5% | Kavala 0,6% | Igoumenitsa 0,1%

# Economic Figures & Financial Analysis

Financial data are based on the published balance sheets and annual financial statements of the corresponding SAs, with the most recently available data referring to fiscal year 2014.

PPA SA and THPA SA have published balance sheets for the fiscal year 2015 and these particular data are used where applicable.

Elefsina Port Authority SA has not published financial statements for the fiscal year 2014 –the report assumes an annual change matching the average trends of the port market.

## This section presents the evolution of the key economic figures and financial indicators for the 12 Port Authorities SA in an aggregated form.

The analysis covers the period **2005-2014**. In most cases the presentation refers to two sub-periods (2005-2009 and 2010-2014) so that long-term trends can be properly reflected, whilst the impact of the long-lasting recession of the national economy since 2009 can be fully understood. The 2010-2014 data per port are presented in detail in Section 4.

The listed companies PPA SA and THPA SA have already published their financial statements for the fiscal year 2015. These statements follow the International Accounting Standards, and whenever permitted reference is made to these particular data. As regards the other Port Authorities, which report according to the Greek Accounting Standards, financial statements for the fiscal year 2015 have yet to be published. Moreover, being newly established, Evia Ports Authority SA has yet to publish its first financial statements, thus those will be analysed in the next edition of GREPORT.

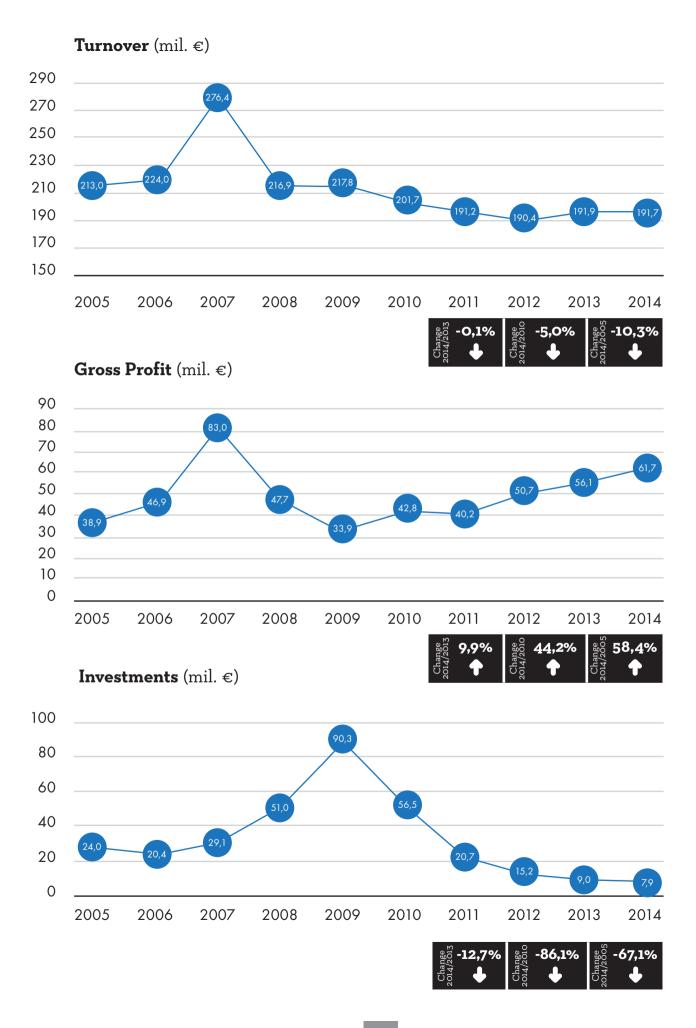
The **turnover** of the 12 Port Authorities is linked to trends of freight throughput and passenger traffic. The economic recession has affected the revenues of the 12 ports, whereas repeated industrial actions since 2008 in the two major ports of the country, Piraeus and Thessaloniki, and the global financial crisis that unfolded the very same year led to a decline of the total revenues.

Since 2009, the **gross profits** of the 12 ports have followed a different trend. A significant increase was recorded, a paradox that is attributed to multiple factors.

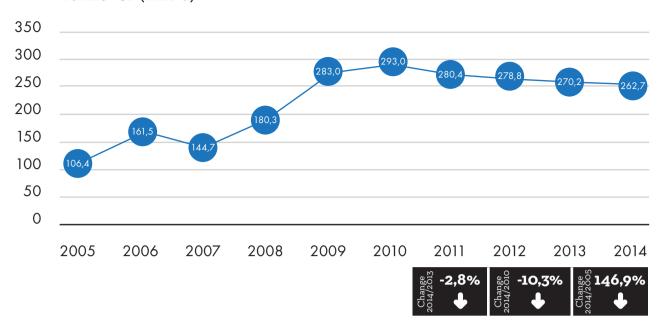
Firstly, **employment** and consequently staff costs, has been reduced. This happened mostly via the retirement of a significant number of workers at the ports; one out of five workers retired between 2010 and 2014. Secondly, there has been an obligatory reduction of public expenditures, as part of a broader fiscal policy adjustment, and the efforts of port authorities to report positive related progress to their major shareholder within a short period.

Lastly, but perhaps most importantly, investments undertaken by Greek ports have been significant reduced. Within a five years period, the investments under-quadrupled, leading to increased profit margin of port authorities.

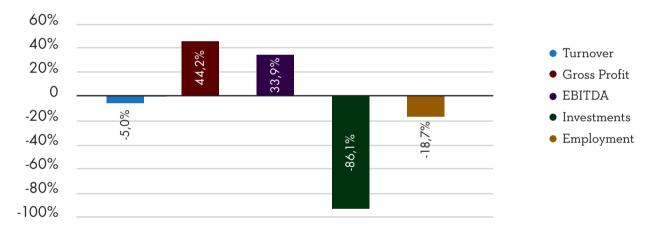
The aggregate **liabilities** of the 12 port entities indicate a considerable increase. This phenomenon though is almost exclusively attributed to the increase of the liabilities of PPA SA, in turn a result of the construction of Pier I Container Terminal that started in 2008 and for which the PPA SA received a loan of approximately €90 million.



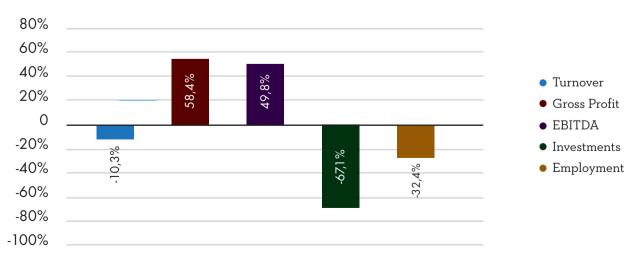
## **Turnover** (mil. €)



## Change in financial data (2010-2014)



## Change in financial data (2005-2014)



## Turnover

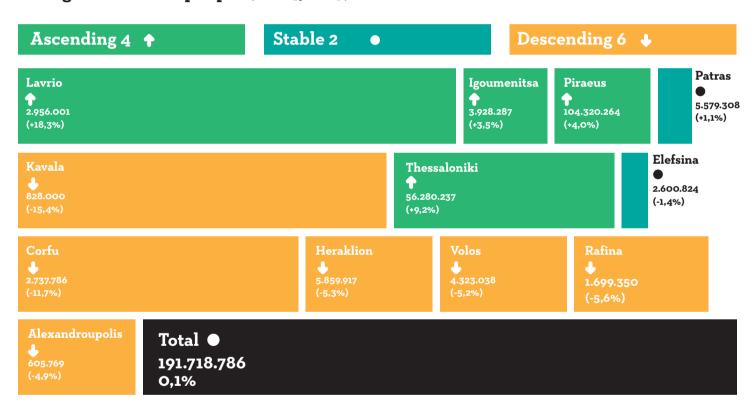
n 2014, the turnover of the 12 port entities reached €191,72 million, recording a marginal decrease of 0,1% compared to the results of fiscal year 2013. In the latter year the turnover stood at €191,90 million.

Having an extensive international presence, Piraeus and Thessaloniki are the dominant contributors to this total, with the other 10 ports maintaining mainly a national and/or local role. Piraeus is the major port, generating 54,4% of the total turnover (€104,32 million) and 37,2% of the total gross profits. Notably, the second largest port in the country, Thessaloniki, registers 29,3% of the total turnover (€56,28 million), but 45,3% of total gross profits of the 12 ports.

At the same time, the remaining 10 Port Authorities generate 16,3% of the annual turnover, and 17,41% of the total gross profits. Four ports (Igoumenitsa, Volos, Patras and Heraklion) account for 63,3% of this €31,16 million turnover and 71,0% of the total gross profit registered at these 10 ports. Rafina was the only port case which experienced a decline of its annual turnover and gross profit during 2014 comparing to 2013, while Kavala recorded losses for the third consecutive year.

Port	Turnover as % of the total
Alexandroupolis Kavala Rafina Elefsina Corfu Lavrio Igoumenitsa Volos Patras Heraklion	0,32% 0,43% 0,89% 1,36% 1,43% 1,54% 2,05% 2,25% 2,91% 3,06%
Total - 10 Ports Thessaloniki Piraeus	<b>16,23</b> 29,36% 54,41%
Total - 12 Ports	100%

## Change in Turnover per port, 2014/2013, in €



Interestingly, the evolution of the combined turnover of Greek corporatised port entities follows the trends of the Gross Domestic Product (GDP). This is evident when constructing indexes to compare the evolution that took place the decade 2005-2014, using 2005 as the base year (2005-100).

Since 2011 the combined PPA and THPA turnover has increased, despite the Greek GDP has headed to the opposite direction. This is attributed to three factors. Firstly, cargoes, especially containers, that had been moved to nearby competitive ports during the strikes that marked the period 2007 -2009 returned to Piraeus, also benefiting by the new operating conditions at the port of Piraeus. Secondly, the activation of Piraeus Container Terminal (PCT) SA as the operator of the Pier II container terminal and the commencing of the construction of the Piraeus Pier III container terminal created positive dynam-

ics as regards container traffic, contributing directly to the increase of the PPA revenues. Thirdly, in Thessaloniki the increase of revenues has been remarkable. This happened mainly as a result of the increase of the container traffic and secondarily due to the increase of dry bulk cargo traffic, a result of the aggressive strategy to attract more cargoes from neighbouring countries in general and FYROM in particular.

As regards the Turnover of the other 10 ports, the trend has been almost identical to the changes observed in the GDP of the country, demonstrating the correlation of the traffic in these regional ports of national importance and the directly linked (local) hinterland. Year 2013 stands as an exception, as the total revenues of the 10 ports increased despite the decline of the GDP. Earlier, in particular during the period 2007-08, the strikes that accompanied the governmental

plans to concession the Piraeus Container Terminal had led to redirections of substantial cargo volumes from the ports of Piraeus and Thessaloniki, and to substantial increases of revenues for the 10 port entities.



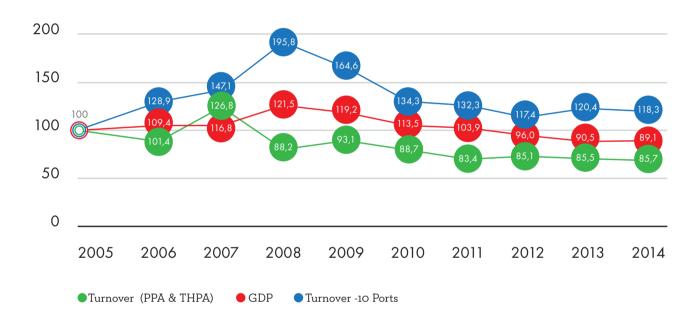
Point of interest forms also the development of the turnover and market shares maintained by each of the 10 regional ports of national interest, in comparison with the average turnover growth of all, as well as the respective trends within a long term (2005-2014) and a medium-term (2010-2014) period perspective.

Five ports remained in the lower left quadrant ("Dogs") for both reporting periods.

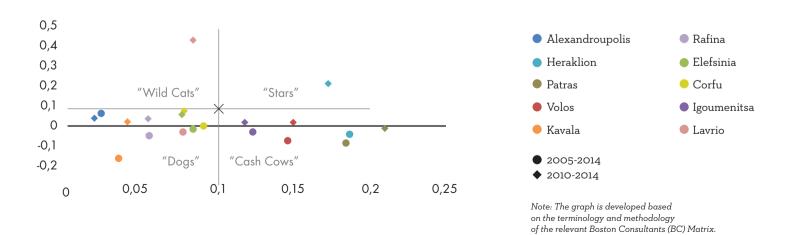
This means that they maintained a small market share, while their turnover increased at a lower rate than the average. Three ports are placed in the lower right quadrant ("Cash cows"), retaining a higher market share than the average, but with a growth rate that is lower than the average one. Ports positioned in this quadrant generally have positive cash flows, while they require relatively limited investments in order to generate satisfactory revenues.

Within a ten-year perspective, Lavrio is placed at the upper left quadrant, as it achieved significantly higher average annual growth rate than the overall market, yet maintains a small market share. However, a five-year analysis (2010-2014) reveals that Lavrio did not retain its considerable momentum in 2010s, losing market shares and showing a lower growth rate in relation to the market average. Similarly, during the decade 2005-2014 Heraklion recorded a higher growth rate than the average growth of the 10 ports, in combination with a significant market share. Yet, during the most recent five years period 2010-2014, a significant part of its growth rate evaporated, while the port continues to hold a high market share.

## **Evolution of Turnover and GDP (2005 - 2014).** Base year 2005 = 100



## Mid and Long Term Trends in Turnover, per port



## **Profits of Ports**

The trends of gross profits have been quite different per port authority. Illustrative is the comparison of these trends using 2005 as base year (GPI2005 = 100). In absolute values that specific year the gross profits of PPA SA reached €24,6 million, that of THPA SA €8,65 million and those of the other 10 port authorities aggregated €5,66 million.

The trends in Piraeus and Thessaloniki followed approximately the same direction throughout the period 2005-2009, but were significantly differentiated during the period 2010-2014. Within the latter period, figures of the PPA SA in 2011 and thereafter increased by lower rates, whereas the gross profits of THPA SA continued to grow significantly.

The gross profits generated in the case of the 10 other port entities increased considerably during 2005-2008, partly a result of serving cargoes redirected from Piraeus and Thessaloniki. From 2009 until 2012, the levels of these gross profits took a downward trend, in line with lower annual turnover. An increase was observed in 2013, when gross profits €10,95 million, while 2014 ended with a marginal fall.

In the case of the two major ports of the country, a rapid increase of gross profits was recorded in Thessaloniki, whereas in Piraeus the increase of gross profits follows a smoother changing pace. The most noteworthy fact is that since 2008 PPA SA has not been able to reach or exceed the gross profit recorded in 2005.

The difference between the performance of PPA and THPA is a result of many factors, four of which are of major importance:

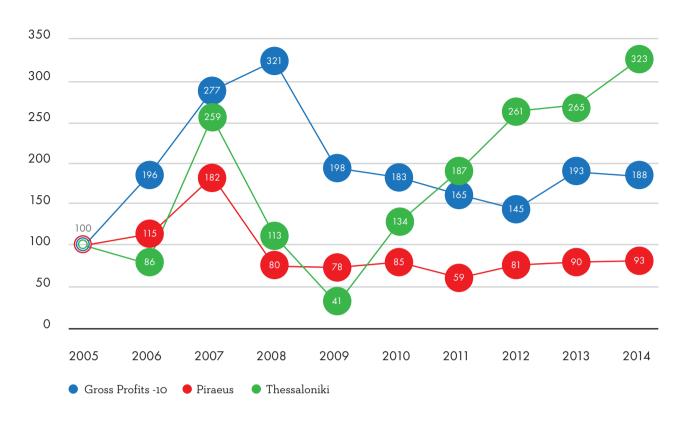
- PPA SA has faced difficulties in developing profitable operations in the container terminal it operates (Pier I). This has been combined with the absence of growth in the case of the other types of cargoes, e.g. dry or liquid bulk, with the exception of cars. These had a negative impact on the financial results of the listed company. The increased labour cost produced by the legislative obligation to employ all workers who decided in 2009 not to work for the new operator of the Pier II container terminal had a very partial contribution, as a result of the existence of staff redundancy.
- THPA experienced a significant reduction in personnel (more details at Section IV detailing developments happened at each port), as a result of staff retirement with no corresponding replacements part of the fiscal adjustment programme of the country. As a result, labour costs decreased significantly, with the remaining staff increasing efficiency in meeting the operational needs of the port.
- Since 2009, there has been a lack of sizable investments in the port of Thessaloniki, as the infrastructure projects that were scheduled were either postponed or cancelled. Rather than registering investments, the financial records of THPA SA recorded increasing profit margins and gross profits.
- Container throughput handled in Thessaloniki (thus by THPA) has increased significantly. This is a quite profitable activity with notable net profit margins. On the other hand, the number of TEUs handled in the container terminal operated by the PPA SA was reduced the period 2009-2011 by a total of 26,16%, increased substantially in 2012 and 2013 before lowering notably in 2014.

Port	Gross profit as % of the total
Alexandroupolis Corfu Rafina	0,41% 0,55% 0,62%
Elefsina Heraklion Lavrio Volos Igoumenitsa Patras	1,69% 2,30% 2,33% 2,83% 2,84% 4,05%
Kavala  Total - 10 Ports  Piraeus	<b>17,01%</b> 37,23%
Thessaloniki Total - 12 Ports	45,36% <b>100%</b>

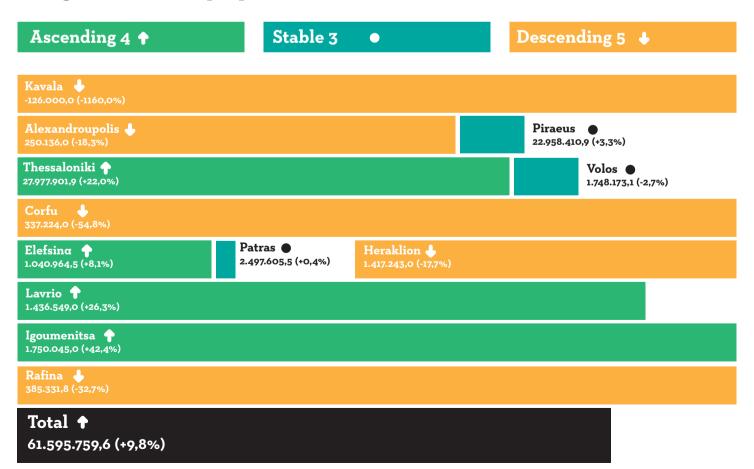
Gross Profit 2014 61.673.585

Note that in 2009 THPA SA recorded an extraordinary gross profit as, in line with the relevant tender process, the decision of the selected as preferred bidder to operate the Thessaloniki container terminal (Hutchinson) to withdraw its interest was accompanied by a payment of €5 million.

## **Evolution in Gross Profits (2005 - 2014)** Base Year 2005 = 100



## Change in Gross Profit per port, 2014/2013, in €

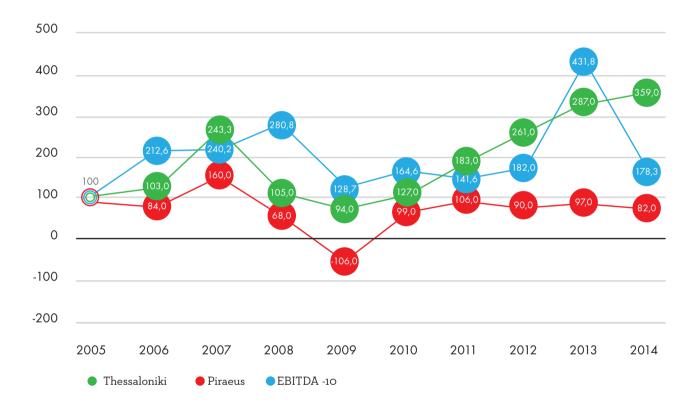


## **Key Financial Data**

Focusing on the annual change of the most important financial data reported in most recent statements (fiscal year 2014), we observe that the volume of the aggregate gross profits of the 12 Port Authorities increased by 9,9%. This increase, however, is almost entirely attributed to the increase of the gross profits of THPA SA.

During the same period the total **Earnings before interest, taxes, depreciation and amortisation (EBITDA)** decreased by 13,5%. In Thessaloniki the EBIDTA increased, whereas Alexandroupolis, Kavala and Lavrio also recorded an improving EBIDTA index.

## Evolution in EBITDA (2005 - 2014)



The liabilities of the 10 regional port authorities have remained stable in recent years, mainly due to the absence of investments that would require substantial loans. Piraeus has not proceeded to any significant investments since the construction of Pier I container terminal, as the privatisation process is in progress. In the case of Thessaloniki the levels of liabilities are really low.

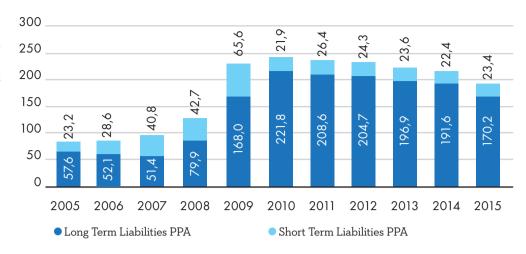
The **investments** recorded in all 12 ports in 2014 were 17,1% less than those that had been recorded a year before. This change was mainly a result of the reduction of the investments undertaken by PPA SA and secondarily of the trends in the 10 regional port entities. In absolute values, the decline is translated to just €1,54 million. Overall, the invested capital in Greek ports the five-year period that the national economy has been marked by recession stands at 50% of the funds that had been invested during the five-year period before the economic crisis.

The main cause for these limited investments is the presence of a national fiscal adjustment program and the limitation that it imposes to public investments. The absence of a long-term port policy and the repeated postponements of a decision regarding the optimum governance of Greek ports delay further any investment planning. The delays and readjustments of governmental planning in relation to ports postponed and cancelled planned investments in anticipation of the arrival of private investors. One might also note that the port of Piraeus, and to a certain extent the 10 regional port authorities, had proceeded to major investments during the years 2007-2011, covering immediate needs, with any recent investments focusing on operational needs (repairs, mobile equipment purchases, etc.).

Meanwhile, despite the economic recession in Greece, the single private container terminal operator in the country, PCT SA has proceeded in significant investments in Piraeus - upgrading Pier II terminal, but also advancing the construction of Pier III container terminal.

**Employment** at the 12 port corporate entities decreased by 3,9% following a combination of personnel retirements and absence of personnel hiring. The structural adjustment programme of the Greek public sector imposes the absence of personnel recruitments. The number of retirements has been fuelled by the fact that policy reforms urged port employees to retire in order to avoid increased retirement age limitation and further cuts in related pensions.

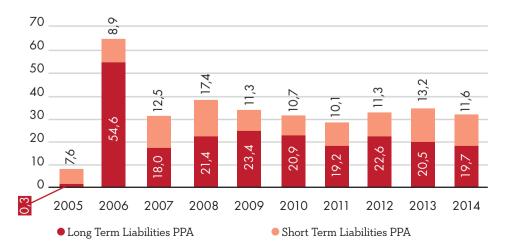
## **Liabilities, PPA SA, 2005 - 2014** (in mil. €)



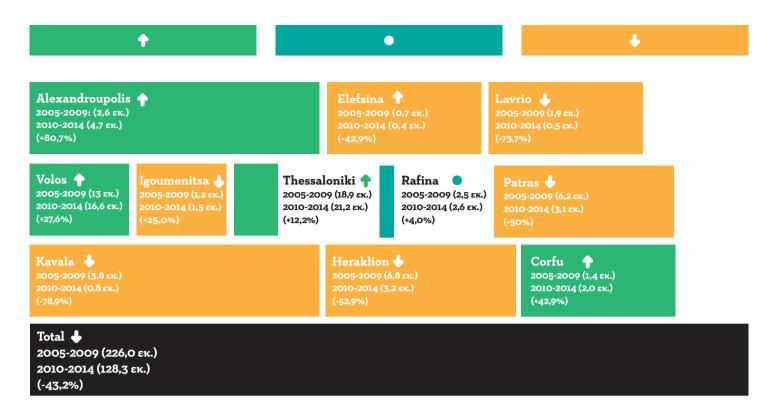
## **Liabilities, THPA SA, 2005 - 2014** (in mil. €)



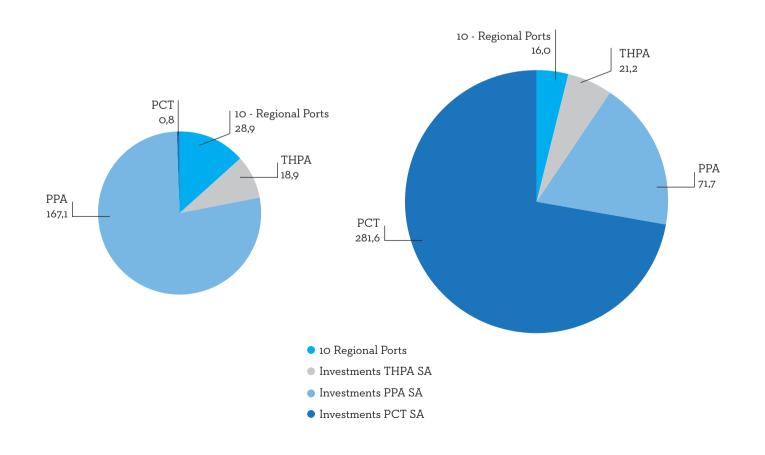
## Liabilities, Regional Port Authorities, 2005 - 2014 (in mil. €)



## Change in Investments per Port Authority, 2005 - 2009 vs 2010 - 2014 (in mil. €)



## Investments of Port Authorities and PCT SA (2005 - 2009 vs 2010 -2014)



## Financial Indicators per port

A comparison of the main economic data and financial indicators suggests a great annual variation per indicator as regards both the direction and the density of the annual changes. Total gross profits increased in 2014 by 9,9%. Gross profit margin increased by almost identical percentage (10%). On the contrary, due to the lower Net profits and lower Earnings before taxes, the Return on Assets (ROA) and the Return on Equity (ROE) declined by 17,4% and 17,3% respectively.

Port Authority of **Alexandroupolis** has not experienced any significant change in its turnover. A significant reduction of gross profits resulted in decline of the gross profit margin by 14,1%. On the contrary, ROA and ROE increased significantly by 49,6% and 39,6% respectively, mainly a result of increased net profits.

**Volos** Port Authority did not experience any major variation of its financial data, as in almost all categories the annual changes fall within the limits of +/- 5%. Based on estimations, the port of **Elefsina** records increased earnings and gross profit margins, along with stable levels of turnover.

Port Authority of **Kavala** ended the fiscal year 2014 with its revenues standing 15,4% lower than the year before. The increase of losses (- €126.000 in 20014 compared to - €10.000 in 2013) does not give the opportunity to calculate the gross profit margin.

The Turnover of **Igoumenitsa** Port Authority increased in 2014 by 3,5%, accompanied by a significant increase of the gross profit margin by 37,5%. ROA and ROE dropped by 34,5%, due to the decrease of the net profits and the growth of the company's assets. Port Authority of **Heraklion** experienced a slight decrease of its turnover and a reduction of the gross profit margin by -13,1%. The ROA and ROE ratios decreased by 83% and 85,4% respectively, a result of the considerable decrease of the company's earnings before taxes.

**Thessaloniki** Port Authority SA achieved significant growth in 2014, with the turnover increasing by 9,2% compared to 2013 and the gross profits increasing by 22%. The gross profits margin increased by 11,8%, with this margin standing at the impressive 49,71%, the highest rate among all Greek port entities. ROE and ROA have been also increased.

The turnover and gross profits of the Port Authority of **Corfu** decreased significantly in 2014. The gross profit margin also decreased by 48,8% and in absolute value equalled 12,32%. ROE and ROA remained stable.

The revenues of **Lavrio** Port Authority increased by 18,3% and the gross profits by 26,3%. As a result, the gross profit margin grew by 6,7%. ROA and ROE moved upwards as a result of the increase of net profits and earnings before taxes (EBITDA).

In 2014, the financial figures of the Port Authority of **Patras** remained at the 2013 levels, with changes of revenues and gross profits being insignificant. On the other side, ROA and ROE indicators deteriorated significantly.

**Piraeus** Port Authority is another case that revenues and gross profits experienced marginal annual changes. The gross profit margin moved upwards, increased by 7,6%, while ROE and ROA indicators fell by 26% and 24% respectively.

**Rafina** Port Authority experienced a decline of its turnover and its gross profits in 2014. This reduced significantly the company's gross profit margin by 28,7% (standing at 22,68% in 2014). ROE and ROA indicators moved downwards due to the decrease of net profits and earnings before taxes.

## Change in financial data per port (2013-2014)

	Financia (Change 20					nancial Ratios nge 2013 - 2014)	
Alexandroupolis	Turnover	Gross Profit	G.P.M.	ROA	ROE	Debt Ratio	Capital Ratio
General Liquidity Ratio 23,5%	-4,9%	-18,3% 🕹	-14,1% 🕹	49,6% 🕈	39,6%	-10,7% 👃	4,4%
<b>Volos</b> General Liquidity Ratio	Turnover	Gross Profit	G.P.M.	ROA	ROE	Debt Ratio	Capital Ratio
26,8%	-5,2% 👃	<b>-2,7</b> % ●	+2,6%●	1,2%	-2,9%	-16,7% 👃	15,1% 🕈
Elefsina * General Liquidity Ratio	Turnover	Gross Profit	G.P.M.	ROA	ROE	Debt Ratio	Capital Ratio
<b>3,3%</b>	-1,4%	8,1% 🕈	9,7% 🕈	-18,0% 🕹	17,9% 🕹	0,3% ●	<b>0,2</b> % •
Igoumenitsa General Liquidity Ratio	Turnover	Gross Profit	G.P.M.	ROA	ROE	Debt Ratio	Capital Ratio
3,3%	3,5%	42,4%	37,5% 🕈	-34,3% ♣	-34,5% 🖶	-2,6%	2,3% 🕈
Heraklion General Liquidity Ratio	Turnover	Gross Profit	G.P.M.	ROA	ROE	Debt Ratio	Capital Ratio
88,1%	-5,3% 👃	-17,7% 🕹	-13,1% 🕹	-83,0% 🖶	-85,4% 🖶	-26,7% 🖶	17,2% 🕈
Thessaloniki General Liquidity Ratio	Turnover	Gross Profit	G.P.M.	ROA	ROE	Debt Ratio	Capital Ratio
-17,1%	9,2% 🕈	22,0% 🕈	11,8% 🕈	31,2% 🕈	34,5%	25,6% 🕈	-18,4% ♣
<b>Kavala</b> General Liquidity Ratio	Turnover	Gross Profit	G.P.M.	ROA	ROE	Debt Ratio	Capital Ratio
41,4%	-15,4% 👃	Ζημιές ( -12	6.000) 🖶	50,3% 🕈	44,7%	83,6% 🕈	-39,4% ♣
Corfu General Liquidity Ratio	Turnover	Gross Profit	G.P.M.	ROA	ROE	Debt Ratio	Capital Ratio
9,1%	-11,7% 👃	-54,8% 🗣	<b>-48,8%♣</b>	2,0%	-2,6%	-16,9% 👃	15,0% 🕈
Lavrio	Turnover	Gross Profit	G.P.M.	ROA	ROE	Debt Ratio	Capital Ratio
General Liquidity Ratio <b>30,1%</b>	18,3% 🕈	26,3% 🕈	6,7% 🕈	54,2% 🕈	28,5% 🕈	-30,8% 🕹	20,5% 🕈

<sup>\*</sup>Για τον Οργανισμό Λιμένος Ελευσίνας, ο Ισολογισμός του έτους 2014 έχει θεωρηθεί ίδιος με εκείνον του έτους 2013

Financial (Change 201					inancial Ratios ange 2013 - 2014)	
Gross Turnover Profit		G.P.M.	ROA	ROE	Debt Ratio	Capital Ratio
1,1%	0,4%	-0,7% <b>•</b>	-93,3% 🕹	-93,2% 🖶	14,1% 🕈	-11,6% 🕹

Piraeus
General Liquidity Ratio
-4,0%

General Liquidity Ratio

**Patras** 

-10,8%

Turnover	Gross Profit	G.P.M.	ROA	ROE	Debt Ratio	Capital Ratio
-4,0%	3,3% ●	7,6% 🕈	-24,0% 🖶	-26,0%	<b>-4,5</b> % ●	2,0%

#### **Rafina** General Liquidity Ratio **6,3%**

Turnover	Gross Profit	G.P.M.	ROA	ROE	Debt Ratio	Capital Ratio
-5,6% 👃	-32,7% 🖶	-28,7% 🖶	-44,3% 🖶	-47,7%	-9,1% 👃	3,2%

## **TOTAL 12 PORTS**

Change General Liquidity Ratio 1,4%

Financial Data
(Change 2013 - 2014)

#### Financial Ratios (Change 2013 - 2014)

Turnover	Profit	G.P.M.	ROA -17,4% ♦	ROE -17,3% ♣	Debt Ratio	Capital Ratio	
T	Gross		DOI	D.0.E	D. L. D. J.	C : ID :	



G.P.M. = Gross Profit/Turnover | ROA= Net Profit | Assets | ROE= Profit before Taxes | Equity

\*The absolute values of the respective category have been negative (losses) for both fiscal years 2013 and 2014

Analysis per Port

# **Alexandroupolis Port Authority SA**

Located at a crucial strategic position in Northern Greece, the port of Alexandroupolis is node of the Pan-European Transport corridor IX. The port is also linked to the Egnatia Motorway (the linkage with the motorway is in progress).

The port consists of two piers with a total length of 2.665 meters and depths that reach 14 meters. The port zone occupies a surface of 1.380 acres. The port facilitates mostly coastal shipping traffic, which is facilitated at the West pier. Dry bulk

cargo (mostly grain) and general cargo is also served. The port has a pier to be used for the handling of containers. Until today, however, this pier has not been equipped and utilised. The port infrastructure can also accommodate yachts and fishing boats.

Alexandroupolis is one of the biggest ports of the country in terms of available area. The port has been further expanded in recent times following the completion of the dredging of the basin and the channel, a work completed at the end of 2015.

#### Significant Developments (2014 - )

- Completion of the connection of the port with the national railway network, a project of total cost €3,1 million. Railway connection Alexandroupolis Orhomenos, electrification of the system and connection with the industrial area.
- The creation of a floating LNG terminal, the connection with the Egnatia Motorway, as well as improvements of the port are included by the Ministry of Economics in the list of projects to be financed in the co "Junker package".
- Dredging and related works of the basin completed in 2015.
- Use of Alexandroupolis port as a storage and transporta-

tion node of the Trans Adriatic Pipeline (TAP).

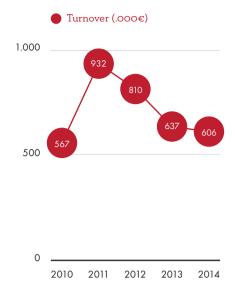
- Planning for concessioning of the freight center of Alexandroupolis, via a tender, during the first semester of 2017.
- Memorandum of Cooperation between Alexandroupolis Port Authority and Damietta port (Egypt).
- Beginning of authorisation procedures for the operation of hydroplanes.
- Memorandum of Cooperation between Alexandroupolis Port Authority and Democritus University of Thrace, with the latter acting as technical consultant for the port authority.
  - · Change of BOD composition in September 2015.

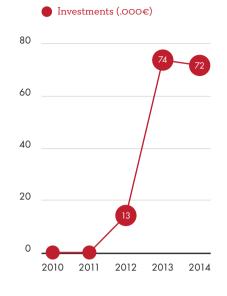
Turnover €605,760 (-4,9%)
Gross Profit €250.136 (-18,3%)
EBITDA €62.837 (+28%)
Investments €71.826
Gross Profit Margin 41,29%
ROA 3,77% | ROE 9,47%
Debt Ratio 1,5
Total number of employees 8

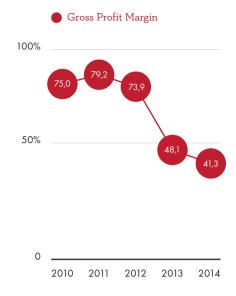
Detailed Traffic Data

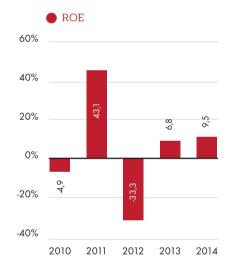


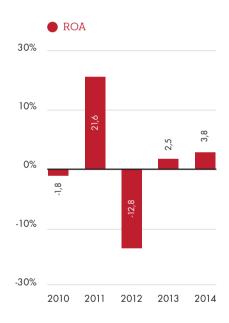


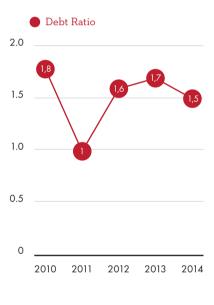


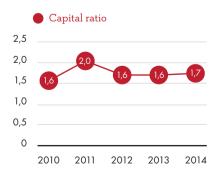


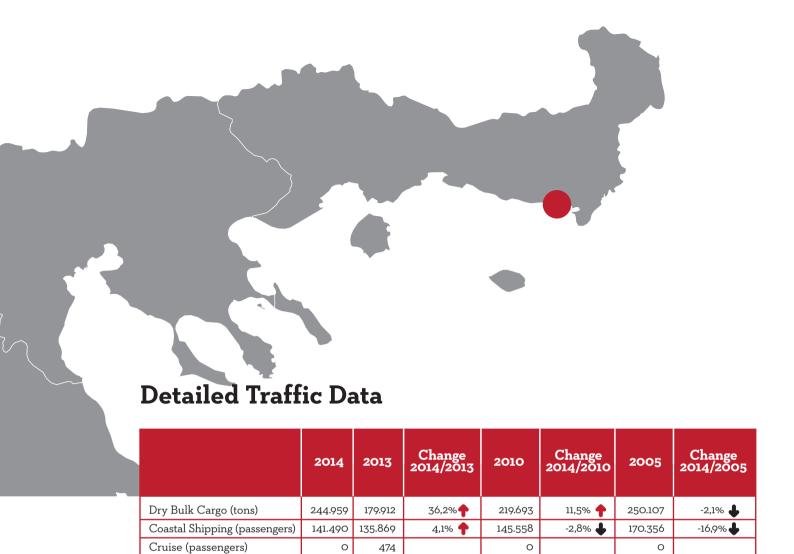












	2014	2013	Change 2014/2013	2010	Change 2014/2010	2005	Change 2014/2005
Turnover	605.769	637.077	-4,9% 👃	567.192	6,8% 🛖	372.162,45	62,8% 🛖
Gross Profit	250.136	306.141	-18,3% 🖶	425.495	-41,2% 🖶	75.246,27	232,4%
Profit before tax	64.870	44.670	45,2% 👚	-20.777	412,2% 👚	-167.404,33	•
EBITDA	62.837	49.110	28,0% 🕈	-5.351	•	-86.367,98	•
Equity	684.747	658.208	4,0%	422.647	62,0% 👚	1.309.032,45	-47,7% 🖶
Total Liabilities	1.034.890	1.113.879	-7,1% 🖶	757.171	36,7% 👚	189.682,74	445,6%
Investments	71.826	73.770	-2,6% 🖶	0	1	387.898,00	-81,5% 🖶
Employment	8	8		8		8	

# Corfu Port Authority SA

The port of Corfu serves the connection of the island with the mainland, while it is an important cruise port at the Adriatic and Ionian sea region. The port facilitates mostly coastal shipping traffic and cruise activities, as well as the berthing of yachts. Significant improvement of infrastructures that were recently completed intend to allow for more and/or bigger cruise vessels' berthing.

Apart from the main port, Corfu Port Authority SA operates the ports of Diapontia Islands, and those of the islands Erikoussa, Othoni and Paxi. The port of Corfu serves a coastal shipping connection with the Igoumenitsa port while there is also seasonal connection with Italian ports and the port of Patras.

#### Significant Developments (2014 - )

- · Expansion of the windward jetty by 430 metres, reaching capacity to accommodate four cruise ships.
- · Construction of a ring node aiming to separate the embarkation/disembarkation of cars and passenger flows from non-port related flows.
  - · Authorisation procedures for the operation of hydroplanes.
- Elaboration of a new study for the cruise passengers' satisfac-
- · Change of President and Managing Director in March 2014.
- Change of BOD composition in November 2015.
- · Corfu port authority named responsible for the operation of port installations in 33 different locations beyond the port zone.

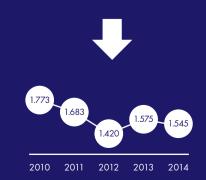
Turnover €2.737.786 (-11,7%) Gross Profit €337.224 (-54,8%) EBITDA €**998.110** (+2,4%) Investements €197.555 Gross Profit Margin 12,32% ROA: 10,29% | ROE: 13,37% Debt Ratio **0,30** 

Total number of employees 9



## **Coastal Shipping**

coastal shipping passengers 1.545.432 (-1,9% in comparison to 2013)



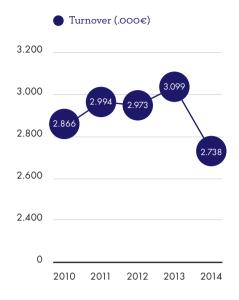


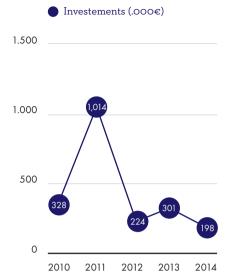
#### Cruise

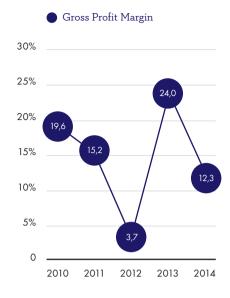
672.368 passengers (-9.7%)

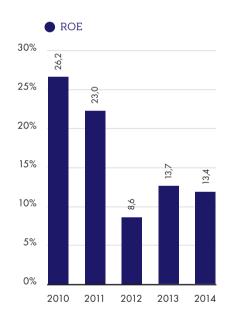
395 cruise ship calls

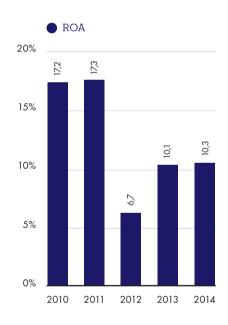


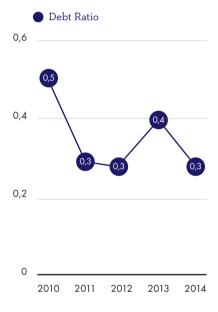


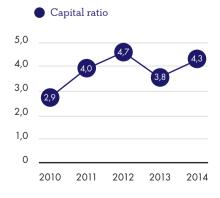


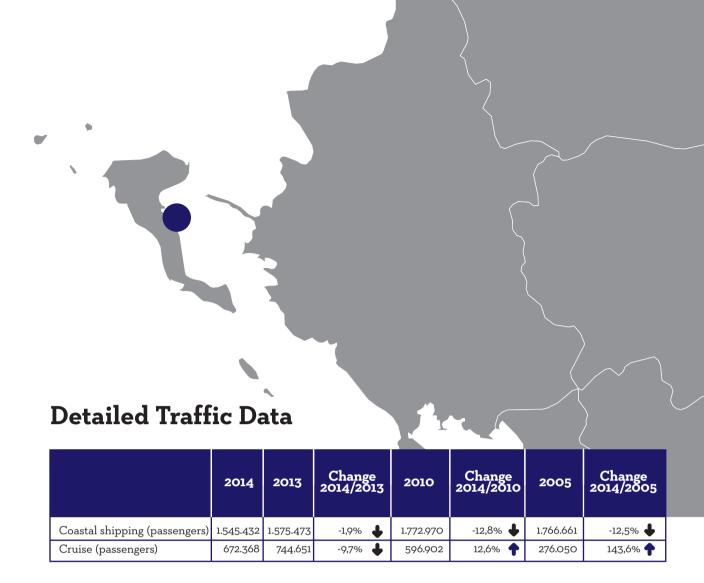












	2014	2013	Change 2014/2013	2010	Change 2014/2010	2005	Change 2014/2005
Turnover	2.737.786	3.099.058	-11,7%	2.865.920	-4,5%	1.553.942	76,2%
Gross Profit	337.224	745.281	-54,8% 🖶	560.924	-39,9% 🖶	-26.364	
Profit before tax	786.055	780.079	0,8%	1.041.479	-24,5% 🖶	70.880	1009,0% 👚
EBITDA	998.110	975.159	2,4%	1.261.609	-20,9% 🖶	568.589	75,5%
Equity	5.879.448	5.682.538	3,5%	3.980.317	47,7%	2.148.735	173,6% 🛖
Total Liabilities	1.760.124	2.048.315	-14,1% 🖶	2.066.563	-14,8% 🖶	485.593	262,5% 🛖
Investments	197.555	301.306	-34,4% 🖶	328.173	-39,8% 🖶	94.488	109,1% 👚
Employment	9	9		12		12	

# **Elefsina Port Authority SA**

The port of Elefsina is one of the four biggest ports of the municipality of Attica, serving mostly cargo traffic. The total length of the piers is 1.037 meters, with a depth up to 10 meters. Cargo throughput is facilitated using a 50 acres land surface.

The port facilitates mostly dry bulk cargo (scrap etc.) and general cargo (wood, steel products etc.). It also hosts Ro/Ro calls, while there is also a berthing area available for passengers handling. The mechanical equipment of the port for cargo

loading/unloading includes three propelled cranes with a lifting capacity up to 45 tons. Two marinas with a capacity to accommodate up to 100 yachts, and fishing harbour having a capacity of approximately 70 fishing boats are also under the jurisdiction of the Elefsina Port Authority.

#### Significant Developments (2014 - )

- Revenues anticipated from the large number of laid up vessels at the Elefsina bay, following negative freight rate trends in the shipping markets.
- · Change of BOD composition in November 2015

Turnover €**2.600.824** (-1,4%)

Gross Profit **€1.040.965** (+8,1%)

EBITDA €**707.397** (-14,5%)

Investements € **6.836** 

Gross Profit Margin 40,02%

ROA 14,52% | ROE 22,78%

Debt Ratio 0,57

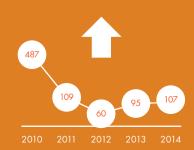
Total number of employees 11

Financial Data 2014\* (estimation)



## **Dry Bulk Cargo**

107.395 tons of dry bulk cargo (+13,4% comparing to 2013)

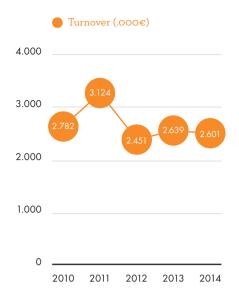


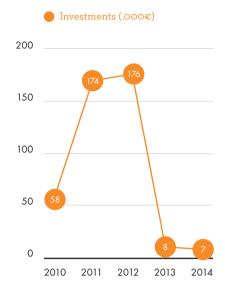


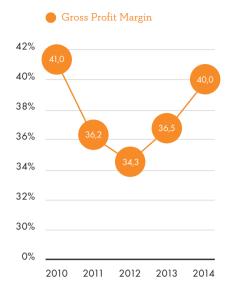
## **Coastal Shipping**

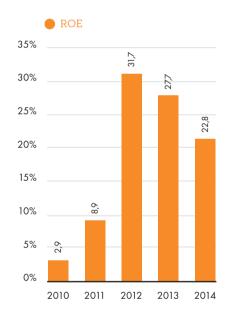
533.512 passengers (Megara – Salamina ferry line)

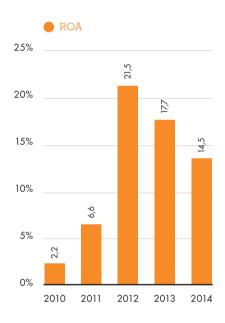


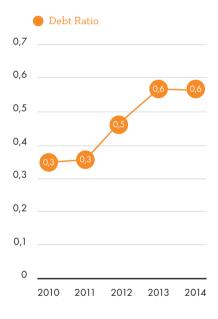


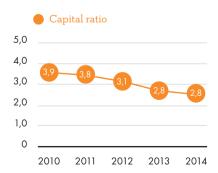


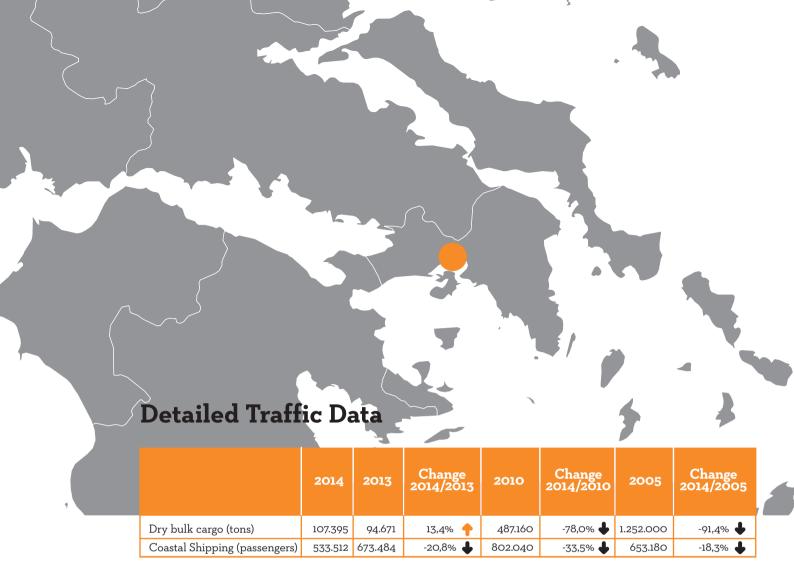












	2014	2013	Change 2014/2013	2010	Change 2014/2010	2005	Change 2014/2005
Turnover	2.600.824	2.639.084	-1,4%	2.782.189	-6,5% 👃	2.174.943	19,6%
Gross Profit	1.040.965	963.139	8,1% 👇	1.139.787	-8,7% 🖶	1.169.112	-11,0% 👃
Profit before tax	581.498	734.879	-20,9% 🖶	61.027	852,8% 👇	5.011	11.505,4% 👇
EBITDA	707.397	827.421	-14,5% 🖶	177.663	298,2% 👇	498.606	41,9%
Equity	2.552.948	2.649.158	-3,6% 🖶	2.042.983	25,0% 👇	1.022.488	149,7% 👇
Total Liabilities	1.450.431	1.500.227	-3,3% 🖶	720.050	101,4% 👇	685.308	111,6%
Investments	6.836	8.254	-17,2% 🖶	57.874	-88,2% 🖶	20.362	-66,4% 🖶
Employment	11	12		14		22	

# Heraklion Port Authority SA

The port of Heraklion is the biggest port of the island of Crete. The port is part of the European core ports network. It has five piers that facilitate the traffic of dry bulk and general cargo, containers, as well as coastal shipping and cruise passengers. It also serves fishing boats and yachts.

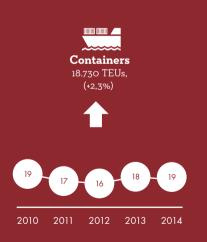
Fully implementing the ISPS Code, the port is equipped with

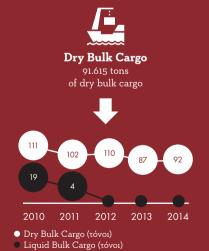
two propelled cranes having lifting capacity of 80 and 100 tons respectively and seven rail-mounted cranes. A small size repair zone is serving small vessels. The port is located in a near distance to the international airport of the city of Heraklion, a fact that has offered the port the opportunity to operate as a homeport for cruise ships.

#### Significant Developments (2014 - )

- Pilot implementation of the renewable energy production systems.
- Beginning of authorisation procedures for the operation of hydroplanes.
- Active promotion of cruise activities at the port of Heraklion.
- Change of BOD composition in December 2015.

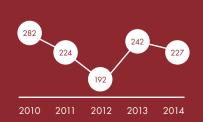
Turnover €5.859.917 (-5,3%)
Gross Profit €1.417.243 (-17,7%)
EBITDA €699.364 (-76,4%)
Investements €1.084.301
Gross Profit Margin 24,19%
ROA 2,41% | ROE 4,39%
Debt Ratio 0,82
Total number of employees 25

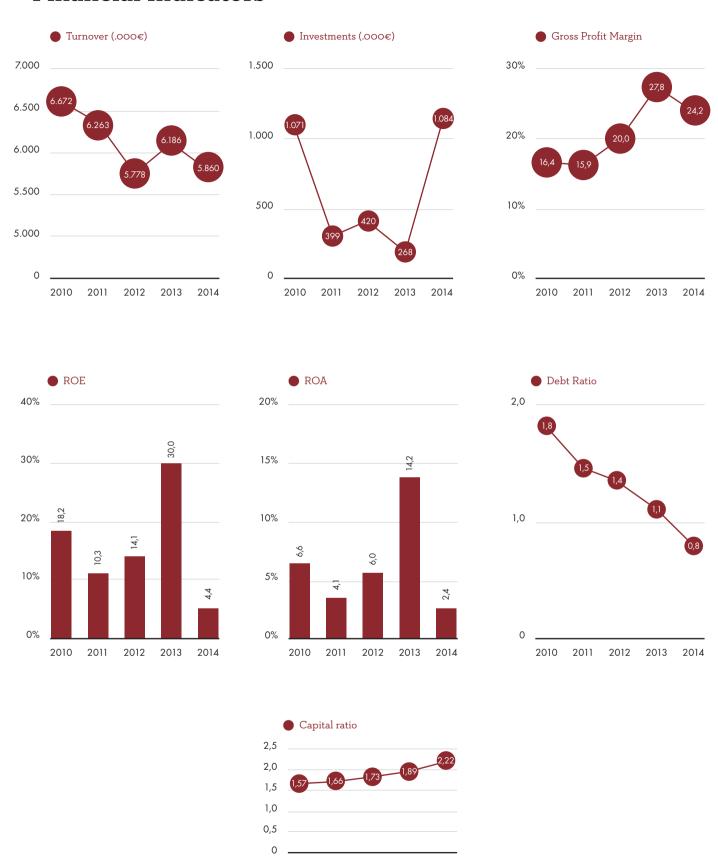










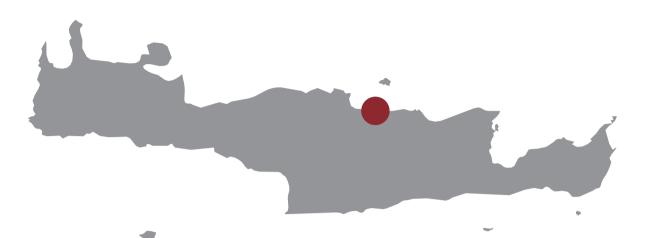


2010 2011

2012

2013

2014



# **Detailed Traffic Data**

	2014	2013	Change 2014/2013	2010	Change 2014/2010	2005	Change 2014/2005
Containers (TEU's)	18.730	18.300	2,3%	19.330	-3,1%	18.537	1,0%
Dry bulk cargo (tons)	91.615	87.112	5,2%	110.721	-17,3% 🖶	218.369	-58,0% 🖶
Liquid bulk cargo (tons)	0	0		19.317	-100,0% 🖶	71.137	-100,0% 🖶
Coastal Shipping (passengers)	1.627.538	1.454.631	11,9%	1.865.317	-12,7% 🖶	1.582.315	2,9%
Cruise (passengers)	226.826	242.301	-6,4% 🖶	282.463	-19,7% 🖶	193.719	17,1%

	2014	2013	Change 2014/2013	2010	Change 2014/2010	2005	Change 2014/2005
Turnover	5.859.917	6.186.334	-5,3% 🖶	6.671.726	-12,2% 👃	1.923.616	204,6% 🛖
Gross Profit	1.417.243	1.722.306	-17,7% 🖶	1.091.116	29,9%	-1.196.519	•
Profit before tax	555.561	3.475.507	-84,0% 🖶	1.454.249	-61,8% 🖶	51.019	988,9% 👚
EBITDA	699.364	2.964.439	-76,4% 🖶	1.580.761	-55,8% 🖶	34.566	1.923,3% 👚
Equity	12.666.964	11.568.730	9,5%	8.010.963	58,1% 🛖	14.586.030	-13,2% 🖶
Total Liabilities	10.418.142	12.977.686	-19,7% 🖶	14.078.882	-26,0% 🖶	944.765	1.002,7%
Investments	1.084.301	268.264	304,2%	1.070.818	1,3%	1.119.313	-3,1%
Employment	25	27		51		64	

# Igoumenitsa Port Authority SA

The port of Igoumenitsa provides mostly passenger and vehicle traffic services, as well as other ancillary services. It is the second most popular Greek port as regards passenger traffic between Greece and Italy. It also facilitates Ro/Ro and Ro/Pax vessels to/from Italy and Corfu, while in recent years it hosts cruise calls. The main passenger terminal building has a total surface of 6.326m2. The port occupies a land surface of 80

acres and berthing infrastructure for 12 vessels. In the absence of storage areas and appropriate port infrastructures, there is no cargo traffic apart from those carried by trucks and lorries and some bulk cargo.

The port is part of the European core ports network. It has direct landside access to the Egnatia Motorway, whereas the connection with the Ionian Motorway is in progress.

#### Significant Developments (2014 - )

- Approval of a Master Plan.
- Approval of tariff regulation.
- Preparation of a strategic and operational plan for the period 2015 2018.
- Feasibility study for the development of a freight centre.
- Installation of equipment for the observation of air pressure in the port area.
- Selection of a service provider for waste reception (liquid and solid waste and residues).
- Change of BOD composition in November 2015.

Turnover €3.928.287 (+3,5%)
Gross Profit €1.750.045 (+42,4%)
EBITDA €939.762 (-22,3%)
Investements €175.146
Gross Profit Margin 44,55%
ROA 5,74% | ROE 6,69%
Debt Ratio 0,17
Total number of employees 19

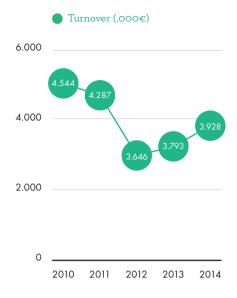
Financial Data

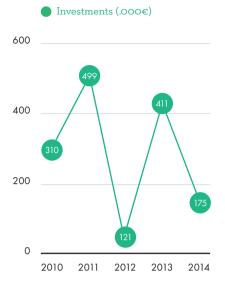


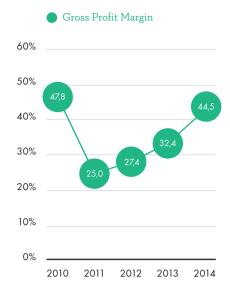
2.492

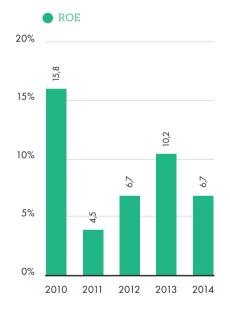
2014

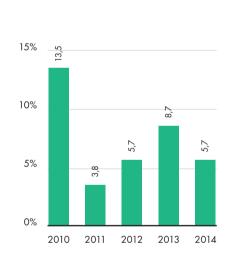






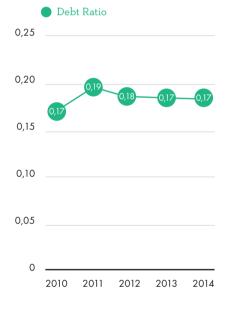


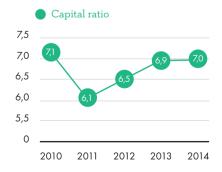


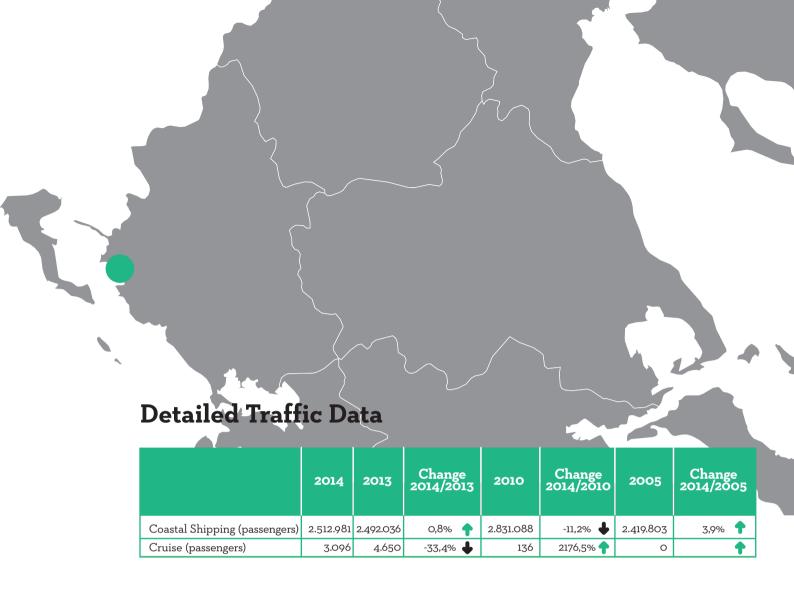


ROA

20%







	2014	2013	Change 2014/2013	2010	Change 2014/2010	2005	Change 2014/2005
Turnover	3.928.287	3.793.644	3,5%	4.544.898	-13,6% 🖶	3.590.825	9,4%
Gross Profit	1.750.045	1.229.339	42,4% 👚	2.173.184	-19,5% 🖶	913.240	91,6%
Profit before tax	949.869	1.376.867	-31,0% 🖶	1.952.094	-51,3% 🖶	204.285	365,0% 👚
EBITDA	939.762	1.209.186	-22,3% 🖶	1.675.987	-43,9% 🖶	556.354	68,9% 🛖
Equity	14.193.766	13.472.224	5,4%	12.371.432	14,7%	10.647.782	33,3%
Total Liabilities	2.347.062	2.287.842	2,6% 🛖	2.041.526	15,0% 🛖	905.501	159,2% 🛖
Investments	175.146	410.665	-57,4% 🖶	309.816	-43,5% 🖶	337.280	-48,1% 👃
Employment	19	18		18		20	

# Kavala Port Authority SA

Kavala Port Authority is the operator of a cluster of four ports: (a) the central port "Apostolos Pavlos" facilitates passenger traffic (coastal shipping, cruise and yachts); (b) "Philippos B" port that facilitates cargo traffic (dry bulk, general cargo and occasionally containers); (c) "Keramoti" port (Ro/Ro vessels and fishing boats); and (d) "Eleytheroi" port (cargo traffic and fishing boats).

The total length of the piers of the two first ports is 2.350 meters (1.950m. for the "Apostolos Pavlos" and 400m. for the "Philippos B'") with depths up to 10,5 meters. "Philippos B' port has a total of 50.000 m2 storage areas. Important investments are in process in these ports, while an effort is being made for the modernisation of the mechanical equipment via the procurement of loading and unloading equipment, i.e. cranes with a lifting capacity of 40 tons at 45 meters.

Cruise activities are a top priority as recent surveys conducted by the Kavala city chamber revealed the satisfaction of the vast majority (88%) of cruise passengers visiting the port-city, as well as significant benefits for the local economy, with the average of expenditure per person reaching €35. Container traffic was registered in 2008 and 2009, yet the lack of large land areas, proper equipment and railway connections have restricted the development of container throughput.

#### Significant Developments (2014 - )

- Construction of port infrastructure at "Philippos B'" port.
- Completion of an environmental impact strategic plan.
- Completion of a Master Plan related to port infrastructures.
- Memorandum of Cooperation with Alexandria Port Authority
- Authorisation procedures for the operation of hydroplanes.
- · Active promotion of cruise activities' potential.
- · Construction of a fire station inside the port zone of "Apostolos
- · Selection of "Philippos B" port for the transportation of materials through the TAP pipeline.

Turnover €**828.000** (-15,4%) Gross Profit **€-126.000** EBITDA €360 Investements €60.000 Gross Profit Margin -15,22% ROA -0,1% | ROE -0,1% Debt Ratio 0,3 Capital ratio 4,5

Total number of employees 11



## Dry Bulk Cargo

423.656 tons of dry bulk cargo (-15.2%)



Detailed Traffic Data (.000)

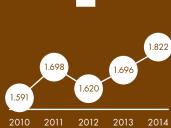




## **Coastal Shipping**

1.821.595 passengers (+7,4%)

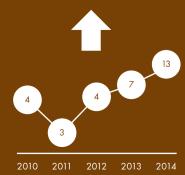


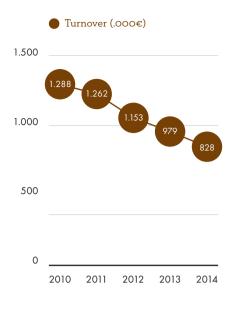


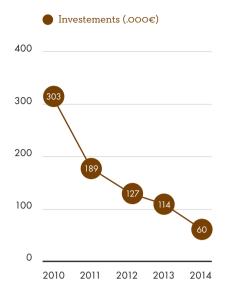


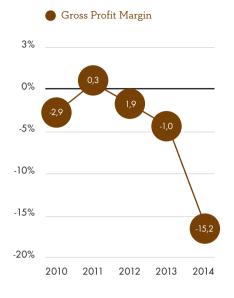
#### Cruise

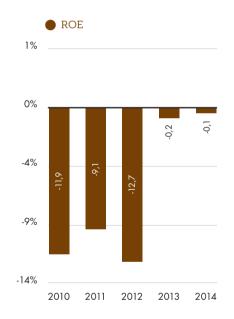
13.083 passengers (+84,3%)26 cruise ship calls

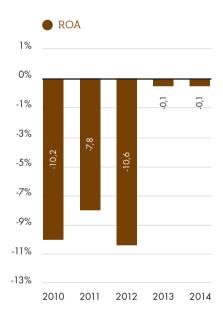


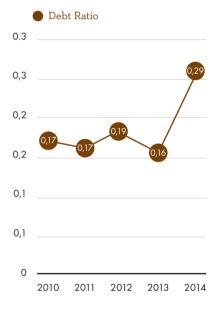


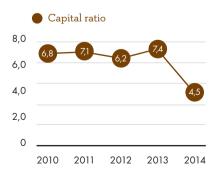


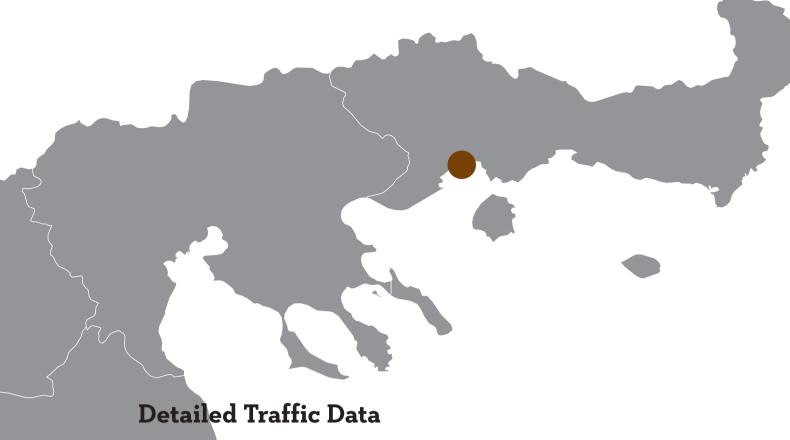












I		2014	2013	Change 2014/2013	2010	Change 2014/2010	2005	Change 2014/2005
T	Dry bulk cargo (tons)	423.656	499.812	-15,2%	1.499.662	-71,7% 👃	1.513.580	-72,0% 🖶
Γ	Coastal Shipping (passengers)	1.821.595	1.696.351	7,4%	1.590.518	14,5%	1.416.589	28,6% 🛖
Γ	Cruise (passengers)	13.083	7.099	84,3%	4.233	209,1% 👚	0	•

	2014	2013	Change 2014/2013	2010	Change 2014/2010	2005	Change 2014/2005
Turnover	828.000	979.000	-15,4% 🖶	1.288.000	-35,7% 🖶	1.172.695	-29,4% 👃
Gross Profit	-126.000	-10.000		-38.000		201.166	
Profit before tax	-4.000	-7.000		-615.000		-301.320	
EBITDA	360	463	22,2% 👚	-165.000		76.587	-99,5% 🖶
Equity	4.486.000	4.340.000	+3,4% 👚	5.149.000	-12,9% 🖶	7.232.155	-38,0% 🖶
Total Liabilities	1.281.000	675.000	89,8% 🛖	891.000	43,8%	137.583	831,1% 🛖
Investments	60.000	114.000	-47,4% 🖶	303.000	-80,2% 🖶	2.952.617	-98,0% 🖶
Employment	11	13		17		19	

# Lavrio Port Authority SA

Lavrio Port Authority is one of the four port authorities operating in Attica district. The port maintains some natural characteristics facilitating the berthing of sea-going vessels (i.e. natural harbour, depth and width of the basin), and serves cargo (general, dry bulk, containers and Ro/Ro) as well as passengers (coastal shipping and cruise).

Coastal shipping lines use Lavrio as the departing port to reach the islands of Cyclades and Northeast Aegean, as well as international destinations (i.e. Cyprus, Israel). In recent years, Lavrio has registered a more dynamic presence in the cruise market, being in some cases a homeport for cruise ships.

The piers of the port have a total length of 1.120 meters. A total of 250 metres were recently reconstructed and now offer five ramps for the facilitation of Ro/Pax vessels. The port zone has a total capacity of 200 mooring positions for yachts, as well as a fishing harbour. Revenues are generated mostly via the exploitation of the port area (23,5% of the turnover), the exploitation of the pier for the yachts (21%) and the loading/unloading of Ro/Ro vessels (17%). The Port Authority does not possess, however, any mechanical equipment to perform cargo handling, thus the latter is offered by private companies.

#### Significant Developments (2014 - )

- Modernisation of the Master Plan of the port.
- Home porting cruise operations by Celestyal Cruises (ex Louis Cruises).
- Initiation of tendering procedures regarding the concession of the passenger terminal building to be used for cruise passengers.
- The financing of the modernisation of infrastructure, the expansion of the suburban railway (total length 32 km.) to link the city of Lavrio with Athens, and the improvement of the respective road connections are among the projects to be financed by the "Juncker package".
- Application for authorisation for the operation of hydroplanes.
- Change of BOD composition in December 2015.

Turnover **€2.956.002** (+18,3%)

Gross Profit **€1.436.549** (+26,3%)

EBITDA **€976.947** (+53,5%)

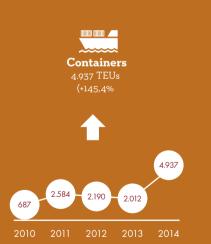
Investements €241.162

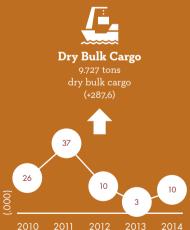
Gross Profit Margin 48,60%

ROA 19,66% | ROE 35,60%

Debt Ratio **0,81** 

Total number of employees 9

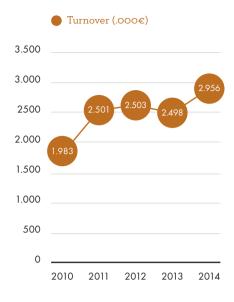


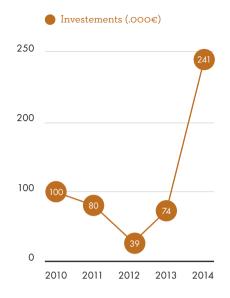


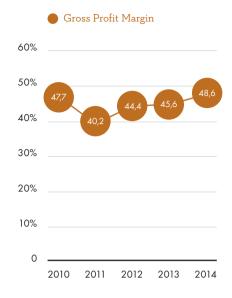


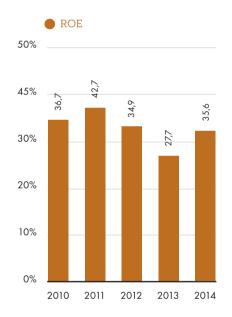


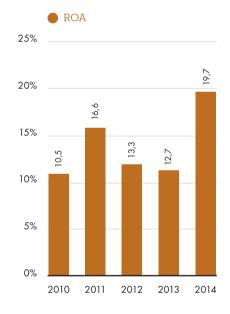


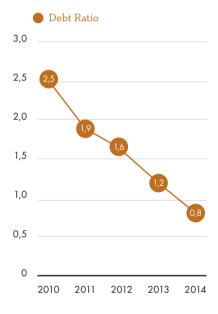


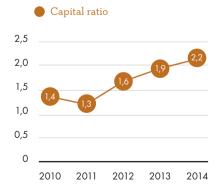


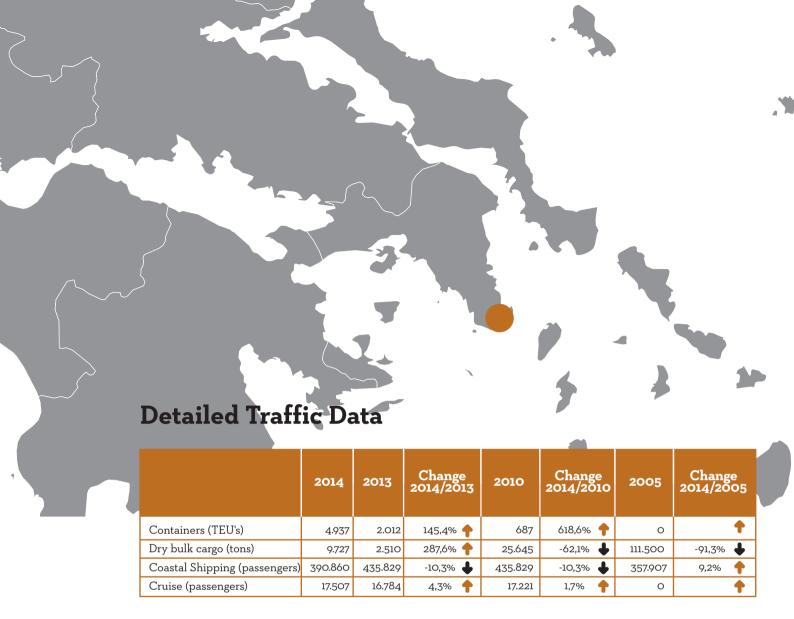












	2014	2013	Change 2014/2013	2010	Change 2014/2010	2005	Change 2014/2005
Turnover	2.956.002	2.497.890	18,3%	1.982.665	49,1%	1.560.194	89,5%
Gross Profit	1.436.549	1.137.807	26,3% 🛖	945.764	51,9%	930.261	54,4% 👚
Profit before tax	832.532	482.855	72,4% 👚	368.253	126,1% 👚	297.030	180,3% 👚
EBITDĀ	976.947	636.458	53,5%	569.733	71,5%	372.665	162,2% 👚
Equity	2.338.560	1.743.517	34,1%	1.002.787	133,2% 🛖	628.182	272,3% 🛖
Total Liabilities	1.896.959	2.044.601	-7,2% 👃	2.489.730	-23,8% 🖶	662.842	186,2% 🛖
Investments	241.162	74.250	224,8% 🛖	99.526	142,3% 👚	267.863	-10,0% 🖶
Employment	9	9		8		8	

# Patras Port Authority SA

The port of Patras is the main connection of the country with Italian ports and is a part of the Trans - European Transport Network (TEN - T).

The South part of the port serves coastal shipping between Greece and Italy. The total length of its piers stands at 992 meters, while its building facilities cover a total area of 6.974 m2, including a passenger terminal station. The northern part of the port has four piers of a total length of 3.000 m. and depths of 8,5 - 10 m. Having also a landside storage area (8.000 m2 sheltered area and 80.000 m2 outdoor area) the port can serve

bulk carriers, , as well as coastal shipping vessels, with a passenger building terminal of 2.932 m2. Within the same port area one might also find a marina of a total capacity of 450 yachts with eight fixed and three floating piers.

The main income of the Port Authority comes from the mooring services offered, as well as from services offered to passengers and vehicles as part of coastal shipping operations, while the exploitation of fixed assets has also a significant contribution

#### Significant Developments (2014 - )

- ISO certification (ISO 14001-2004 and ISO 9001-2008) regarding the loading and unloading of dry bulk cargo.
- Port of Patras Authority SA in order to boost its competitiveness elaborates international research programs that improve its offered services and infrastructures.
- BOD resolution regarding the release of a part of its landside areas and grant those at the city of Patras.
- Construction of a passenger control gate and outdoor enclosure of the South port of Patras (financed by public investments and PA).
- · Completion of an interchange that connects the South part

of the port with the national roadway (Athens - Patras, public investments).

- New BOD as of the 11th of November, 2015.
- As a part of its efforts to promote the cruise market, the port of Patras is actively engaged at the MedCruise (The Association of Mediterranean Cruise Ports) actions.
- Sister port agreement between Port of Patras Authority SA and Calingrand port (Russia).
- Application for the authorisation for the operation of a waterway airport.

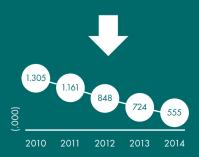
Turnover €5.579.309 (+1,1%)
Gross Profit €2.497.605 (+0,4%)
EBITDA €1.432.706 (-85,4%)
Investements €682.678
Gross Profit Margin 44,77%
ROA 0,94% | ROE 1,00%
Debt Ratio 0,07
Total number of employees 38

Financial Data



## **Coastal Shipping**

555.453 passengers (-23,3%)



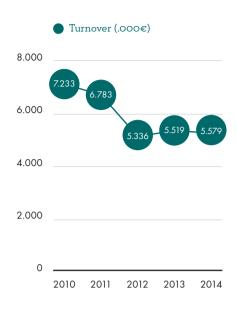


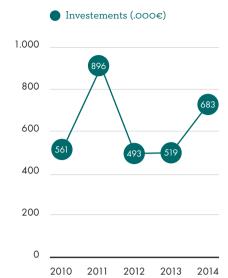
#### Cruise

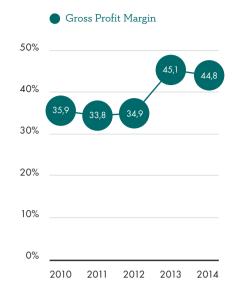
745 passengers 2 cruise ship calls (-41.1%)

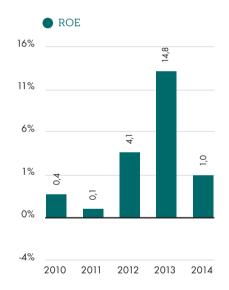


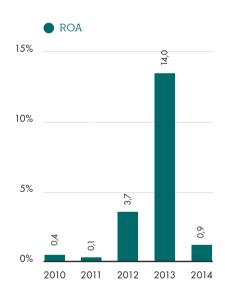
Detailed Traffic Data

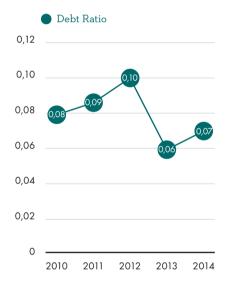


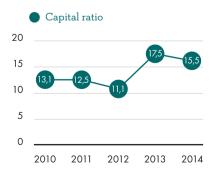














	2014	2013	Change 2014/2013	2010	Change 2014/2010	2005	Change 2014/2005
Turnover	5.579.309	5.518.566	1,1%	7.232.988	-22,9% 🖶	7.844.425	-28,9% 🖶
Gross Profit	2.497.605	2.487.159	0,4%	2.598.853	-3,9% 🖶	2.571.951	-2,9% 🖶
Profit before tax	617.701	9.015.167	-93,1% 🖶	209.877	194,3% 👚	420.398	46,9% 👚
EBITDA	1.432.706	9.841.772	-85,4% 🖶	1.285.116	11,5%	1.359.893	5,4%
Equity	61.535.942	60.918.241	1,0%	49.357.705	24,7%	18.419.295	234,1% 👚
Total Liabilities	4.247.907	3.686.484	15,2%	4.080.546	4,1%	2.884.442	47,3% 👚
Investments	682.678	518.667	31,6% 👚	560.809	21,7%	1.038.272	-34,2% 🖶
Employment	38	46		56		72	

# **Piraeus Port Authority SA**

The port of Piraeus is the largest port in Greece and among the largest in the Mediterranean Sea, while it also forms part of the core network of the Trans - European Transport Network (TEN-T),

Piraeus serves all types of cargoes, being particularly dynamic in containersas it stands among the biggest container ports in the region. Piraeus Port Authority SA operates a container terminal (Pier I) of 820 meters length and up to 18 meters depth, having a capacity of up to one million TEUs per year. The second operating container terminal (Pier II) has been concessioned to PCT SA. A modern car terminal hosts significant car traffic, while the

port maintains also a ship repairing zone.

The port of Piraeus is the central node of the Greek coastal shipping system, as it connects the mainland with the islands serving the majority of coastal shipping routes. Piraeus is also one of the largest cruise ports in Europe with a significant position across the Mediterranean.

#### Significant Developments (2014 - )

- The majority stake of PPA SA (51% to rise to 67%) was sold to China COSCO Shipping Corporation Ltd. following an international tender.
- Revision of the contract governing the concession of the container terminal.
- Completion of the in-port railway infrastructure allowing transportation of cars and containers by train (New Ikonio area).
- Agreement of the EU to co-finance by 95% €136 million expenditure for the construction of a new cruise pier.
- Carnival Cruise initiated home-porting operations in 2016.
- Construction of new seawall at St. Nikolas area.
- Tender procedure for repairing a major Floating Dock.
- Concession of a 90 acres area, at the Municipality of Keratsini/ Drapetsona.
- Renewal of the ECOPORT certification.
- Re-certification of cruise operations with ISO 9001:2008 and ISO 14001:2004.
- Major upgrade of the software systems.

Turnover €**99.880.455** (-4,3%)

Gross Profit €26.150.566(+13,9%)

EBITDA **€23.520.035** (7,1%)

Investements **€2.721.825** (+65.6%)

Gross Profit Margin 26,2%

ROA 2,66% | ROE 5,61%

Debt Ratio 1,11

Total number of employees 1.129

Container Terminal Station 13,2%

Car Terminal 11,4%

Coastal Shipping 10,3%

Cruise **11,9%** 

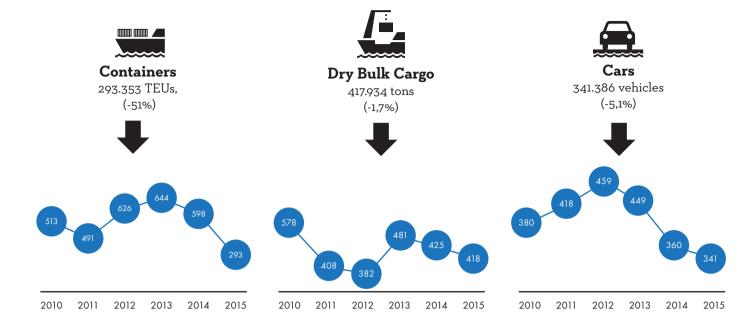
Other Activities 4,2%

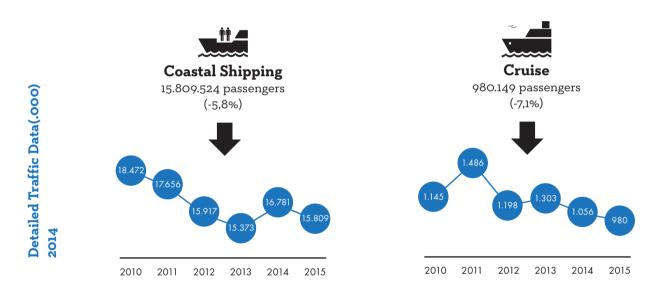
Ship Repairing Zone 9,0%

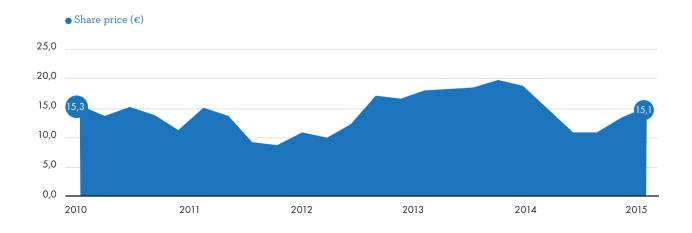
Concession 40%

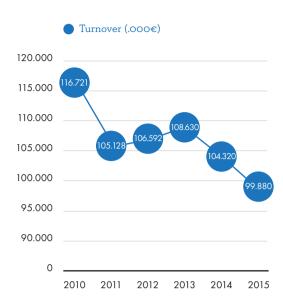
**Turnover breakdown** 

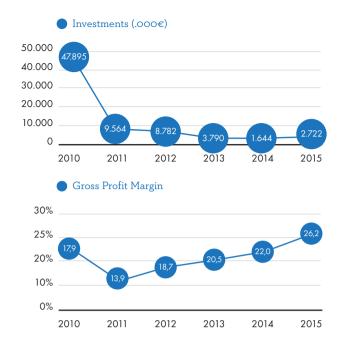
Financial Data

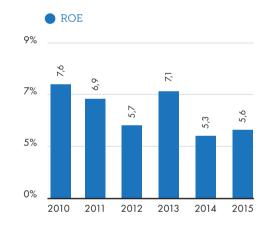


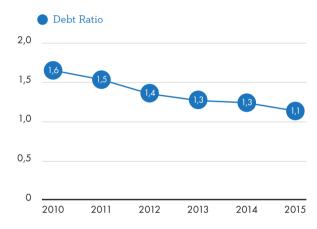


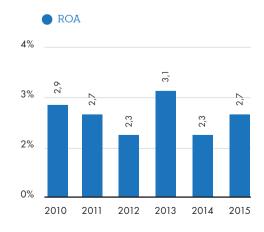


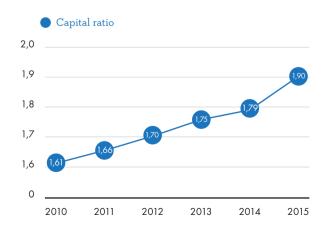


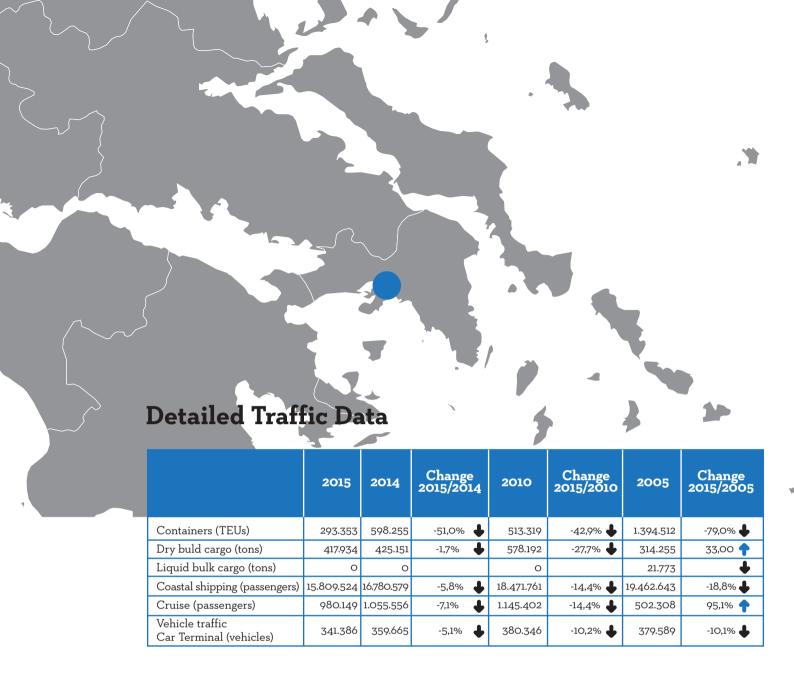












	2015	2014	Change 2015/2014	2010	Change 2015/2010	2005	Change 2015/2005
Turnover	99.880.455	104.320.264	-4,3% 🖶	116.720.754	-14,4% 🖶	139.978.022	-28,6% 🖶
Gross Profit	26.150.566	22.958.411	13,9%	20.879.871	25,2% 🕈	24.609.350	6,3%
Profit before tax	9.772.290	8.891.465	9,9%	11.332.552	-13,8% 🖶	17.082.724	-42,8% 🖶
EBITDA	23.520.035	21.969.264	7,1%	26.653.485	-11,8% 🖶	26.934.117	-12,7% 🖶
Equity	174.315.811	168.585.628	3,4%	149.084.204	16,9% 👚	152.025.795	14,7%
Total Liabilities	193.661.274	213.929.719	-9,5% 🖶	243.656.673	-20,5% 🖶	80.801.418	139,7% 🛖
Investments	2.721.825	1.643.893	65,6% 🛖	47.894.936	-94,3% 🖶	16.356.569	-83,4% 🖶
Employment	1.129	1.157		1.396		1.686	

# Rafina Port Authority SA

The port of Rafina is a passenger port. It facilitates coastal shipping lines that connect mainland Greece with Cyclades islands and the island of Evia. The length of its piers totals 845 meters and depth up to 7 meters, having the potential to facilitate simultaneously the berthing of 15 coastal shipping vessels. There is also a fishing harbour of a 50 positions capacity. The jurisdiction of the Rafina Port Authority included the operation and management of the port of St. Marina that serves coastal shipping lines to/from Evia with a depth up to five meters.

The majority of the port authority's revenues derives form coastal shipping activities, while significant is also the income coming from car parking spaces and waste reception facilities. Planning priorities include the expansion of the windward jetty of the port, and the construction of a modern passenger station.

#### Significant Developments (2014 - )

- Modernisation of Master Plan.
- ISO 9001: 2008 and ELOT 1429:2008 Certification.
- Study of optimisation of traffic flows within the port zone and nearby areas.
- Authorisation procedures for the operation of hydroplanes at St. Marina port.

Turnover **€1.699.351** (-5,6%)

Gross Profit € **385.332** (-32,7%)

EBITDA: €**354.834** (-29,6%)

Investements €240.462

Gross Profit Margin **22,68%** 

ROA 3,96% | ROE 11,64%

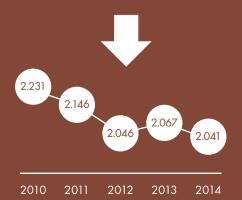
Debt Ratio 1,94

Total number of employees **10** 

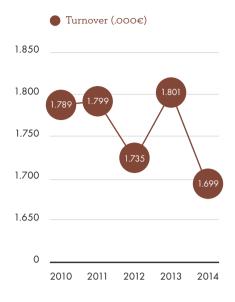


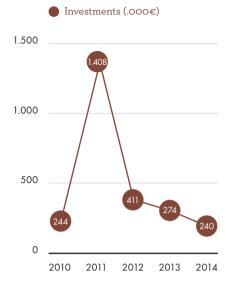


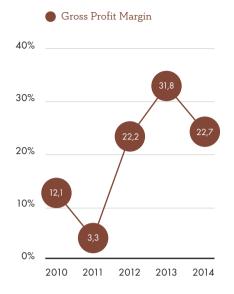
(-1,3%) 443.995 vehicles of all types

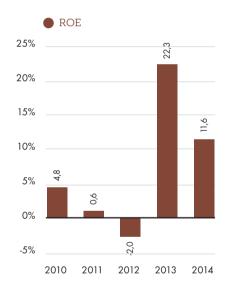


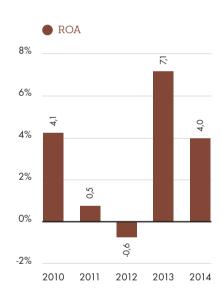
Detailed Traffic Dat

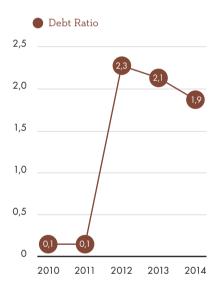


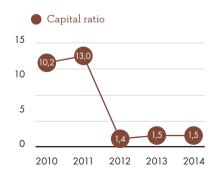














	2014	2013	Μεταβολή 2014/2013	2010	Μεταβολή 2014/2010	2005	Μεταβολή 2014/2005
Turnover	1.699.351	1.800.508	-5,6% 🖶	1.789.306	-5,0% 🖶	1.586.334	7,1%
Gross Profit	385.332	572.360	-32,7% 🖶	216.966	77,6%	503.362	-23,4% 🖶
Profit before tax	244.773	441.111	-44,5% 🖶	193.323	26,6% 👚	271.723	-9,9% 🖶
EBITDA	354.834	504.211	-29,6% 🖶	275.794	28,7%	493.320	-28,1% 🖶
Equity	2.103.124	1.981.704	6,1%	4.026.449	-47,8% 🖶	732.646	187,1% 🛖
Total Liabilities	4.070.429	4.218.856	-3,5% 🖶	461.552	781,9% 🛖	431.589	843,1% 🛖
Investments	240.462	273.616	-12,1% 🖶	243.685	-1,3%	62.291	286,0% 👚
Employment	10	10		10		10	

# Thessaloniki Port Authority SA

The port of Thessaloniki is the second largest port of Greece. Located at an important geostrategic position at Northern Balkans, the port is part of the European core ports network, as well as of the Pan-European Corridors IV and X.

The port has six piers, the total length of which is 6.200 metres and the maximum depth 12 metres. Pier I is used for recreational purposes. The port has a fully organised container terminal with a storage capacity of 5.000 TEUs, a terminal used for general (dry bulk) cargo and a passenger terminal. It also facilitates liquid bulk cargo (also via private facilities inside the port zone).

The total storage area available is 600.000 m2. Railways reach all piers, connecting the port with the national and international railway network. The main loading / unloading equipment consists of four gantry cranes for containers, 34 rail-mounted cranes and two propelled cranes.

#### Significant Developments (2014 - )

- Commencement of tendering procedures for the sale of 67% of the shares of Thessaloniki Port Authority SA. Eight companies and/or consortia have expressed an unsolicited interest. Bids are expected to be submitted by the end of 2016, with a precondition to include a request for €220 million investments.
- Completion of a Master Plan with a 25-year horizon (year
- Purchase and installation of two mobile electric cranes, of a lifting capacity of 32 tons.
- Development of an integrated environmental management system (ISO 14000:1 certification).
- Studies concerning the connection of the Pier VI (container terminal) with the national road network and the Egnatia Motorway.
- Authorisation procedures for the operation of hydroplanes.

- Selection of the port of Thessaloniki for the transportation of materials through the TAP pipeline.
- A 2-year collective labour agreement was signed in July 2015.
- Change of BOD composition in December 2015.

#### Turnover breakdown

Container
Terminal
62,3%

Conventional cargo

Passenger
port
0,6%

Exploitation

of port zone

Turnover €50.881.605 (-9,6%)

Gross Profit €24.333.039 (-13,0%)

EBITDA €26.861.416 (-8,70%)

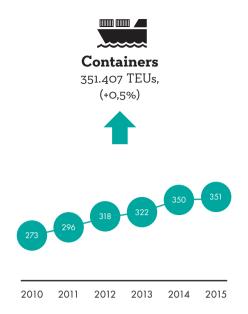
Investements €7.169.837

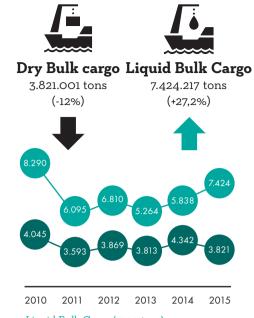
Gross Profit Margin 47,82%

ROA 17,41% | ROE 19,29%

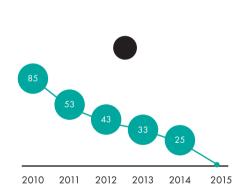
Debt Ratio 0,111

Total number of employees 420

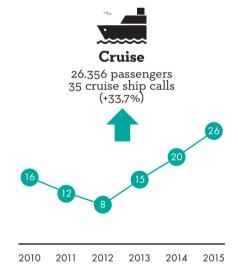


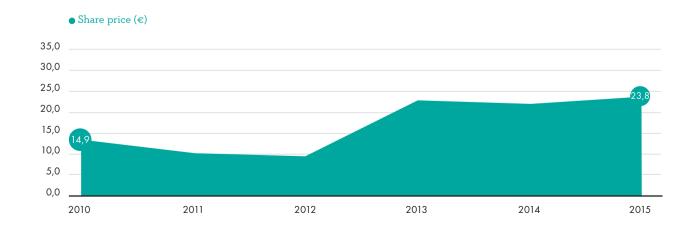


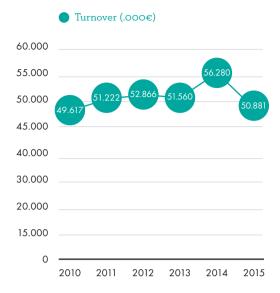
Liquid Bulk Cargo (.000 tons) Dry Bulk Cargo (.000 tons)

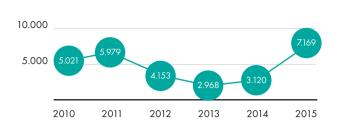


**Coastal Shipping** 



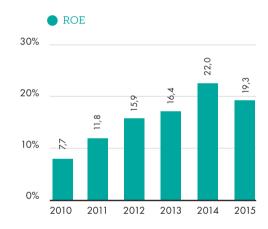


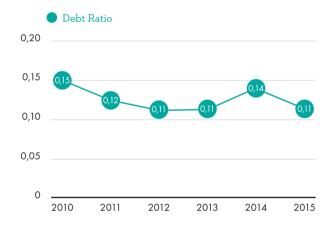


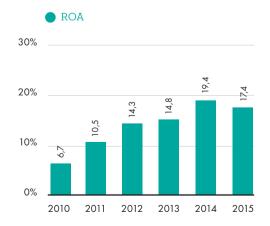


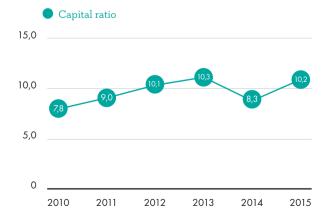
Investments (.000€)

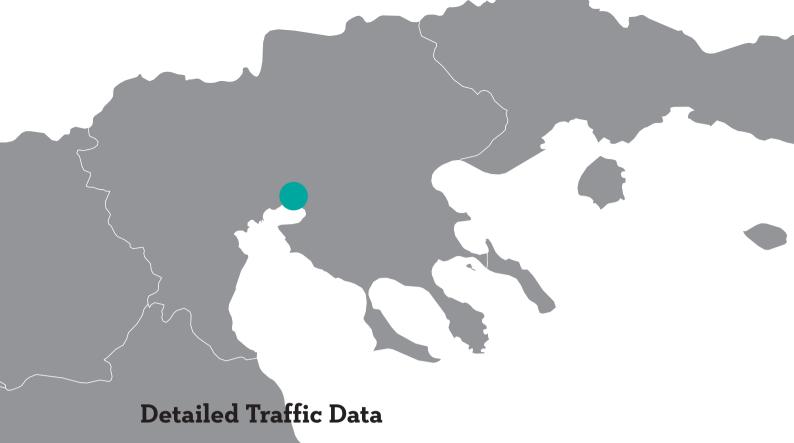












	2015	2014	Change 2015/2014	2010	Change 2015/2010	2005	Change 2015/2005
Containers (TEUs)	351.407	349.513	0,5%	273.282	28,6% 👇	365.925	-4,0% 🖶
Dry bulk cargo (tons)	3.821.001	4.341.950	-12,0% 🖶	4.044.618	-5,5% 🖶	3.527.187	8,3%
Liquid bulk cargo (tons)	7.424.217	5.838.107	27,2%	8.289.724	-10,4% 🖶	8.206.051	-9,5% 🖶
Coastal Shipping (passengers)	0	24.795	-100,0% 🖶	84.716	-100.0% 🖶	211.469	-100.0% 🖶
Cruise (passengers)	26.356	19.720	33,7%	16.029	64,4% 🔷	6.069	334,3% 🛖

	2015	2014	Change 2015/2014	2010	Change 2015/2010	2005	Change 2015/2005
Turnover	50.881.605	56.280.238	-9,6% 🖶	49.617.466	2,5%	47.462.190	7,2%
Gross Profit	24.333.039	27.977.902	-13,0% 🖶	11.557.575	110,5% 👚	8.655.503	181,1% 👚
Profit before tax	24.514.352	28.388.514	-13,6% 🖶	9.288.755	163,9% 👚	5.695.859	330,4% 👚
EBITDA	26.861.416	29.424.347	-8,7% 🖶	10.381.684	158,7% 🔷	8.188.103	228,1% 👚
Equity	127.087.934	128.768.713	-1,3%	120.675.957	5,3%	101.187.528	25,6% 👇
Total Liabilities	13.758.053	17.441.853	-21,1% 🖶	17.732.263	-22,4% 🖶	17.742.963	-22,5% 🖶
Investments	7.169.837	3.120.302	129,8% 🛖	5.021.741	42,8% 👚	1.213.742	490,7% 👚
Employment	420	400		491		591	

# **Volos Port Authority SA**

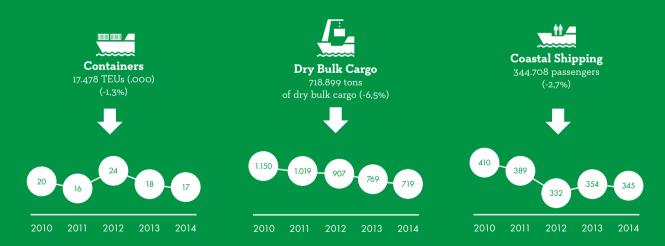
The port of Volos serves mostly the needs of the Thessaly region, while it provides a connection with major urban regions in Greece via the major motorway Patras-Athens-Thessaloniki. The port infrastructure includes six piers, some of those of a small surface, with a total length of 3.241 meters and depth up to 11 meters. The port equipment includes nine electronic cranes and an engine crane.

The port facilitates all types of cargo and passengers, apart from liquid bulk cargo. Moreover, it provides the possibility for berthing of yachts in an area close to the seaside road network of the city. As regards coastal shipping, Volos connected the mainland of Greece with the Sporades islands complex and occasionally with the North Aegean Sea islands.

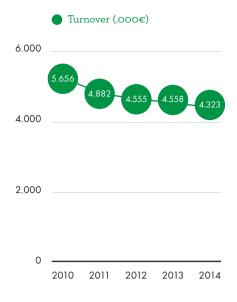
#### Significant Developments (2014 - )

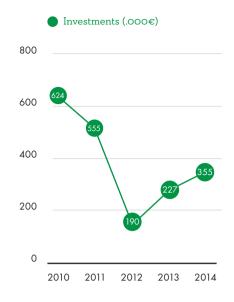
- Harmonization with the ISPS Code requirements following the installation of electronic surveillance equipment.•
- Consideration of a coastal shipping connection between Volos and Izmir.
- Beginning of authorisation procedures for the operation of hydroplanes.
- Change of BOD composition in November 2015.

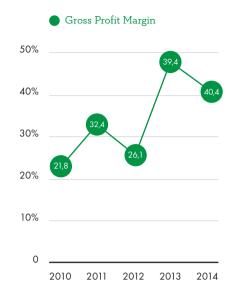
Turnover €4.323.039 (-5,2%)
Gross Profit €1.748.173
EBITDA €1.441.184 (+0,5%)
Investments €354.940
Gross Profit Margin 40,44%
ROA 6,92% | ROE 8,76%
Debt Ratio 0,27
Total number of employees 44

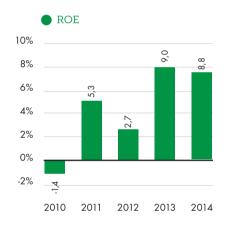


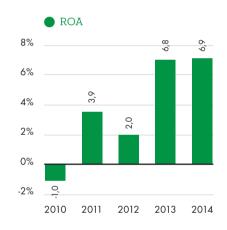


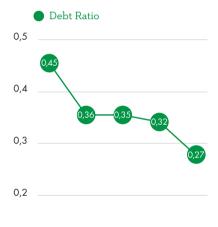










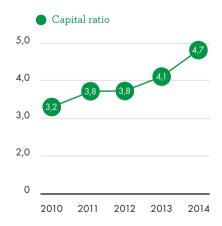


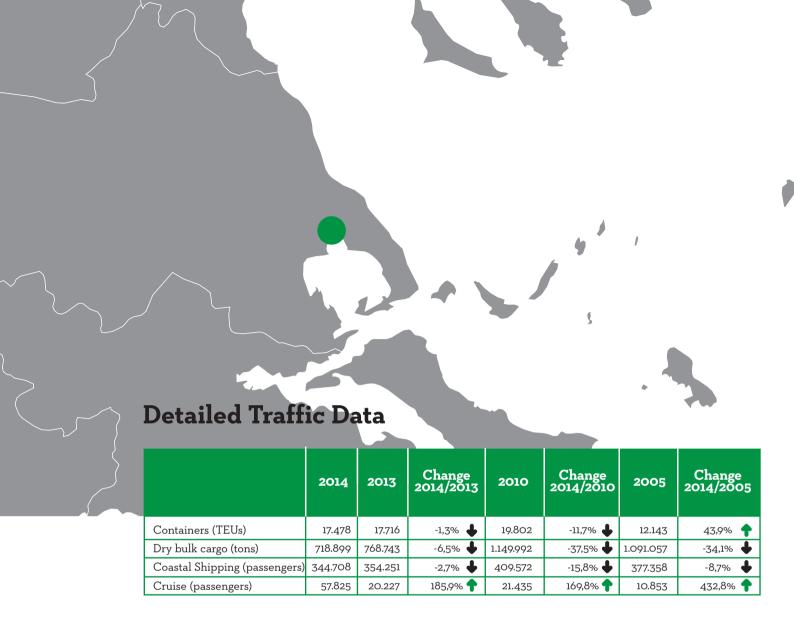
2012

2013

2014

2010 2011





	2014	2013	Change 2014/2013	2010	Change 2014/2010	2005	Change 2014/2005
Turnover	4.323.039	4.558.299	-5,2% 🖶	5.655.547	-23,6% 🖶	4.603.295	-6,1% 👃
Gross Profit	1.748.173	1.797.014	-2,7% 🖶	1.231.395	42,0% 👚	517.783	237,6% 👚
Profit before tax	931.336	894.197	4,2%	-124.987	1	-539.352	•
EBITDA	1.441.184	1.433.948	0,5% ●	372.407	287,0% 👚	396.779	263,2%
Equity	10.628.644	9.909.534	7,3%	8.850.729	20,1% 👚	5.529.879	92,2% 👚
Total Liabilities	2.839.156	3.175.905	-10,6% 🖶	4.025.357	-29,5% 🖶	553.365	413,1% 🛖
Investments	354.940	226.678	56,6% 🛖	623.682	-43,1% 🖶	114.000	211,4% 👚
Employment	44	49		61		65	

#### **Scientific Coordinators**





**Dr. George K. Vaggelas** (BSc, MSc (Shipping), PhD (Maritime Economics) - University of the Aegean, Department of Shipping, Trade and Transport) is a maritime economist with more than 10 years of experience in studying shipping and ports.

George has first hand expertise in managing ports as he has served as Senior Advisor to the President and C.E.O. of Thessaloniki Port Authority S.A. responsible, among others, for the strategic development of the port. Involved in a number of European and Contract research projets, George is now involved in the major European project PORTOPIA project (Ports Observatory for Performance Indicator Analysis) involving several partners including ESPO (European Sea Ports Organisation), and project on the restructuring of ports or port systems in Cyprus and Greece. He has also led projects developing ports master plans, cruise ports business development, cost benefit analysis of port investments, and due diligence reports on behalf of international terminal operators. For almost a decade, George participates in the Jean Monnet Program "European Port Policy" at the University of the Aegean where he is also delivering lectures as a guest speaker. He is co-founder of the PortEconomics.eu initiative.

In 2014, George co-founded the Ports & Shipping (P&S) Advisory, aiming at delivering consultancy services of high quality in the port and shipping industries.

**Dr. Athanasios A. (Thanos) Pallis** (BSc, MA, PhD (Bath, UK), Fulbright (Columbia, USA)) is Associate Professor at the Department of Shipping, Trade and Transport, University of the Aegean, Greece.

He has worked in shaping the port sector and has conducted research on behalf of United Nations Trade and Development (UNCTAD), Organisation for Economic Co-operation and Development (OECD), the Association of American Port Authorities (AAPA), European Seaports Association (ESPO), International Association of Port Cities (AIVP), national governments and European ports. Thanos served as General Secretary for Ports & Port Policy, at the Ministry of Development, Competitiveness and Shipping, Hellenic Republic, and as Member of the National Council for the Development of State assets (2011-12). Since 2013 he is the Secretary General of MedCruise, the association of Mediterranean cruise ports.

Holder of a Jean Monnet grant in European Port Policy (since 2003), he is also participating in the European flagship project Ports Observatory for Performance Indicators Analysis (PORTOPIA) (2013-2017). Thanos acts as Visiting Professor at the Centre for International Trade and Transportation, Dalhousie University, Halifax, Canada, University of Antwerp, Belgium and Athens University of Economics and Business, Greece. He is co-director of the PortEconomics.eu initiative.

Thanos is scientific partner of Ports & Shipping (P&S) Advisory since its establishment.

#### **Research Team**









Kleopatra Arapi (BSc (Applied Mathematics), MSc (Applied Statistics and Probability, NTUA)) has experience in data analysis and maritime research projects, with her main focus being the cruise industry. She is currently a PhD Candidate at the Department of Shipping, Trade and Transport of the University of the Aegean, examining the evolution of cruise activities in the Mediterranean region. Since 2013, she works at MedCruise, the Association of Mediterranean Cruise Ports, with emphasis in statistical analysis and the development of new source markets. She speaks English, Spanish, French, Italian and Greek.

Evie Kladaki (BSc (Business Administration). MA (Maritime Economics), MSc (Maritime and Transport Economics, Antwerp)) is a maritime economist with research experience in finance, accounting, marketing and ports development. Evie participates in the EU funded project PORTOPIA (Ports Observatory for Performance Indicator Analysis) in cooperation with the European Seaports Organisation and is a research associate at the Jean Monnet action "European Port Policy". Among others, she is involved in due diligence reports for international terminal operators, and analyses of strategies of port authorities. She speaks English, French and Greek.

Aimilia A. Papachristou (BSc (Shipping), MSc (Shipping, Trade and Transport, University of the Aegean)) is a Maritime Economist with significant experience in studies on port economics, management and policy, (maritime) transport policies and governance. Since 2013, she works as policy advisor to MedCruise, the Association of Mediterranean cruise ports, with her portfolio including European port policies and research projects. She has worked as advisor to Secretary General of Ports and Port Policy at the Ministry of Shipping in Greece. Aimilia is a Research Fellow at the Department of Shipping, Trade and Transport (STT), University of the Aegean, working on a PhD thesis examining industrial relations in ports. A member of the PortEconomics.eu team, she speaks Greek and English.

Konstantina Trapali (BSc (Transportation Engineer, NTUA), MSc (Shipping, Trade & Transport, University of the Aegean) is a Transportation Engineer, specialised in intermodal transport and new technologies. She has participated in port projects dealing with cost benefit analysis and port investments, financial analysis of the port industry and transportation systems. Konstantina speaks English and Greek.

# **Ports & Shipping Advisory**

**Ports & Shipping Advisory** (P&S Advisory) is a consulting company specialising in port management, operations, economics, and policy, as well as shipping and maritime transport systems. Established by a skilful team with experience in contract research on behalf of international organisations, national governmental bodies, port authorities and shipping companies in four different continents, and in partnership with an international network of knowledgeable research associates, P&S Advisory provides its clients high-level consulting services tailor-made to their particular needs.

#### Indicative recent projects

The indicative list of projects that the P&S Advisory team has been recently involved includes:

- Cost Benefit Analysis for the construction of a new pier for dry bulk cargoes (2016) Ministry of Transportation and Works, Cyprus
  - Due diligence study of port privatisation (2016) International Terminal Operator
- Development of cruise business at the port of Kavala (2016) Kavala Port Authority S.A., Greece
- Cost-benefit analysis for the construction of a dock for ferries (2016) Piraeus Port Authority S.A., Greece
- Strategic Plan for the Cyprus port industry till 2065 (2015) Cyprus Port Authority, Cyprus
  - Tender for Master Plan Study (2015) Municipal Port Fund of Chios, Greece
  - Due diligence study of port privatisation (2014) International Terminal Operator
- Development of cruise business at the port of Thessaloniki Consultancy Services (2014) Thessaloniki Port Authority S.A., Greece
- Strategic Planning for the development of the Cyprus Maritime Cluster (2014)
- Ministry of Transportation and Works, Cyprus
- Ports Observatory for Performance Indicators Analysis (PORTOPIA)
   (2013-2017) European Commission

#### We invite private companies and public institution to contact P&S Advisory for:

- Specialised consulting services on port administration and organisation strategic development, operational issues, business plans, etc;
- Analysis of ports and shipping markets and Due diligence reports of ports and shipping companies:
- Quality educational services related to port and maritime policy, port governance, strategy & planning;
- Development of studies and concrete policy proposals improving the competitiveness of port and maritime sectors, via initiatives at company, local, peripheral and national level.

# Ports & Shipping ADVISORY

