

Monitor
Deloitte.



EU Shipping Competitiveness Study

International benchmark analysis

Study commissioned by the European Community Shipowners' Associations

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1. Executive summary

The European maritime industry is at the risk of losing ground to other globally leading shipping centres. Relocation of activities as well as further de-flagging may be the consequence and would have negative impacts on the EU economy and competitiveness. Monitor Deloitte finds that while in general the EU has developed a competitive framework for shipping with a number of important core elements that should be retained, some specific policies are less competitive compared to other leading international shipping centres.

The future of shipping in Europe is tightly interwoven with EU policies

The shipping industry in the EU is a highly mature industry and an economic giant in the European economy directly accounting for over 620,000 jobs. A competitive regime for fiscal and social measures to improve competitiveness facilitated by Community Guidelines on State aid to maritime transport (2004/C 13/03, hereinafter referred to as SAGs), quality registers and a strong skills base have, among other things, made the EU an attractive location for shipping activities.

But the economic giant is under fierce international competition as a location for shipping activities. A number of international shipping centres are building up maritime clusters and attracting shipping companies with innovative and aggressive measures and policies, leading to a competitive advantage for shipping companies operating under such regimes.

The claim made in this report where the EU² as a whole is specifically compared to some leading international shipping centres in Singapore, Hong Kong, Dubai, Shanghai and Vancouver is that EU policies will become increasingly important for future investment decisions and the long-term competitiveness of Europe as a centre for shipping and the whole maritime economy, which is intimately linked to a successful shipping business.

As is well known, dramatic changes have taken place in the business climate affecting shipping activities over the recent years. Most notably, the economic slowdown after the global recession hit in 2009 has caused a reduction in transport volume at a time when shipowners were building up their capacity in anticipation of demand for further tonnage. This has driven freight rates and margins down, has led to unsustainable charter rates for shipowners chartering out their vessels and significantly reduced ship values.

While shipowners and operators are driven primarily by market developments and commercial opportunities in their business decision of where to invest and expand their fleet, decisions to establish and develop their office depend on the level playing field offered by the country of location and thus depend on national and EU policies. The choice of office location is very significant since most of the value-added of shipping is created on shore. For shipowners and operators, the economic slowdown has exacerbated the importance of EU policies and the regime under which shipping operates within the EU. Global competition is even fiercer than before the crisis as in the meantime, companies have implemented all feasible measures for cost reduction, including large-scale consolidations.

The framework conditions related to the fiscal treatment of shipping companies, labour-related costs, investment, training, flag state administration, access to skills and services, etc, directly affect operating costs, income and returns on investment. Since the 1990s, they became increasingly important factors that influence business decisions. Hence, if the EU is to remain a competitive place to do business at a global level, and if significant relocation of shipping activities and further de-flagging to other jurisdictions are to be avoided, the EU will have to reorient its focus on shipping to a global level.

1. Oxford Economics, The economic value of the EU shipping industry – update, February 2015.

2. "EU" is used in this study as a common term referring to EU28 + Norway.

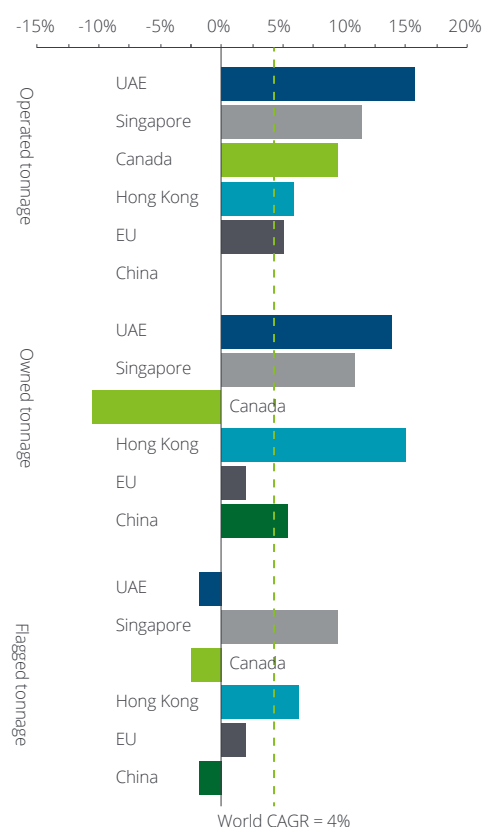
In this report, Monitor Deloitte has devised a set of policy recommendations on how to improve Europe as a location for shipping activities – which would result in a benefit for the whole maritime cluster. Monitor Deloitte has been commissioned to do so by the European Community Shipowners' Associations on the basis of a benchmark study of five specific international shipping centres (Singapore, Hong Kong, Dubai, Shanghai and Vancouver) and a comparison of the successful policies in those centres with EU policies. The primary focus of the comparison is on policies where the EU is responsible for or may impact policies. The study does not focus on individual member states' policy implementation. The insight from the five international shipping centres have inspired recommendations on EU policies at two levels: the overall strategic approach to EU shipping and specific areas where the EU should develop its policies further.

Challenges of growth in the European shipping industry

Measured in the global share of gross tonnage, the EU is a large, global player compared to most regions in the world, including the five benchmark centres. In November 2016, EU28 and Norway owned 36.5 percent of the gross world tonnage, whereas 46.2 percent were operated from the same countries. The tables on the following pages are based on a subset of nine EU countries to ensure coverage across the three dimensions of economic activity (owned, operated and flagged) over the full time series from 2010 to 2016. Accordingly, the world share numbers in Figure 2 are underestimated.

However, compared to the international growth centres, the EU is experiencing a slower growth in terms of the tonnage operated and owned in particular. In recent years, the EU has just been able to keep up an annual growth rate equal to the world average growth rate, while the most important international shipping centres outside the EU have had strong annual growth rates of 10-15 percent, cf. figure 1. As we will return to later, the EU-owned and -flagged tonnage is trailing behind, signalling that strong competitors are catching up and that market dynamics are changing.

Figure 1. Compound annual growth rate (CAGR), 2014-2016, gross tonnage



Note: Operated tonnage refers to vessels operated (under all flags) by companies/legal entities based in a given jurisdiction. Owned tonnage refers to the jurisdiction in which the ultimate control or ownership by shareholding of vessels lies. Flagged tonnage refers to the jurisdiction in which the vessel is registered with the maritime authorities. Data not available at level of all international centres.

Source: IHS SeaWeb, calculations by Deloitte. EU covers only nine European maritime centres (Greece, Germany, Denmark, UK, Norway, Italy, France, Belgium, the Netherlands). Data has been linearly extrapolated in cases of missing data. Data for flag registers are UNCTAD.

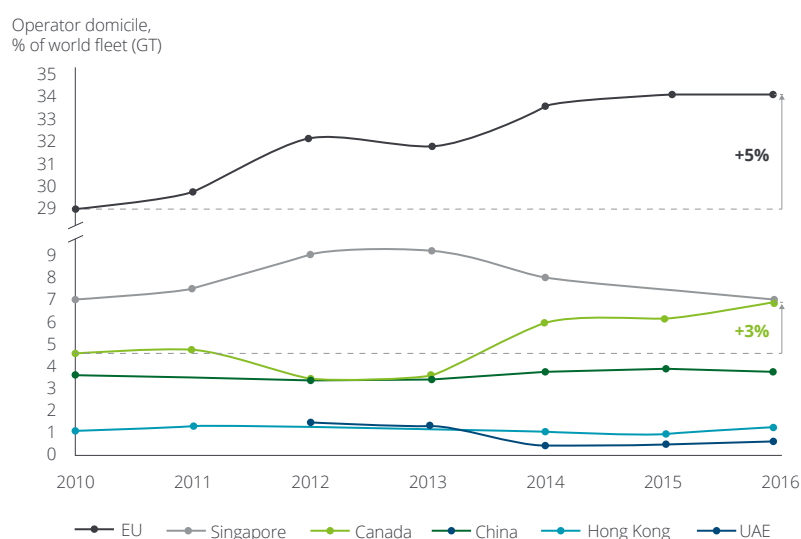
Since 2010, the nine selected EU shipping nations have increased their aggregate market share from around 29 percent to 34 percent – amounting to a small annual increase in global market share, cf. figure 2. While competitors have had higher compound growth rates, their smaller size means that the higher growth rates translate into a modest growing market share. This will, however, accelerate over time if the current high growth rates continue. Maintaining the significant aggregate global market share of the EU shipping nations should therefore not be taken for granted as Asian competitors develop rapidly. Maintaining its global market share will be increasingly difficult for EU shipping when competitors experience much higher growth rates.

While the share of world fleet by operator domicile indicates that Europe is still an attractive market for shipping companies, there are other indicators suggesting that the EU is faced with an increasingly competitive pressure.

The EU is losing ground on the share of the world merchant fleet that is registered under EU flags, cf. figure 3. Since 2010, the EU share of world fleet by flag of registration has dropped 4 percentage points. The share of the world fleet by ownership has fluctuated, but is showing signs of lower ownership shares, cf. figure 4. The upward fluctuation in group ownership domicile in the EU from 2011 to 2012 possibly reflects the investments made in new ships before the financial crisis in 2008, delivered at this point, where it seems that the overinvestments have been particularly large in key EU countries. The following decrease in the EU share of world ownership from 2012 to 2016 illustrates the increased activity from American and other foreign (non-European) capital funds in the global market for vessel ownership³ as well as the increased Chinese ownership.

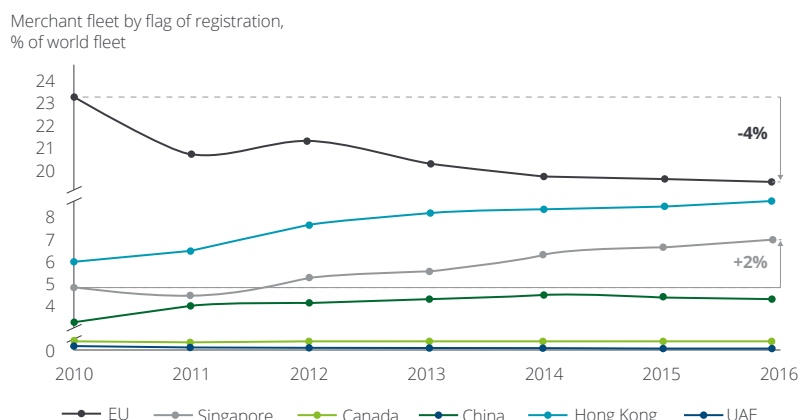
The key question is to what extent European policies support the long-term global competitiveness or whether policies are in fact contributing to the relocation of shipping companies, ownership and activities as well as further de-flagging outside Europe.

Figure 2. Development in share of world fleet by operator domicile, gross tonnage



Source: IHS-SeaWeb, calculations by Deloitte, EU defined as nine European maritime centres (Greece, Germany, Denmark, UK, Norway, Italy, France, Belgium, the Netherlands). Data have been linearly extrapolated in cases of missing data.

Figure 3. Development in share of world fleet by register and group ownership domicile, gross tonnage



Source: UNCTAD Maritime Transport database, EU28 + Norway

3. From 2010 to 2016, US world share of owned gross tonnage has increased by 2 percentage points (IHS-SeaWeb). On the inflow of private equity in shipping see for instance <http://www.caymanfinancialreview.com/2014/10/31/a-changing-seascape-in-shipping-finance-and-the-capital-structure-of-vessel-ownership/>

Current EU priorities and policies contain gaps vis-à-vis the international centres

The conclusion of the analysis of the EU policies relative to the policies in five international shipping centres is that there are a number of important gaps where, at the moment, the EU offers less attractive or consistent policies. Policy changes may be considered if the EU is to maintain its competitiveness as a location for shipping activities.

In total, the analysis has covered eight competitiveness factors: (1) taxation and other fiscal incentives, (2) regulatory, economic and political factors, (3) availability of professional services (4) skills, (5) flag attractiveness, (6) ease of doing business, (7) legal framework for vessel exploitation and (8) availability of finance. The gaps identified are:

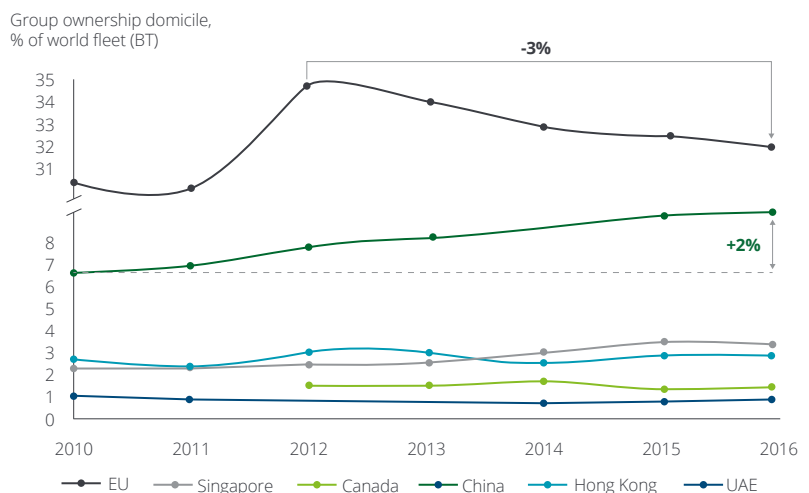
On taxation and other fiscal incentives:

The ease of relocation of activities in combination with the aggressive fiscal incentives that other international centres offer suggest that effective taxation at both corporate and shareholder level is a sine qua non condition to maintain a sizeable market share in international shipping. The current regime facilitated by the SAGs provides for a relatively competitive European shipping sector at its core. It is clear that the framework for fiscal and social measures to improve competitiveness is necessary to maintain a level playing field for EU shipping companies vis-à-vis global competition. However, the current SAGs should be further improved from a competitiveness perspective. Monitor Deloitte's analysis reveals that the EU framework is less competitive with regard to several elements, including the EU eligibility criteria relating to the flag requirement and the current ring-fencing put in place by the European Commission.

On regulatory, economic and political factors:

A significant gap has been identified, relating to the application and legal status of the SAGs. While the SAGs in their current form provide a good framework, the freedom of member states to tailor the framework to their needs is restricted. It is a perceived weakness seen from the view of shipowners that the EU and national interpretation of the SAGs is based on legal grounds, but lacks flexibility, whereas administrations in international centres are often much more pragmatic and business-

Figure 4. Development in share of world fleet by register and group ownership domicile, gross tonnage



Source: IHS SeaWeb, calculations by Deloitte, EU-defined as nine European maritime centres (Greece, Germany, Denmark, UK, Norway, Italy, France, Belgium, the Netherlands). Data has been linearly extrapolated, in cases of missing data.

friendly. This problem is reinforced by the fact that the SAGs are easily amendable from the perspective of the European Commission and that there are no explicit periods of applicability. In a sector where most business decisions are long-term, these factors give rise to uncertainty due to a perceived risk of interpretative policy change. In some of the centres (Hong Kong and Vancouver), rules governing fiscal treatment are written in primary legislation, and perceived policy risks are marginal.

The EU's current work in international negotiations in cooperation with member states is seen as valuable for EU shipping policies insofar as this enables member states to leverage their negotiating power. Interference of the EU leading to legislation that goes beyond or contradicts IMO conventions and unnecessarily restricting member states in contributing to developments at IMO level should, however, be prevented. The same goes for aggressive block building. Moreover, EU's involvement in the negotiations of FTAs on behalf of member states is seen as a highly important factor to EU competitiveness.

On availability of professional services:

There is a marked difference between the EU and the five benchmarked centres, except Shanghai, at a more fundamental level in the way that professional services and services surrounding the core shipping operations are actively included in policies. In four centres, the core ambition is to support the development of high value-added professional service jobs around the core shipping operations in order to develop and improve the maritime cluster and its competitiveness as a whole. This is seen in Singapore's Maritime Cluster Fund for Manpower Development (MCF-MD) and in Hong Kong's Maritime and Aviation Training Fund (MATF). The EU does not have a similar policy in place that focuses on a strong shipping sector as the core of a thriving maritime cluster and where the supply of skills in all corners of the shipping industry is prioritised – from seafarers to ship managers and ship brokers. Cluster strategies of the top international maritime centres focus on the entire value chain of shipping, whereas European cluster policies (developed in the context of Europe's Integrated Maritime Policy) have lacked a similar core focus.

On skills:

The analysis points to the fact that there is no significant financial gap in the EU regulatory framework for subsidies to training or to the labour-related costs such as provisions on exemption of seafarers' income tax and exemption of social contribution payments. Maritime training may be subsidised up to 100 percent of training costs under certain conditions. In practice, public funding levels are mostly around 50 percent in the EU, which is lower than in Singapore that usually covers around 70-90 percent. However, there is a gap regarding the scope of the training. Within the EU, this is solely focused on EU seafarers, whereas the scope in other centres is wider and also includes upskilling in the maritime professional services sector and other onshore-based jobs.

The SAG framework for lowering the effective income tax and social security contributions for seafarers within the EU is also effective (if applied by member states) and would leave behind a large policy gap if these provisions were to be rolled back.

On flag attractiveness and legal framework for vessel exploitation:

There are possible important policy gaps that may affect competitiveness negatively and possibly lead to relocation of activities and de-flagging to outside the EU. These are, among others, caused by a problematic introduction of EU legislation for international shipping and thereby introduction of different standards for EU flags and shipowners, causing additional administrative and technical requirements. Furthermore, some EU registers still stipulate specific nationality requirements and crewing restrictions that also lead to increased economic and administrative burdens. Lastly, there is a lack of cross-member state digital solutions that would allow EU shipping companies to benefit specifically from being registered under an EU flag. An example could be solutions building on innovative digital platforms for EU flags such as EfficienSea that could streamline EU flag state administrative procedures⁵. Such common solutions could improve efficiency of EU flags and registers and, for instance, ease the transfer of vessels between them. In the end, this would allow for lower costs passed on to owners of EU-flagged vessels.

4. Regulation (EU) No 1255/2011 of the European Parliament and of the Council of 30 November 2011 establishing a Programme to support the further development of an Integrated Maritime Policy

5. Innovative project currently being developed by the Danish Maritime Authority, co-funded by the Horizon2020 Programme in the EU. See <http://efficiensea2.org/>.

Singapore, on the contrary, has strategies to ensure that the regulation does not go beyond the international standards or further restrict operations through additional national requirements. This leads to lower operational costs and higher flag attractiveness. However, this practice does not cause the Singapore flag to be considered a lower quality option as exemplified in various MoU (memorandum of understanding) flag state ratings⁶. As a consequence, the competitiveness of EU flags vis-a-vis Singapore becomes a matter of differences in operational costs and not quality.

On ease of doing business:

The EU's continued focus on the reduction of administrative burdens on both general business and shipping-specific touchpoints is seen as highly important. However, the policy gaps identified relate to the lack of focus on ease of doing business for shipping companies involved in global shipping activities. The international centres provide examples of an approach where the perspective is global and as much on facilitating activities from abroad as on facilitating only internal activities. It also seems that a customer-related approach such as a one-stop shop, etc, is still missing rather often within the EU and its member states and the administrations involved.

Singapore is consistently being highlighted as a jurisdiction, in which ease of doing business is being pushed by a strong central administration in the Singapore Maritime and Port Authority that takes direct ownership of all directly and indirectly shipping-related matters and focuses on personal and flexible provision of services.

On availability of finance:

There is a number of policy gaps relating to the focus on mainly intra-EU investment support, the lack of transparency surrounding EU financial offerings, high administrative complexity and the uncertainties surrounding the new Basel regulations and their implications on ship financing through EU-based banks (where regulatory effects are expected to be more profound).

It is stressed that approximately 70 percent of the EU fleet are private enterprises that rely primarily on commercial bank financing. The current regulatory framework for bank financing is already restrictive, and the Basel IV proposals (and likely mandatory application in the EU) will make ship financing from banks even more scarce. With regard to the proposed Basel IV regulations, there is a need to include the consideration of the repercussions in the EU, especially on SME shipowners and operators who traditionally rely heavily on bank loans. This is in contrast to non-EU shipping companies that have more options for financing besides the traditional bank loans.

There is also a need to review the current EU public funding schemes with a view to schemes also supporting deep sea shipping, thus expanding the current setup of schemes primarily supporting short sea shipping activities.

Recommendations

Monitor Deloitte has assessed the gaps and their importance for competitiveness. On the basis of the assessment, one generic recommendation concerning the overall EU policy for shipping and three specific recommendations are put forward. The specific recommendations relate to the gaps identified within taxation, regulatory, economic and political factors and flag attractiveness. Furthermore, the identified gaps give rise to additional recommendations. These recommendations have been summarised in a separate table below containing all recommendations.

- **Key recommendation 1: Formulate a comprehensive and globally oriented shipping and maritime policy in the EU**

There is a need for formulating a renewed, overall comprehensive policy for shipping with two significant features. Firstly, it should have a strong focus on supporting the global competitiveness of the shipping and wider maritime sector. While emphasising the inherent global nature of shipping, the current maritime transport strategy and the majority of the initiatives launched to a large extent focus on the competitiveness of waterborne transport internal to the EU and other provisions related to safety and

6. Summed up in the annual Shipping industry flag state performance table, published by the ICS. <http://www.ics-shipping.org/docs/flag-state-performance-table>

security. But both markets (short sea shipping and global shipping) are important to Europe. In fact, the largest share of EU shipping is international and cross-trading, carrying cargoes between third countries. This means that it earns its living outside the EU, doing business with trading partners outside the EU. The global challenge to EU shipping requires the EU to formulate a more globally oriented policy. Secondly, the policy should be comprehensive by cutting across policy fields like transport, taxation, environment, etc, and thereby cover the key competitiveness factors.

Monitor Deloitte's benchmark analysis has revealed that the strategies of the international centres are comprehensive in the sense that policies are aligned and coherent across competitiveness factors in order to support the distinctive position that the cluster aspires to achieve globally. Following up on its 2009-2018 Maritime Transport Strategy, the EU could take a similar step and unfold a comprehensive policy supporting the ambition to be globally competitive as a location for shipping activities.

• **Key recommendation 2: Improve legal clarity around the application of the SAGs**

The uncertainty pertaining to how the SAGs are interpreted in specific cases gives rise to some degree of risk. This risk is related to questions on how different components of a shipping operation should be treated for tonnage tax purposes, and what types of income are accepted as arising from qualifying activities. This is highlighted by the lack of clarity surrounding the European Commission's gradual shift from the targeting of maritime transport to the inclusion of maritime services, the treatment of ancillary activities, chartering ratios and the treatment of financial income. Whereas this shift is welcome, seen from a competitiveness perspective there is still uncertainty about the degree of flexibility that member states are allowed under the SAGs. While the maritime SAGs should remain soft regulation, there is an apparent need for continued flexibility in the member states' application of the guidelines. A one-size-fits-all model that drives out the particularities of individual

member state shipping sectors would be harmful to the overall competitiveness of EU shipping.

Secondly, there is a perceived risk around the lack of clear time horizons for the applicability of the current SAGs. This makes them inherently risky from a business perspective as they can be amended at a rather short notice due to changing political preferences of the European Commission. It also has a detrimental effect on the level of business-friendliness. Rightly or wrongly, national administrations are very reluctant to entering into open discussions with shipping companies because of the perceived risk of an infringement procedure. The recommendation is that the EU should increase the clarity around the applicability of the SAGs by clarifying the principles applied to describe the activities that qualify for European tonnage regimes. Also, to the extent possible, the EU should aim at setting medium/long-term horizons for the applicability of the SAGs to induce increased legal certainty. Finally, the EU should not question previous decisions that were duly notified and approved.

• **Key recommendation 3: Assess and ease the flag link eligibility criteria for entering the tonnage tax regime**

The current requirement of a flag link in the tonnage tax regime is restricting the operational freedom of shipowners and operators in the EU, even though the SAGs contain a pragmatic degree of flexibility regarding the use of EU flags. While sometimes a shipowner has little choice in which flag the vessel has to fly⁷, in general, this choice is determined by the overall standards and professionalism practiced by the flag administration as well as by the costs and bureaucracy connected with the flag. EU flags might not always provide the most attractive commercial framework for shipowners, and requirements could lead to increased operating costs or lack of market access. Too rigid an insistence on the location of the flag may be counterproductive in discouraging the use of EU flags. The consequence may be that over time, the EU registers will lose further ground to the growth centres contrary to the stated EU objective.

7. For example, when ships are chartered in to meet a temporarily demand for extra transport capacity, the chartered vessel already has a flag, and changing the flag can be too cumbersome and costly. In case of cabotage or other maritime services at sea outside the EU, the ship often is obliged to fly the flag of the country where the services are performed.

Furthermore, the economic value of belonging to a quality EU register for shipowners has been eroded by the high level of international harmonisation on safety and environmental factors. Hence, by insisting on a flag link eligibility requirement for the special fiscal treatment, the EU will lose attractiveness and may over time lose operational and ownership activities. The above graphs suggest that the correlation between the share of operational activities and the size of the EU-flagged fleet is non-existing, and that the argument of the flag link being a prerequisite for increased economic activity in the EU may be obsolete.

The recommendation is to consider easing, or as a minimum not further restricting, the current flag link requirements set up in the SAGs. Instead, the EU should maintain and focus on its requirement concerning strategic and commercial management activities, which is closer to the requirements in other jurisdictions, including Singapore and Dubai.

- **Key recommendation 4: Avoid deviating from or going beyond IMO/ILO conventions in EU and member state regulation**

There is a continued pressure for higher safety and environmental standards in the EU. Whereas such efforts are also principally positive from a competitiveness perspective, it is equally important that the EU does not act as first movers and impose stricter regional regulations for international shipping. Implementation of regulations outside IMO/ILO will increase the operating costs relative to flag states, such as Singapore, pursuing regular implementation of IMO/ILO conventions and should be avoided.

The implementation of IMO/ILO conventions is mainly the responsibility of member states, but specific conventions are implemented through EU directives and regulations (MLC and aspects of SOLAS, MARPOL, Hong Kong Convention on Ship Recycling). Furthermore, the implementation of conventions and flag attractiveness in general are to a large extent depending on member state policies. However, there is some EU legislation influencing the attractiveness

of EU flags in general due to situations where EU directives and regulations impose ship operators with stricter minimum requirements than the international conventions (examples here are the extensive range of European directives and regulations on health and safety, environment and labour relations). Furthermore, the EU may encourage member states to avoid excessive and burdensome regulation and advocate for regulatory reform.

In order for the EU to offer competitive conditions for reflagging of existing vessels and flagging of new ones, the deviation from or going beyond IMO/ILO conventions should be prevented. Furthermore, current regulation should be reviewed in order to reduce unnecessary detailed and burdensome regulation. In cases where the EU implements higher safety or environmental standards than IMO/ILO conventions themselves require, it should be ensured that the full economic effects on EU-flagged ships are assessed compared to a regular implementation of international conventions and full reliance on unified interpretations adopted by the IMO. In cases where the economic effects are significant, supportive measures should be pursued to help EU-based shipowners to adapt to the new regulations.

In the overview on the next page all recommendations from the study have been presented categorised by the importance of the competitiveness factor concerned and the priority of the recommendation. The recommendations have been further detailed in chapter 4 of the report.

What should the EU do? Policy recommendations

Vision		Develop the competitiveness of the EU/EEA shipping sector in order to retain economic activity within the EU							
Vision	Taxation and fiscal incentives	Availability of professional services	Regulatory, economic and political factors	Skills	Flag attractiveness	Ease of doing business	Legal frame- work for vessel exploitation	Availability of finance	
Factor im- portance	1. Critical importance	2. High importance			3. Some importance				
New key initiatives to improve EU competitiveness Initiative priority High 									

2. The strengths and priorities of international centres

The benchmarking points to the fact that the most competitive shipping centres follow a comprehensive and consistent strategy leveraging its competitive position. This involves strong government involvement and high performance of general and, in particular, maritime-specific enabling competitiveness factors.

The framework for shipping in five leading international centres is the point of departure for looking into the competitive challenges that Europe faces as a location for shipping activities.

Singapore, Hong Kong, Dubai, Shanghai and Vancouver are the centres selected for a benchmarking of the attractiveness to shipping activities. While most of them are still minor centres in terms of global market shares, compared to the EU member states as a whole, they experience high growth rates and are named the main competitors to the EU for location of strategic, commercial and operational shipping activities⁸.

The benchmarking has been performed with a view to identifying what makes the centres the best in terms of attractiveness.

We find that Singapore consistently scores high in the benchmarking, highlighting the wide-scoped dedicated governmental focus on promoting the maritime economy and the comprehensive strategy to develop a maritime cluster.

Furthermore, it can be concluded that the individual centres leverage their distinct strengths and actively promote these on the global maritime scene. The centres are at different levels of maturity, but they are all actively pursuing growth from a different competitive position.

The strategies of the centres differ markedly. The strategy of Singapore is to attract all types of global activities across the maritime cluster, whereas China aims at building Shanghai as a domestic cluster, and Vancouver hopes to attract a significant number of headquarters of shipping companies and management activities. The different strategies lead to a different focus of policymakers, which in turn is seen in the benchmarking scores.

2.1 Introduction to the five centres

The centres pursue different strategies and have different propositions towards shipping companies and actors in the wider maritime cluster. The strategies are, to a large extent, illustrative of different levels of maturity of the maritime centres. Whereas Hong Kong has a long history of maritime activity, newcomers such as Dubai, Vancouver and Shanghai have only recently seen a focus on their position as an internationally competitive place to set up shop. Singapore is still a relatively young maritime centre, but has nevertheless managed to develop a significant level of maturity over a short period of around 20 years.

The strategies pursued by policymakers and stakeholders in the centres differ on several key parameters as highlighted in table 1. The overall strategic imperatives vary from ambitions to become the leading maritime centre of the world to pursuits of niche positions in the marketplace. The maturity of the centres also means that policymakers focus on markedly different end goals. Some focus on retention of existing shipping activities, others on attracting activities. Different strategies mean different policies, and different policies in turn lead to different performance across the set of benchmarked parameters. Accordingly, the competitive pressure on the EU is highly variable, looking across the five centres. The EU and its member states are competing against Singapore and Hong Kong on most accounts (flagging, operations and ownership), whereas the competitiveness pressure from Vancouver is focused mostly on location of management activities related to ownership.

8. As such, the scope of the benchmarking and the choice of international maritime centres go beyond the question of attractive flag registers. Panama, Liberia and Marshall Islands are the three largest flag registries in the world, but they do not compete for strategic, commercial or operational activities the same way as the five centres in this study do. The common denominator for the five centres is a maritime cluster focus.

In a nutshell, Singapore is pursuing the position as the strongest global maritime centre in the world. It does this through heavy government involvement in the development of the sector and through comprehensive strategies on all aspects of the maritime cluster. Since Singapore has a comparably weak local supply and demand base for shipping, its focus is targeted on attracting foreign shipping activities through attractive shipping incentives and unique business-friendliness

towards both new and existing businesses. Singapore has policies in place to support the widest range of maritime cluster players, going beyond the traditional beneficiaries of shipping incentives such as shipowners. The Singapore Maritime and Port Authority (MPA) is the one-stop shop for all maritime commercial and strategic matters, and Singapore's laser beam focus is targeting the continued development and competitiveness of the Singapore maritime sector.

Table 1. The five centres in a nutshell

	Overall strategic aspiration/ imperative	Key focus of the centre	Sector scope	Primary selling points	Noteworthy policies and investments
Singapore	Global maritime centre through comprehensive government-induced development and attraction of foreign activities	Attraction of foreign actors	Entire shipping sector	Shipping incentives on tax without restrictions Direct project grants Ease of doing business	MSI tax incentives (SRS, AIS, SSS, ML) Maritime Cluster Fund MPA one-stop-shop strategically, operationally and commercially
Hong Kong	Global maritime centre through focus on liberal business conditions and position as gateway to China	Retention and attraction of national (Chinese) and foreign actors	Ship owners and management	Ease of doing business Maritime skills Simplicity and no special treatment Gateway to China	Establishing Hong Kong Maritime and Port Board, a joint government/industry body
Dubai	Regional maritime centre through no-tax regime and heavy government investments in physical maritime infrastructure	Attraction of foreign actors	Ship owners and branch offices	No corporate or personal income tax	Investments in physical infrastructure of Dubai Maritime City Set up of Dubai Arbitration Centre
Vancouver	Global maritime HQ/ management centre through broad tax incentives for shipping and auxiliary services	Attraction of foreign actors	Management activity/ branch offices	No tax on shipping activities, incl. mgt and financing activities Quality of life	VIMC investments in advertising Changes to fiscal regime, widening incentives for international shipping
Shanghai	National maritime centre primarily based on national shipping companies and foreign satellite offices located due to economic activity	Retention of national actors	Ship owners	Access and location Relatively low costs	Investments in Shanghai Pudong FTZ Government ship financing subsidies

Note: VIMC is the Vancouver International Maritime Center. MSI-schemes are the maritime shipping incentives schemes offered by the Maritime and Ports Authority of Singapore (MPA).

Hong Kong is the pressured incumbent of Asian maritime centres, currently revitalising its position through active promotion of its competitive advantages. Hong Kong's strategic imperative of these advantages remains the same, as Hong Kong positions itself as a liberal and legally sound gateway to the Chinese market. The newly established Hong Kong Maritime and Port Board (HKMPB) is the primary actor in promoting the long-term development of Hong Kong as a maritime centre and seeks to do this through facilitation of cooperation between government and industry.

Dubai is a newcomer on the maritime scene and a relatively immature centre backed by heavy government investments in the physical maritime infrastructure. Dubai's focus is on attracting foreign shipowners and operators by offering a no-tax regime, while pursuing growth in its maritime professional services sector through support of newly established maritime arbitration centres (EMAC), maritime educational centres and innovation labs (MCL). These are initiatives backed by government and administered strategically by Dubai Maritime City Authority.

Vancouver is another newcomer on the maritime scene, also backed by some government investments in the physical maritime infrastructure, including large public contracts for shipbuilding, which drives the development of technical maritime expertise. However, the main competitive driver for Vancouver is the attractive fiscal regime for non-resident companies involved in international shipping activities. Vancouver historically saw an influx of traditional Hong Kong shipowners leading up to the transfer of sovereignty over Hong Kong from the United Kingdom to China in 1997, as shipowners hedged against the risk of changes to the political system. Since then,

Vancouver has continuously focused on attracting the primary management activities of shipowners. Recently, the Vancouver International Maritime Centre (VIMC) initiative backed by the federal government has sought to revitalise this strategy and focus on the attractive tax system offered for management activities in the jurisdiction. Vancouver is seen as a fairly viable alternative to the Asian counterparts for traditional management activities.

Lastly **Shanghai** is building its presence in the global maritime sector through attracting national shipping activities and offering liable conditions for global shipping companies to set up commercial satellite offices, which increases their access to the massive Chinese market. Many large European shipping actors have in this regard utilised the EU-China trade agreement as an entry point to the Chinese market as this significantly lowers the entry barriers. Shanghai still offers no specific fiscal incentives for shipping companies. Their primary selling point is commercial access. Besides the significant development of government involvement in ship financing, the efforts of the Chinese government to develop the Shanghai maritime centre still have to materialise. As of now, many foreign shipowners and operators still consider Shanghai as a more risky and uncertain place to do business vis-à-vis other international centres.

The methods behind the model

The benchmark model consists of eight competitiveness factors and 52 indicators. The academic literature, previous competitiveness indices and discussions with industry stakeholders have provided a foundation for the selection of indicators and have guided the overall architecture of the model. The competitiveness factors are shown in the box below and will be further described throughout the report. Annex 1 shows the complete overview of local and global weights applied in the model.

The 52 indicators are based on data representing the best available estimates from various sources such as national authorities, international organisations and private data holders. Some indicators are based on desk research and expert interviews, and these data inputs have been quality assured. It is possible that some data will have been updated or revised after publication.

The computation of the benchmark scores is based on successive aggregations of scores on individual weighted indicators that operationalise the overall competitiveness factor. Local weights are applied to indicators that add up to the global weight for the overall competitiveness factor shown in the table.

Competitiveness factor score_i
 $= \sum (Indicator\ score_i * local\ weight)$

To construct the composite indices of a wide variety of variables so that the scores retain the relative distance between the five centres' performance, while standardising the individual indicators range from 1 to 10, we apply a standard min-max transformation at indicator level. The standard formula for converting the quantitative data is the following:

$$std.score_i = 9 * \frac{(score_i - score_{min})}{(score_{max} - score_{min})} + 1$$

In cases where higher values indicate the worst performance, such as number of eligibility requirements for tax incentives, the min-max transformation is reversely converted so that the 1-10 scale still corresponds to worst and best possible performance, respectively:

$$std.score_i = -9 * \frac{(score_i - score_{min})}{(score_{max} - score_{min})} + 10$$

The perils of a min-max transformation in cases where the sample size is limited are that the model automatically creates variance, even though the variance might be limited in practice (e.g. if all countries, but one, in the model had 60 signed tax treaties and the last had 59, then that country would score 1, and the others 10). The weighting scheme shown in the table has been sensitivity tested and no significant changes to the ranking of the five centres are seen when applying significantly different weights.

Competitiveness factors and weighting


Taxation and
fiscal incentives
30%


Availability of
professional services
15%


Skills
15%


Regulatory, economic
and political factors
12,5%


Flag attractiveness
12,5%


Ease of doing business
7,5%


Legal framework for
vessel exploitation
5%


Availability of finance
2,5%

2.2 Overall result of the benchmarking

The benchmarking suggests that Singapore outperforms other shipping centres on most parameters, except for taxation (second to Dubai) and skills (second to Hong Kong). Singapore and Hong Kong are consistent high performers, whereas Vancouver and Dubai score high on specific factors, underlining differences in overall strategy of centres.

Both Singapore and Hong Kong offer a full-fledged cluster setting with very few outspoken competitive disadvantages. The strategy applied by policymakers in the two centres to achieve this status differs markedly. Whereas Singapore and the Maritime and Ports Authority (MPA) is founded on a political imperative of big government and heavy intervention, Hong Kong pursues a laissez faire approach to government, in which long-term liberal framework conditions are prioritised over short-/medium-termed policy programmes targeted the competitiveness of the shipping sector. When assessing competitiveness, Singapore's approach is indeed very sector-specific, whereas Hong Kong looks at competitiveness in more general terms. The maturity of the Hong Kong maritime centre makes the hands-off approach more viable vis-à-vis Singapore where development of the maritime centre is an ongoing process. The recent establishment of the HKMPB suggests that a more activist approach is sought, although still partly industry-led.

Dubai scores a third place in the benchmarking. This is mainly due to the attractiveness of their tax regime. Offering zero tax across the board allows the centre to attract shipowners and operators who set up their profit centre in the Dubai FTZ, where foreign-owned shipping companies can register businesses with few restrictions. The Dubai maritime centre is seeing significant advancement for the time being, but is still rather immature and lacks the comprehensiveness offered in the other centres. Heavy public investments in physical maritime infrastructure and a strategic location have made Dubai a key regional hub. The strong focus on physical infrastructure until now means that the centre is still hampered by an underdeveloped legal framework, weak core shipping institutions and lack of maritime skills. However, a strategic shift from hardware to software is underway⁹.

9. Oxford Business Group, 2016.

Figure 5. Results of the benchmarking

Overall Singapore and Hong Kong are on top

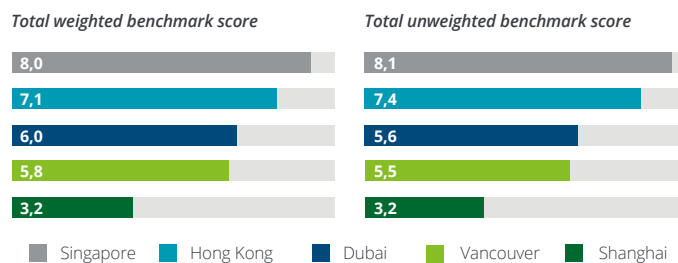
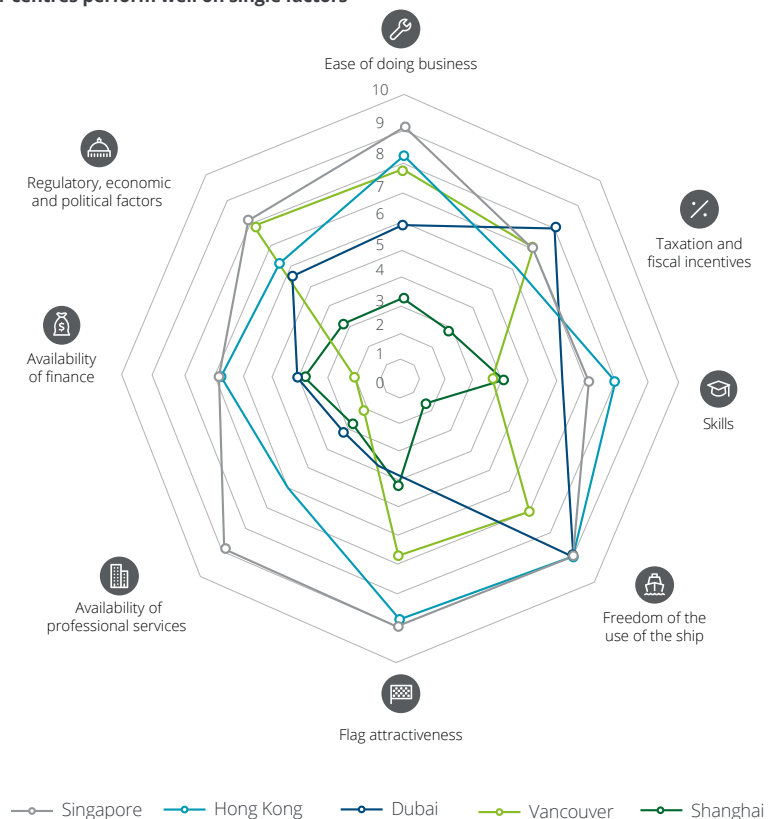


Figure 5. Results of the benchmarking

Other centres perform well on single factors



Vancouver is so far not trying to compete directly with the larger and more comprehensive maritime clusters in general. Instead, there is a focus on attracting the management activities of shipowners and operators. This is mainly done through offering an attractive tax regime for international shipping activities and framing Vancouver as a liable alternative to the Asian counterparts. Comparing the centre with Singapore and Hong Kong, there are several shortcomings in terms of availability of professional maritime services, maritime skills and some key parameters relating to ease of doing business (e.g. procedures for VISA applications).

It has also been highlighted by interviewed experts that whereas the strategic geographic position of Dubai is an attractive feature of that centre, Vancouver is hampered by being located in an unattractive time zone for trading with key markets in Europe and Asia.

Shanghai receives the lowest score in the benchmark model. The region consistently score lowest or second lowest. This is partly due to the lack of any fiscal incentives for shipowners and operators located in the jurisdiction, but also due to general legal uncertainty and a very low ease of doing business. As such, Shanghai leverages its power as a gateway to the Chinese market that is now more accessible than earlier, thus partly eroding the proposition of Hong Kong.

Table 2. Comparison with other shipping-specific and general benchmark analyses of competitiveness of centres

Centre/Country	Monitor Deloitte benchmark (2016/2017)	Menon International Maritime Centres (2015)	Xinhua- Baltic Exchange (2016)	BMT Asia: Hong Kong consultancy report (2014)	World Bank ease of doing business (2016)	World Economic Forum Competitiveness (2016)	Economic Intelligence Unit (2016)	Heritage Foundation (2016)
Singapore	1	1	1	1	1	1	1	2
Hong Kong	2	2	2	2	2	2	2	1
Dubai	3	4	4	-	4	5	4	4
Vancouver	4	-	-	-	3	3	3	3
Shanghai	5	3	3	3	5	4	5	5


Shipping specific
General competitiveness

Note: Numbers for other benchmark analyses show the relative ranking between the five centres/countries and not the absolute ranking of the individual centres/country in the benchmark analysis.

Compared to other benchmarking of the performance and competitiveness of the five centres, shown in table 2, the ranking in this study differs on a few accounts. A few things are worth noting in this regard. It seems obvious that most analysts agree that Singapore and Hong Kong are the leaders in terms of competitiveness, both in relation to general business frameworks and shipping-specific conditions. The more shipping-specific the benchmarks get, the higher Shanghai is scoring due to its sheer size. General benchmarking of competitiveness, on the other hand, tend to score Vancouver higher and Shanghai lower. The benchmarking undertaken in this project seeks to balance general and shipping-specific competitiveness factors to give the most comprehensive look at the attractiveness of each centre.

These parameters are, however, not included in the generic tax model illustrated in figure 6, which builds on seven parameters enabling a comparison of centres that offer no principal tax incentives for shipping with centres that offer extensive incentives for some components of income of shipping companies.

2.3 Ranking on individual competitiveness factors

The following section ranks the five centres on each of the eight competitiveness factors included in the competitiveness model.

2.3.1 Taxation and other fiscal incentives

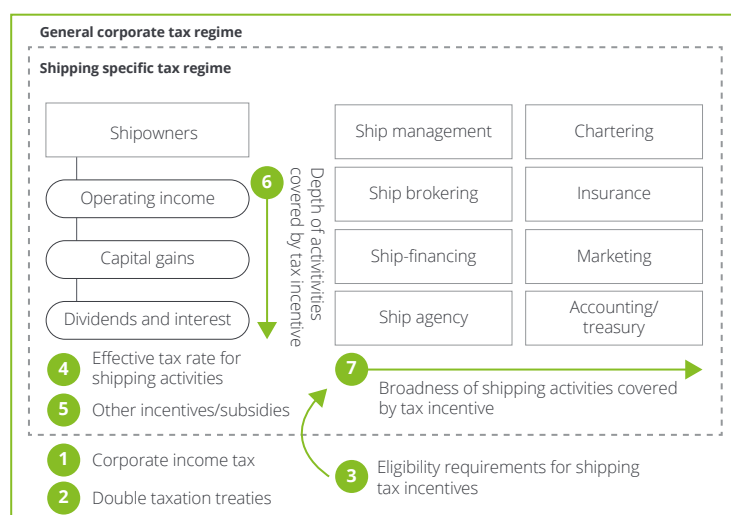
Taxation and other fiscal incentives is considered the preponderant factor for the competitiveness of shipping centres. Many shipowners will consider the existence of a low/no tax regime for shipping generated income as a necessary condition for their undertakings to be competitive in the global market place.

Reviewing the tax regimes of the individual maritime centres, it is clear that each regime provides for something different in relation to fiscal incentives offered for shipping companies. The fundamental differences in the overall tax regimes make direct comparisons very challenging. In view of the above, the ranking of the countries in relation to the attractiveness of the fiscal systems in place for the shipping industry was made on the basis of a generic framework of indicators that apply for all regimes regardless of the character of the tax regime. Table 3 shows a short summary of the five tax regimes. Besides the hands down attractiveness of the tax rates offered to actors in the shipping sector, each regime type comes with pros and cons related to factors such as extent of bureaucracy, legal certainty and complexity¹⁰.

10. Parameters such as legal certainty and complexity are covered in connection with other competitiveness factors.

Table 3. Summary of the five different tax regimes

Singapore	Hong Kong	Vancouver	Shanghai	Dubai
Low tax regime with extensive and broad shipping incentives	Low tax regime with few narrowly defined shipping incentives	Broadly defined tax incentives for non-resident shipping operations	Standard tax regime, with no shipping incentives	No tax regime
• General low tax regime. • Tax exemption for Singapore-flagged shipping operations and foreign-flagged shipping operations under conditions of economic activity in Singapore – similar for maritime finance and leasing services. • Tax reductions for auxiliary maritime services. • Annual tonnage fee applies for Singapore flagged vessels	• General low tax regime, including no dividend tax, withholding tax, VAT, capital gains tax, sales tax, etc. • Operating profits derived from international shipping operations not subject to profit tax, neither is charter hire income. • Low number of double taxation treaties. • Annual Tonnage Charge applies for HK flagged vessels	• Full tax exemption shipping operations and management activities based in Vancouver. The office is tax exempt. • Tax exemption on capital gains on sale of vessels outside of Canada. • No flagging requirements, minimum time commitment, vessel ownership restrictions, restrictions on types of vessels. • Activities incidental to the operation of ships including crewing, accounting/treasury back office support, etc.	• Shipping companies are offered no preferential treatment in the Chinese tax code. • Dividend tax, capital gain tax, VAT, special local levies. • Extensive list of double taxation agreements. • Freight tax for foreign companies (1.25 %) still not effectuated in Shanghai.	• No special incentives for shipping. • No corporate tax whatsoever, including dividend tax, inheritance tax, withholding tax, etc. • A renewable tax exemption for up to 50 years in Dubai FTZ, no nationality requirements on ownership.
Shipping incentive regimes			Standard tax regime	No tax regime

Figure 6. Tax model used to compare attractiveness of tax regimes in the five centres



Taxation and fiscal incentives

Who is the best?

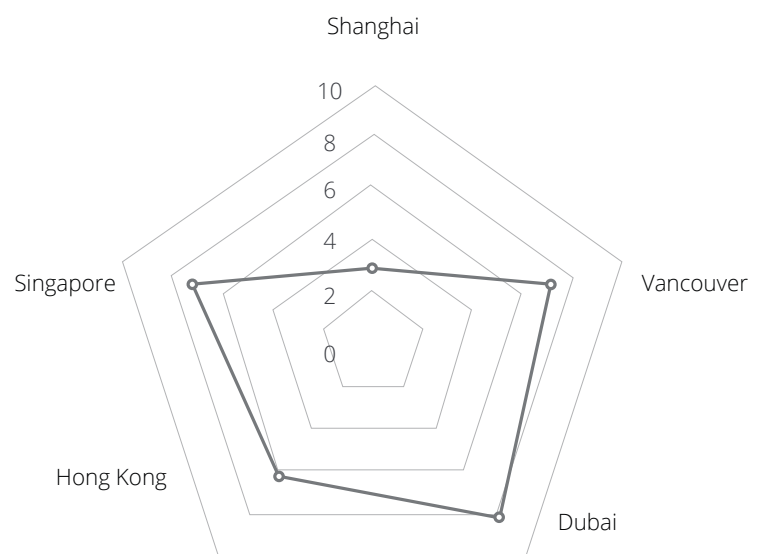
Dubai

What are the numbers saying?

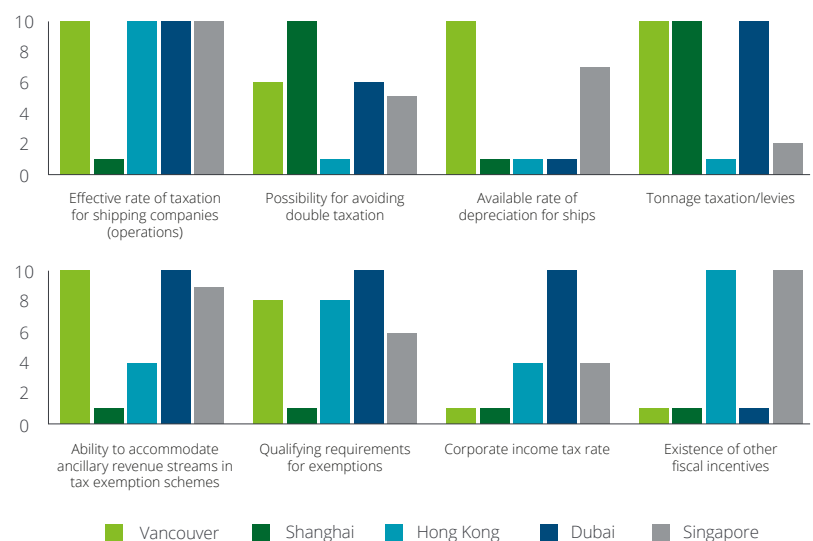
For the shipowners, there are few differences to the effective tax rate on operational income, which is exempt from tax in 4 of 5 centres. However, Dubai, besides offering no corporation tax on operational income, also has no dividend, capital income and withholding taxes. In Dubai, since no special incentives for shipping are in place, there are no ring-fencing of the tax regime. Tax freedom thus applies to income derived from all vessel types and for all companies in the shipping cluster.

Eligibility requirements for a shipowner are limited to corporate ownership in U.A.E, whereas shipping incentive regimes place requirements of either flag links or requirements for economic activity. UAE also offers a strong base of double taxation agreements compared to its closest competitors in Singapore and Hong Kong. More importantly, fiscal incentives apply also to shareholders and executives.

Ranking of shipping centres on competitiveness factor



Ranking of shipping centres on sub-indicators

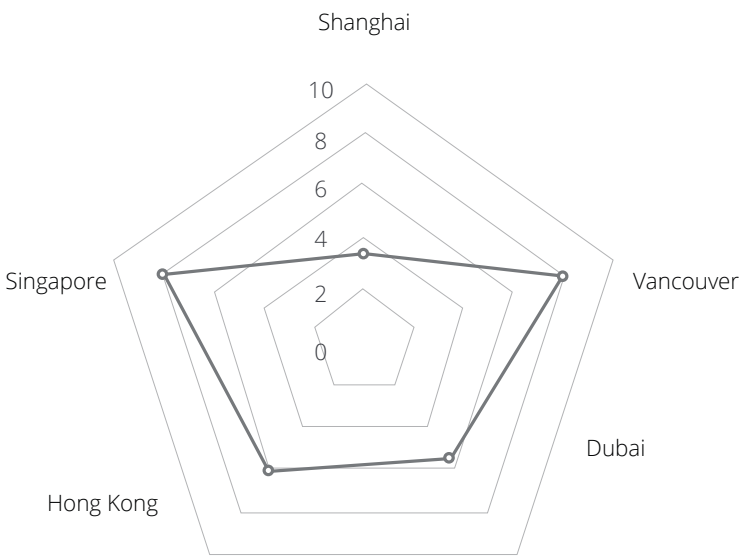




2.3.2 Regulatory, economic and political factors

Legal certainty, consistency in the governmental commitment to the sector, a well-functioning common law-based legal system and general economic prosperity are pivotal to location decision of shipping companies. The capital-intensive character of the sector with long payback periods make stability the common denominator behind this key competitiveness factor. The regulatory indicators relate to the overall risk of legislative changes and the influence of the centre and the government in IMO and ILO. The influence at these forums makes it easier for stakeholders in the centres to influence the development of international regulations on safety, environment and social matters. The political indicators measure the overall quality of the rule of law in the jurisdiction and the extent to which bureaucracy hinders business activity. Lastly, the economic indicators highlight the overall economic climate in the centre and the corresponding costs of living.

Ranking of shipping centres on competitiveness factor



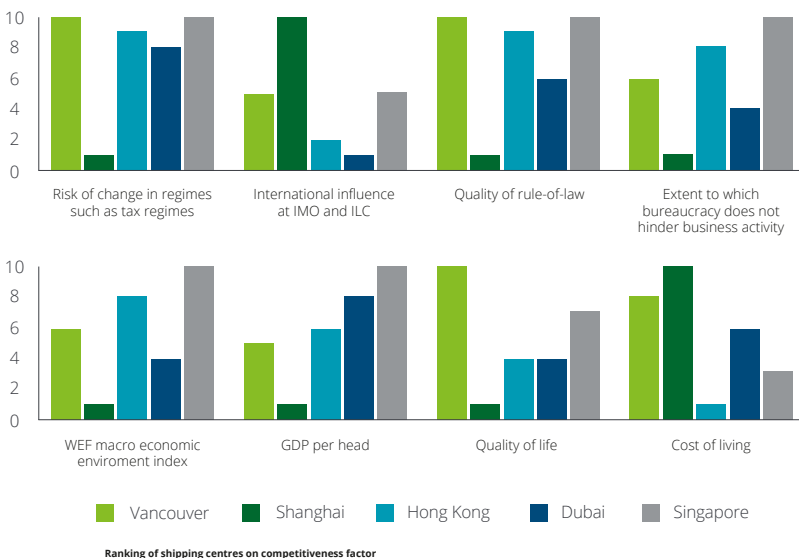
Who is the best?

Vancouver, Singapore

What are the numbers saying?

Vancouver and Singapore score higher than their competitors. Although Hong Kong seen in isolation performs very well on the same indicators, its scores are hampered by the uncertainty created by the Chinese administration. Vancouver is considered attractive due to a mix of high quality of life, low risks of legislative changes to both general rules and shipping-specific legislation paired with relatively low costs of living compared to Hong Kong and Singapore. Singapore and Hong Kong both offer stabile regimes on all parameters, whereas Dubai lacks behind on the regulatory and political factors. The low costs in Shanghai cannot outweigh the lack of transparency, the low quality of rule of law and problems surrounding the quality of life.

Ranking of shipping centres on sub-indicators





2.3.3 Availability of professional services

Shipping companies are complex undertakings that rely on several highly specialised services. The existence of providers of such service lay the foundation for an effective business environment for shipping. Besides core professional services, the existence of the physical services surrounding the sector is important too, although to a lesser extent. The model takes both core professional services, e.g. legal, insurance and business services, and physical service provisions, e.g. port infrastructure and ship engineering/repair services, into account. Accordingly, the competitiveness factor gives a good indication of the overall completeness of the service side of the maritime cluster (excluding finance, which is handled separately).

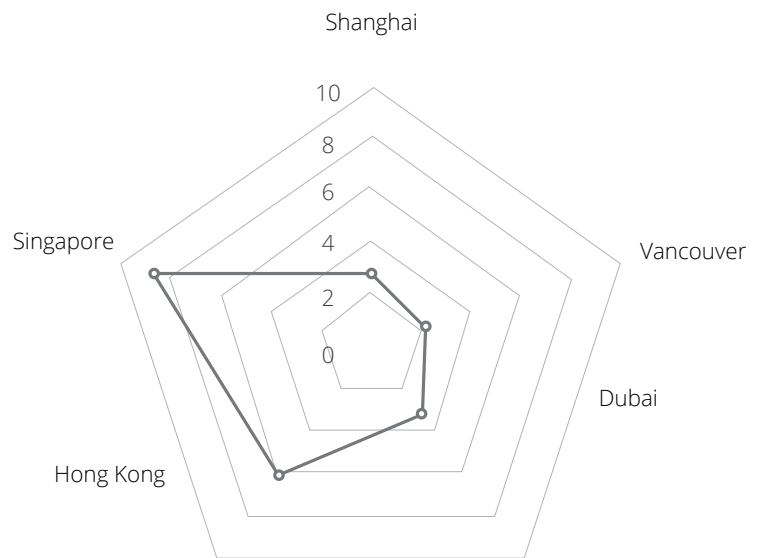
Who is the best?

Singapore

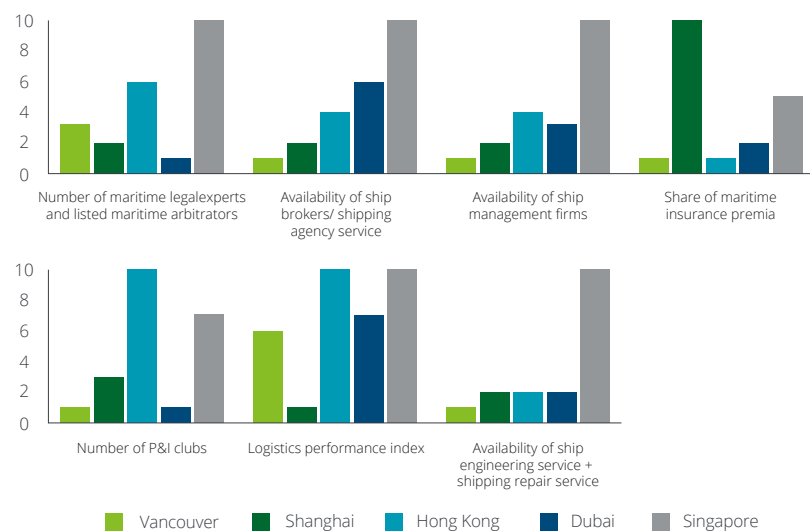
What are the numbers saying?

Singapore offers the strongest cluster setup for maritime services. On legal services and arbitration, they outcompete Hong Kong, whereas Hong Kong and Shanghai are stronger on the insurance side with presence of most P&I clubs and the highest share of collected maritime insurance premiums. Singapore, however, offers the strongest supply of wider business support services such as ship agencies and ship management firms as well as ship brokers. Singapore has a strong position, both commercially and operationally, which makes the centre stand out from many of the others that tend to show strength in only one of the two aspects. As a central transshipment hub in East Asia, Singapore's physical services compliment its strong professional services sector.

Ranking of shipping centres on competitiveness factor



Ranking of shipping centres on sub-indicators





2.3.4 Skills

A supply of skilled labour and proper institutions, policies and framework conditions supporting this supply is a critical factor for the competitiveness of maritime centres. Human resource issues are generally complex, but even more so in the shipping sector with a fragmented demand for skilled onshore and offshore workers, ranging from finance graduates to cadets.

The benchmark model splits the centres’ competitiveness on the skills question into three sub-factors: (1) structural labour force indicators, (2) tax and other skills-related rules and (3) maritime education. The factor as such looks at general as well as shipping-specific supply and demand-side drivers for skills.

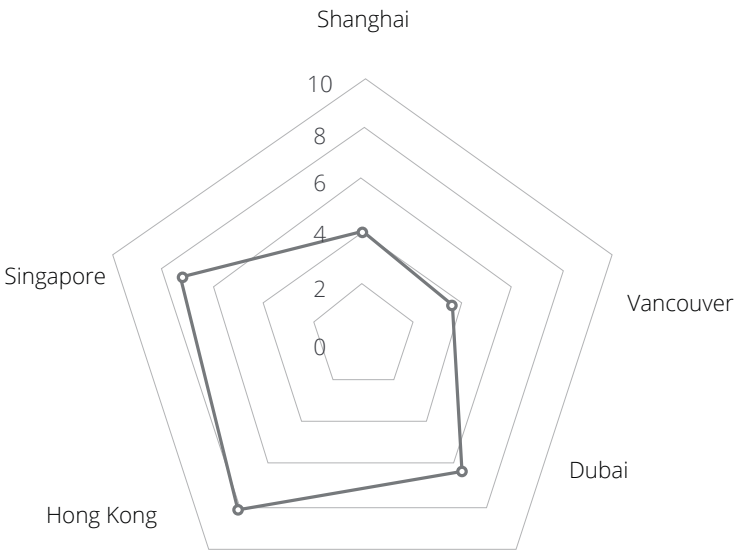
Who is the best?

Hong Kong

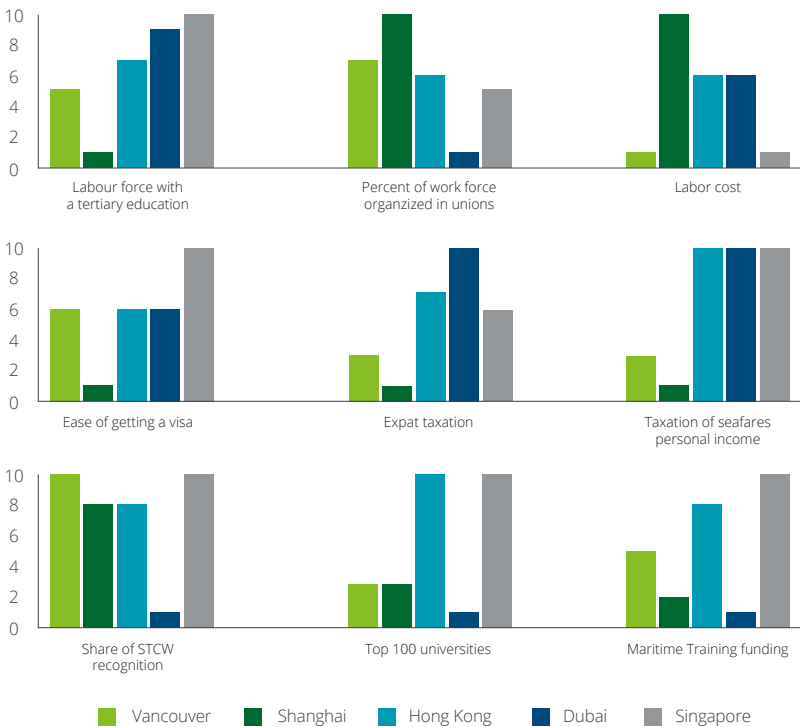
What are the numbers saying?

Hong Kong offers the best fit between supply of skilled local labour, strong generalist universities, maritime educational institutions for seafarers, labour costs and personal tax rates. Compared to Singapore, the labour costs in Hong Kong are significantly lower, mainly due to the fact that companies in Hong Kong are better able to source local labour, rather than relying on foreign permanent residents/expats. This reality is handled in Singapore by minimising the visa application bureaucracy to a very large extent. Both Singapore and Hong Kong offer generous training subsidies for upskilling employees in the wider maritime sector as well as tax freedom for seafarers on worldwide income, and their nationally educated seafarers are granted recognition of STCW certificates by the EU and most European maritime administrations.

Ranking of shipping centres on competitiveness factor



Ranking of shipping centres on sub-indicators





2.3.5 Flag attractiveness

Flag attractiveness is only relevant for the centres that compete for global activity in this area (ship registration) and it is clearly illustrated in the data on the domestic flag registers of UAE, China and Canada. Hong Kong and Singapore, on the other hand, both compete for global flagging activity in their open registries. This ties back to the overall strategy pursued by the policymakers in the five maritime centres and what types of activity they desire to attract. However, being able to also offer attractive flags for shipowners in a centre is a significant competitive advantage as large merchant fleets will spill over into the wider maritime cluster and add significant expertise and skills to the maritime administrations of the centres.

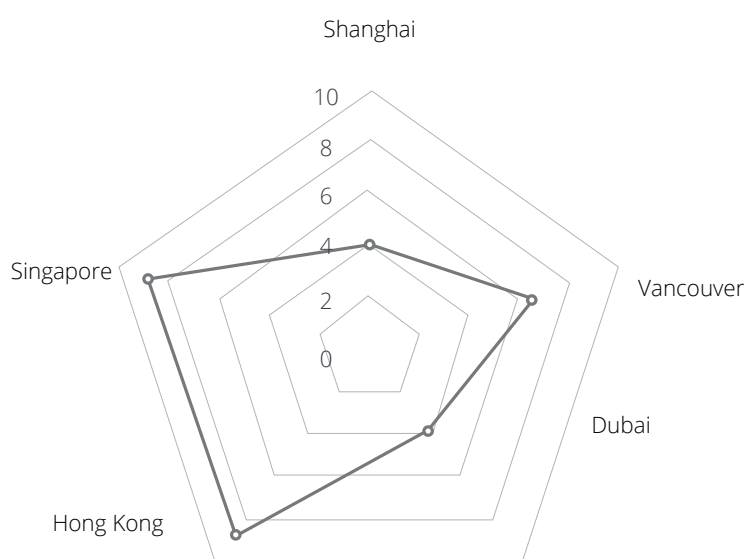
Who is the best?

Singapore, Hong Kong

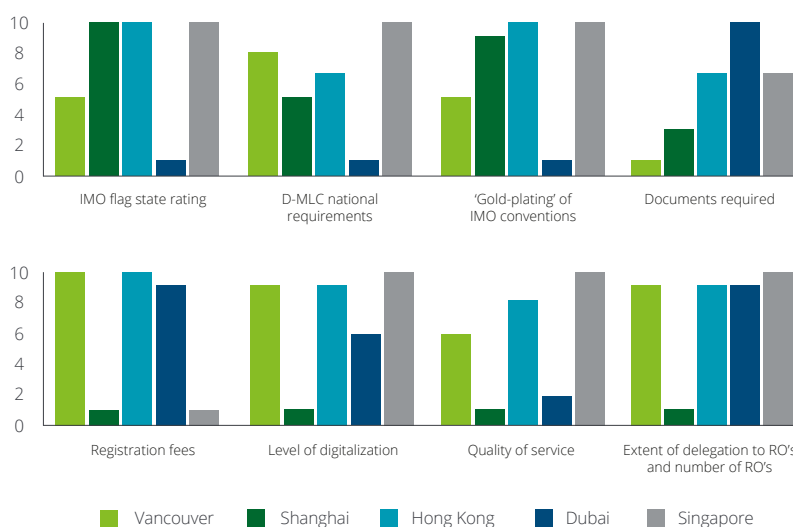
What are the numbers saying?

The Singapore and Hong Kong registries offer the most attractive package for shipowners with excellent service and few national requirements that goes beyond IMO/ILO conventions. The two flags, as well as the Chinese flag, are all considered quality flags by various port state control MOUs. Looking at the implementation of international conventions in the five centres, Singapore performs best in terms of pursuing effective implementation of all international conventions without introducing additional national requirements. Enforcement by registered organisations are handled similarly across the centres. Looking isolated at the registration procedure of a new ship, the process is more expensive in Singapore vis-à-vis Hong Kong, not accounting for various schemes lowering the payable fee. In terms of perceived administrative service, Singapore's business-friendly, people-oriented and pragmatic approach is the most competitive approach.

Ranking of shipping centres on competitiveness factor



Ranking of shipping centres on sub-indicators



Ranking of shipping centres on competitiveness factor



2.3.6 Ease of doing business

The competitiveness factor ease of doing business is an indicator of the overall regulatory economic environment in the process of starting or running a local firm. The point of departure is the World Bank's Ease of doing business index. In our benchmark study, six World Bank indicators have been included, leaving four behind, primarily due to overlap with other competitiveness factors. Furthermore, some of the competitiveness factors have been redefined in order to fit the scope of the study. It is important to notice that this ease-of-doing-business measure reflects the economy as a whole and does not only concern the shipping industry. The rationale behind treating the economy as a whole is the vital supporting services in the shipping clusters. Industry experts have been asked to substantiate a shipping-specific view on the general ease-of-doing-business statistics.

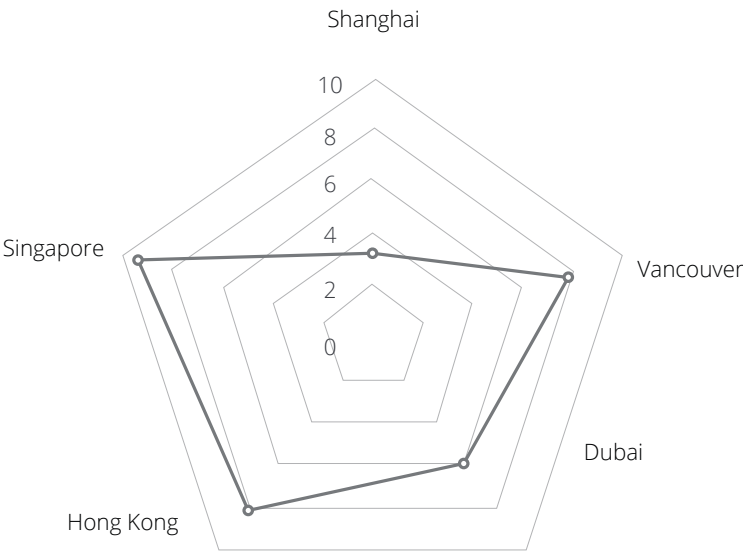
Who is the best?

Singapore

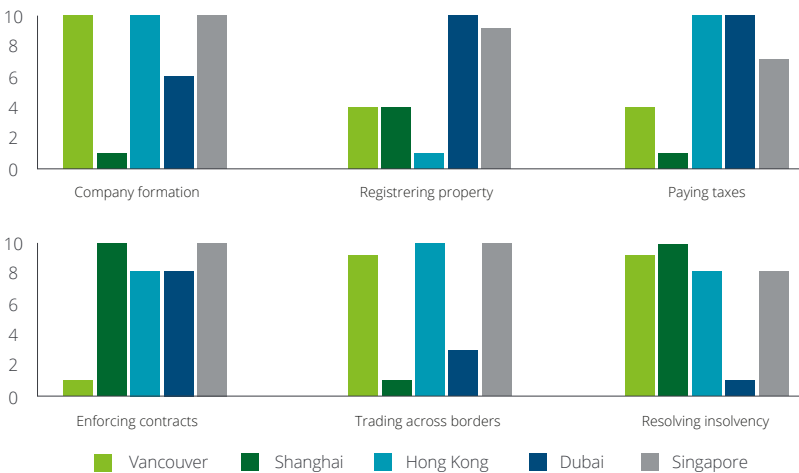
What are the numbers saying?

In Singapore, business-friendliness and ease of doing business are seen as high politics. Singapore is not the high-scorer on all separate sub-factors, but performs above average on all of them, making Singapore the highest scoring centre ahead of Hong Kong and Vancouver. Sector experts highlight that personal service from high-level officials is crucial to Singapore's ease of doing business in the shipping sector. Hong Kong is similarly very competitive on ease of doing business, but lacks behind in comparison with Singapore on ease of registering property on both cost and efficiency parameters. China has fall-backs on parameters such as company formation and paying taxes, whereas UAE does not perform well on parameters such as insolvency resolutions and cross-border.

Ranking of shipping centres on competitiveness factor



Ranking of shipping centres on sub-indicators





2.3.7 Legal framework for vessel exploitation

This competitiveness factor relates to specific rules restricting shipowners' freedom to operate vessels under various constellations. This factor is highly dependent on the character of the domestic flag register and on the specific rules governing the tax regimes for shipping. In many instances, policymakers set requirements for certain operational conditions to be met in order for the fiscal shipping incentive to be applicable. The specific eligibility requirements related to fiscal incentives are treated separately under the taxation and other fiscal incentives competitiveness factor.

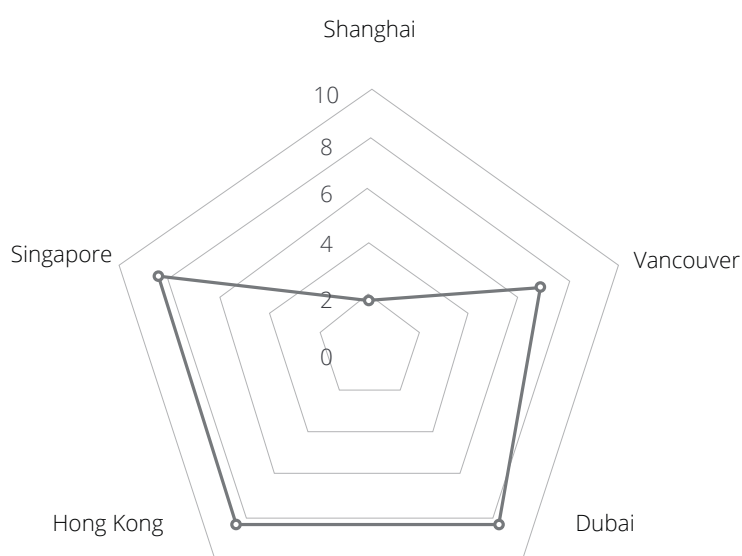
Who is the best?

Hong Kong, Dubai, Singapore

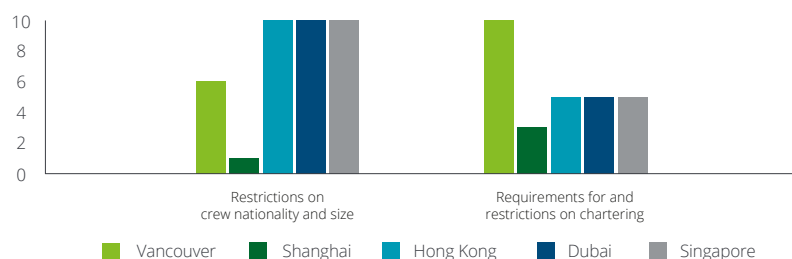
What are the numbers saying?

Hong Kong, Dubai and Singapore have no restrictions on crew nationality at any rank for ships in their national registers. Shipowners operating ships under Chinese flag have nationality requirements for crewing, whereas the Canadian authority does not use the STCW White List to guide issuance of certificates of recognition for foreign certificates. This in turn means that manning will be more complicated and costly in these regimes. In Vancouver, bareboat chartering in and out is always allowed and so-called dual flag registration is assessed on a case-by-case basis. Although a ship may be registered in Hong Kong, Singapore, Dubai and Shanghai in the name of a demise charterer, the ship may not be registered in the domestic registers in the ownership of one person and in another register in the disponent ownership of another person.

Ranking of shipping centres on competitiveness factor



Ranking of shipping centres on sub-indicators

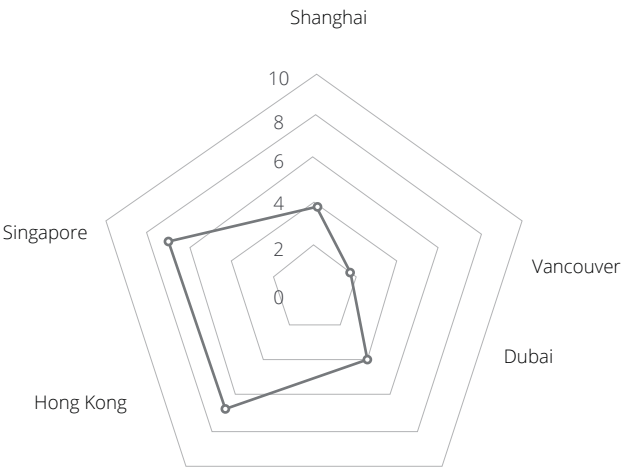




2.3.8 Availability of finance

The shipping industry is one of the most capital-intensive industries in the world, requiring significant capital investments in both assets and infrastructure. Shipping companies often finance themselves through bank loans, bonds, the stock market, funding programmes supported by the government, leasing structures, etc. Accordingly, a sound financial services sector is important for shipping companies in deciding where to locate. The internationalised character of the financial sector does, however, render geography less central on this aspect. The benchmark model looks at the presence and activity of syndicated loan providers in the five jurisdictions, the general development of financial markets, the number of shipping firms on the stock exchange (if a stock exchange exists) and the extent to which the government is involved in ship financing either through co-funding or loan guarantees, etc.

Ranking of shipping centres on competitiveness factor



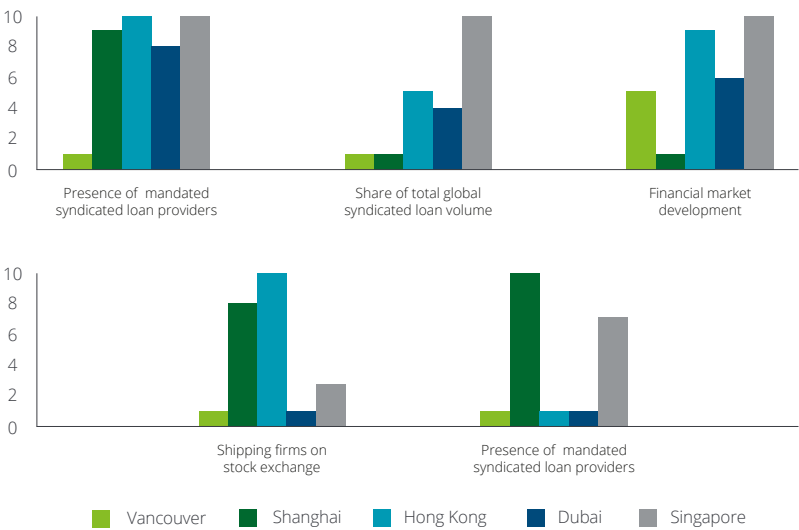
Who is the best?

Hong Kong, Singapore

What are the numbers saying?

Hong Kong and Singapore both have well-developed financial markets with a relatively active syndicated loans business providing capital support and guarantees. Singapore continues to lead the market for syndicated loans, whereas Shanghai and Hong Kong have the largest amount of shipping firms on their stock exchanges, and in general there is more activity on the equity capital market. On this parameter, Singapore still lacks the volume of its main Asian competitors. Looking at the governmental involvement in ship financing and finance leasing, China takes the lead with its heavy involvement in export credit agencies facilitating financing for home country exporters and investors doing business overseas and direct vessel ownership through the ship leasing divisions (China Exim, Sinosure, CDB, etc).

Ranking of shipping centres on sub-indicators



3. Assessing the EU policy framework

Compared to international maritime growth centres, the EU as a shipping centre has some weak spots and possibly also inconsistencies in its shipping policy framework. This may affect competitiveness and potentially increase relocation of activities to other maritime centres as well as de-flagging.

Monitor Deloitte has conducted an overall review of maritime policies in the EU in relation to the eight competitiveness factors and the performance of the competing international centres.

Taking the strengths of the best of the five centres on the competitiveness factors as the benchmark, we have looked into what the EU does and where the EU policy framework has shortcomings.

The level of the review is primarily at EU policy framework level covering, e.g., EU regulation and guidelines, specific EU policy initiatives and coordination measures.

The main framework for the EU's maritime policy is set out in the 2009 Communication¹¹ from the European Commission and the 2015-2016 mid-term review of this,^{12,13} which outlines the main strategic goals for the shipping sector up to 2018 and the current progress of key policies. The strategy sets out to improve the competitiveness of the European shipping sector without compromising environmental performance or maritime safety, thereby increasing the overall economic activity and European employment. This duality of the strategy is complex, as the introduction of environmental and health and safety standards that

go beyond the global standards is directly increasing the operational expenditure of EU-based shipowners. In the following sections, we cover the eight factors by summarising the learning from the five international centres before we turn to the EU context and describe EU policies in relation to the specific factors and the shortcomings/weak spots/gaps.

We conclude that the EU policy framework generally facilitates a competitive EU shipping sector, but that there are significant policy gaps compared with the competing jurisdictions included in the benchmark in chapter 2. The most significant policy gaps influencing the EU competitiveness are found in relation to peripheral elements of the fiscal regime facilitated by the SAGs (i.e. marginal differences around the edge of the guidelines and not its core), the overall regulatory/political stability and the lack of policies actively targeting and supporting the development of the full EU maritime cluster as well as the EU shipping activities in global markets.

3.1 Taxation and other fiscal incentives

Taxation and other fiscal incentives are a key competitiveness and location factor. Hence, it is of big importance that the EU provides a level playing field in comparison with other important shipping centres outside the EU if it is to attract and maintain shipping activities.

The benchmark analysis of the five international non-EU shipping centres revealed that all centres, except Shanghai, offer attractive low-tax regimes where incentives are based on a wider definition of shipping activities than in the EU. However, each regime in the benchmarking has different requirements in relation to the incentives granted.

In some centres, the tax incentives provided are specific for shipping-related activities. In others, like Dubai, the tax incentives are provided as a result of a general low (zero) tax regime.

11. Commission Communication, Strategic goals and recommendations for the EU's maritime transport policy until 2018, COM (2009).

12. Council Conclusions on Mid-term review of EU Maritime Policy <http://ec.europa.eu/transport/modes/maritime/consultations/doc/2015-mts-review/council-conclusions-on-mid-term-review-of-eu-maritime-policy.pdf>

13. Implementation of the EU Maritime Transport Strategy 2009-2018 https://ec.europa.eu/transport/sites/transport/files/swd2016_326.pdf

The benchmarking also reveals that some centres like Dubai and, in a different way, Canada use tax as the main competitiveness factor. In Dubai, this is paired with an extended range of double-taxation treaties with important trade partners. Both Canada and Singapore offer lucrative shipping incentives to a broad base of shipping activities (both core shipping operations and supporting services) with relatively low barriers of entry into the incentivised fiscal schemes. Hong Kong offers a low-tax and very simple legislative regime, in which temporary shipping-specific incentives are not used, but lacks competitiveness on several parameters such as the number of double-taxation treaties and a narrowly defined tax exemption base.

The EU framework for taxation and fiscal incentives

- The core framework for the European fiscal regimes governing shipping are the SAGs. First introduced in 1989 and amended in 1997 and 2004, these facilitative guidelines set the limits of how far member states can go in supporting their shipping sector fiscally.
- Both the mid-term review of the Maritime Transport Strategy of 2015-2016, the Athens Declaration of 2014 and the public consultation on the SAGs underline the importance of keeping the fiscal measures provided by the SAGs in place (see quote from the Athens Declaration).
- Within the SAG framework, member states have a high degree of flexibility, i.e. the competences to develop packages within the framework of the SAGs.

The limits to that flexibility concern prescriptive provisions and de-facto case law originated from EU administrative practice concerning, e.g., eligibility criteria and quantitative thresholds for, e.g., chartered flag shares. Furthermore, the European Commission will approve only those new tonnage tax schemes, which provide similar taxation levels to the existing ones¹⁴. Section 3.1(18) of the SAGs states that:

‘[t]he notional profit rates provided for by EC States have been homogeneous up to now. However, since corporate tax rates may vary significantly across the EC, the tonnage taxes to be paid for the same tonnage might be very uneven in the different EC States. In order to keep the present equitable balance, the EC Commission stipulated that it will only approve schemes giving rise to a tax-load for the same tonnage fairly in line with the schemes already approved. Based on its experience, the Authority notes that instead of calculating virtual profits to which the ordinary corporate tax is applied, some States may decide to directly fix special tonnage tax rates. The Authority will likewise seek to keep an equitable balance in line with already approved systems.’

Thus, although the system is fairly flexible in terms of different tonnage tax models, EU member states are nonetheless required to adhere to this general rule of harmonisation.

‘[The ministers] underline the need to maintain and further enhance the EU state aid regime for maritime transport in order to achieve and maintain a global level playing field for EU shipping in competition with third countries. Stress that such state aid regime is essential for promoting European trade, the competitiveness of shipping and employment in the EU maritime cluster and in particular for preventing flagging out and relocation of EU shipping to third countries.’

Athens Declaration, 2014

14. European Dredging Association General Assembly (2009) presentation DG Tren: http://www.european-dredging.eu/pdf/Presentation_M_Milev-EuDA_Annual_General_Assembly_2009.pdf

Box 1. Accepted derogations from the flag requirement in the guidelines

If the general flag link requirement is to be derogated from, the applicant has to demonstrate that the strategic and commercial management of all ships concerned is carried out from within the territory and that this activity contributes substantially to economic activity and employment within the community. The beneficiaries of the schemes must be liable to corporate tax in the community. In addition, the European Commission requests any available evidence to show that all vessels operated by companies benefiting from these measures comply with the relevant international and EU safety standards, including those relating to on board working conditions.

Before aid is exceptionally granted (or confirmed) to fleets, which also comprise vessels flying other flags, member states should ensure that beneficiary companies commit themselves to increasing or at least maintaining under the flag of one of the member states the share of tonnage that they will be operating under such flags after entering the tonnage system.

The tonnage share requirement applies to the parent company and subsidiary companies taken together on a consolidated basis. Shipowners may not benefit from the tonnage tax for further non-EU flagged tonnage that they operate if:

- The share of their fleet tonnage under community flags has decreased since January 2004 (for companies who have opted for the tonnage tax regime after
- January 2004, this calculation will be based on the fleet at the year-end of the first year the taxpayer qualifies for the tonnage tax regime) or
- The share is already below 60 percent of their total fleet tonnage or
- The global EU tonnage eligible for tax relief in the member state concerned has decreased over the last three years.

The community tonnage share requirement set out in the provision does not apply to undertakings operating at least 60 percent of their tonnage under a community flag¹⁵.

The SAGs set a framework for eligibility requirements for state-aided tax relief measures, for broadness of activities covered by tax incentives, for effective tax rates and for depth of revenues covered by tax incentives. In the following, these are in turn presented and then compared to the international centres.

Eligibility requirements

The general rule is that access to tax relief schemes of EU member states requires a link with an EU flag and a corporate residence in one of the member states. However, derogations from the flag link requirement in the EU may be approved if a shipowner applies with the entire fleet and if the company is established commercially and strategically within a member state's territory liable to corporate tax. The possibility to derogate from the flag link is detailed in the box.

Similar flag link requirements are not found in the international centres. Other eligibility requirements exist, but they differ markedly between the centres included in the comparison.

In Dubai, since the zero-tax regime applies not only to shipping, but to all activities, there are no shipping-specific requirements. In practice, the only requirement is to have a corporate residence in UAE¹⁶. In Singapore, requirements are found to be largely negotiable for individual companies. In the EU, a company is in general required to live up to the above stated flag link requirements as well as ensuring strategic and commercial management that contributes substantially to economic activity and employment within the community¹⁷. The same company in Singapore would only have to demonstrate the latter and to a lesser extent than in Europe.

15. Deloitte Shipping Tax Guide, 2015.

16. In practice, this means that internationally owned shipping companies operate from the Dubai free trade zone (FTZ) where 100 percent foreign ownership is allowed. Most FTZ require that the general manager is a resident of the UAE and is in possession of a valid lease for office space. It has been noted that non-FTZ business setups (i.e. a mainland license) come with significant advantages as they allow shipping companies to operate freely in any area of the UAE. A mainland license requires 51 percent ownership of a local Emirati sponsor.

17. Member states often have tests in place to assess whether companies live up to the conditions on strategic and commercial management (e.g. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/356766/TTM_amended_paragraphs.pdf for UK).

In Hong Kong, shipping companies operating foreign-flagged or Hong Kong-flagged vessels would not be taxed on their income sourced outside the Hong Kong jurisdiction.

Breadth of activities covered by tax incentives

The scope of activities covered by tax incentives is also regulated in the guidelines. The EU definition of maritime transport applied is 'transport of passengers and goods at sea'. Recently, a shift to acknowledge the services and transport activities as analogues has been observed, but clarity on the interpretation of the EU remain insufficient¹⁸. In a nutshell, the regime covers qualifying legal entities performing qualifying activities in relation to qualifying vessels.

- **Qualifying legal entities** are shipowners, charterers (bareboat, demise, time and voyage) and ship managers providing technical and/or crewing services.
- **Qualifying activity** for shipowners and charterers means maritime transport of goods or people between ports and offshore installations. Qualifying activity when applied to ship managers means services provided to a shipowner or bareboat charterer on the basis of a written agreement in relation to crew and/or technical management.
- **Qualifying vessel** is a sea-going vessel that has been certified in line with international principles and legislation of the flag country and that lives up to certain requirements¹⁹.

Activities that are necessary for or closely related to maritime transport (i.e. ancillary activities) refer to activities such as transport to and from the ship in the port area, loading and unloading of goods, embarkation and disembarkation of passengers, temporary storage of goods, ticket sales and booking of maritime transport and the running of freight and passenger terminals. The said activities are examples

of activities, which, by their very nature, are considered necessary for or closely related to maritime transport.

For ship management companies, the application of the SAGs is restricted. Aid may only be granted for those vessels for which the ship management company has been assigned the entire crew and/or technical management, whereas commercial management in itself does not qualify a company for tonnage tax²⁰. The responsibility for the vessels operation has to be assumed in full by the ship manager, including responsibilities imposed by the ISM Code. The EU also requires that the tax base to be applied to ship management companies should be approximately 25 percent (in terms of tonnage or notional profit) of what would apply to the shipowner for the same ship or tonnage.

The eligibility of ship management companies under the tonnage tax scheme varies markedly between member states. Some countries do not allow ship management companies under their tonnage tax system.

Dredging and towage activities are, in principle, excluded from the guidelines. However, exceptions may be made in cases where the company is registered in a member state and where more than 50 percent of its operational time consists of transport at deep sea and the ships fly EU flags.

With regard to types of vessels eligible under European tonnage tax systems, the EU public consultation on the current SAGs²¹ highlighted that there is a lack of clarity on the topic of offshore service vessels.

Regarding chartering in with crew, the European Commission has stated in its decisions that it will not accept companies under the tonnage tax regimes, if the company's entire fleet consists of ships chartered in with crew from other companies. However, it has been accepted that no more than 80 percent of the

18. Case on cable-laying vessels by Denmark. Commission decision of 13 January 2009 on State aid C 22/07 (ex. N. 43/07).

19. Member states usually allow the following specialist vessels under TT: cable layer, diving support vessel, oceanographic vessel, pilot vessel, remotely operated vehicle support, cable repair, fire-fighting vessel, oil-well stimulation vessel, pipe-laying vessel, research vessel, seismic survey ship, trenching vessel, crane/derrick barge, pile driving vessel, polar research vessel, survey vessel, offshore supply vessel, anchor-handling vessel, vessels for transport of personnel and supplies, contractor ships, tender vessels, tugs and dredgers (under the rule that 50 percent of the vessels' annual operational time involves the transport at deep sea).

20. EC Decision 37/2010 – Cyprus Introduction of a tonnage tax scheme in favour of international maritime transport.

21. EC Consultation on review of the Community guidelines on state aid to maritime transport (2012)

company's fleet under tonnage tax consist of ships that could be chartered in with crew from third parties. Going up to 90 percent is also possible, but under strict conditions.

In this case, a company could have up to 80-90 percent of its net tonnage chartered in on time charters with the remaining 10-20 percent being chartered in on bareboat charters. These conditions should be seen in conjunction with the general flag link requirements explained above, which set further requirements for the tonnage tax eligibility of income from chartering activities.

Regarding bareboat chartering out, it is most commonly allowed if a shipping company has overcapacity over a period of three years, for instance due to temporary downturns in the market. Other countries have no special conditions for bareboat chartering out. The European Commission notes that temporary, limited bareboat chartering out is in line with the maritime guidelines as the objectives in the common interest spelled out in the maritime guidelines are safeguarded. The objectives are 'maintaining and improving maritime knowhow and protecting and promoting employment for European seafarers' and 'contributing to the consolidation of the maritime cluster established in the member states while maintaining an overall competitive fleet on world markets'. In operational terms, bareboat chartering in is equal to owning vessels in terms of legal status in the guidelines.

In general, the benchmarked centres offer tax incentives for a much broader range of activities. Besides Dubai, in which all activities are tax free, Singapore offers an incentive system that covers a range of activities not currently included under the EU interpretation of the SAGs.

Firstly, in relation to vessel types covered by the MSI-AIS and SRS schemes, the Singapore scheme offers tax incentives for offshore industry units (e.g. jack-ups, semi-submersibles and submersibles) as well as floating production storage and loading vessels, dredgers, seismic vessels, tugboats and more. The basic rule of thumb in Singapore is that vessels eligible for registration in the Singapore Registry of Ships are also eligible for the fiscal incentives. This is a wider scope

than the one applied by the EU that applies a narrower sectoral ring-fence in relation to vessel types and also still leaves scope for clarification for certain types of vessels. Income qualified under the Singaporean fiscal schemes has recently been expanded to include income derived from operation of ships used for exploration or exploitation of offshore energy or offshore minerals or ancillary activities relating to exploration or exploitation of offshore energy or offshore minerals. The enhancements to the MSI scheme will widen the scope of the incentives beyond owners and operators of vessels used for offshore oil and gas activities.

Also, Singapore does not require any flag links in terms of chartering operations in/out for any of the eligible vessels.

For Singapore, the tax incentives for ship management companies are only partial, however. An approved MSI-SSI company will enjoy an income tax rate of 10 percent (sometimes as low as 5 percent) on the incremental income derived from the provision of shipping-related support services, including ship management. Whether this is a higher or lower tax-effective tax rate than the one allowed under the current 25 percent tonnage tax rule in the EU is unclear and will vary from operation to operation. Experience shows that despite the fact that in nominal rates, the Singapore regime may result in a 10 percent rate, the effective tax rates are in fact much lower. On the other hand, the Singapore scheme also allows a broader range of supporting services to be included such as ship agency, FFA trading, ship brokering, etc. As such, this scheme encourages a wider definition of cluster activities.

In Hong Kong, non-resident ship management companies sourcing their income from outside the Hong Kong jurisdiction are also eligible for the fiscal incentives, which is also the case for other support services. The determining factor here is territorial.

Tax rates

The maritime SAGs set out tonnage tax systems as the primary approved tax model. Tonnage tax means that the shipowner pays a flat tax rate directly linked to the tonnage operated. The tonnage tax will be payable irrespective of the company's actual profits or losses and is calculated on the basis of a notional profit on which corporate tax is charged.

There are variations in both corporate tax rates and in the methods used for calculating the taxable income across

member states. However, as noted by many interviewed shipowners and managers, the effective tax rates under tonnage tax regimes are all considered competitive, and differences between member states are moderate. The differences between the tonnage tax regimes of EU member states and tax systems of international shipping centres are not considered to be a decisive factor in general. However, in times where shipping companies make no profit, the tonnage tax rates, which have to be paid even while making losses, can be influential. On the contrary, under shipping incentive regimes such as Singapore, there is no taxation when the operator is in a tax loss position. In that respect, a competitiveness difference remains.

As has been mentioned, Dubai offers a flat rate zero-tax regime for all businesses and accordingly has the lowest effective tax rate on ship company profits. Canada offers a similar tax-free environment for profits sourced from outside Canadian waters.

Hong Kong and Singapore offer full tax exemption on shipping profits sourced outside their jurisdictions²². The tonnage levies are, depending on the size of the vessel, lower in Singapore and Hong Kong even compared to the lowest tonnage tax system in the EU. Compared to an EU average, the tonnage charges levied on ships in the two jurisdictions are around 70 percent and 79 percent lower, respectively, for Singapore and Hong Kong.

The major difference between the tonnage tax systems in the EU vis-à-vis the shipping-incentive systems in Singapore and Hong Kong is the absence of any flag link requirements. In the EU, tonnage taxes are levied on all registered and chartered ships on a basis of notional profits or flat-rate fees.

It has been noted by many interviewed shipowners and managers that the effective tax on profits permissible in the EU under the current SAG regime is competitive with the benchmarked international shipping centres.

Depth of revenues covered by tax incentives

The primary focus of the tonnage tax system is aimed at the operational income generated by the qualifying

shipping activity itself. As such, operating income from core qualifying activities of eligible entities qualifies for tonnage tax.

On the basis of section 3.1, subparagraph 19, of the maritime SAGs, the European Commission has accepted in its decision-making practice the following features in a number of tonnage tax schemes: tonnage tax regimes have to be ring-fenced to avoid spillover effects on economic activities that do not constitute maritime transport. To that end, the European Commission usually requests from member states a series of ring-fencing measure such as: (i) the verification of commercial transactions across the ring fence based on the arm's length principle, (ii) rules on the fair sharing of the cost of capital expenditure between eligible and non-eligible activities, (iii) rules on the fair allocation of revenues between eligible and non-eligible activities, (iv) the all-or-nothing option for maritime groups (all eligible entities of the group shall opt for the tonnage tax where at least one of them does).

Due to the existence of different forms of owning structures provided and applied by different legal orders in EU member states, it is the case that analogous tax rules regarding the distribution of dividends stemming from shipping companies, as for other sectors, both at corporate level and at the level of private individuals, may be granted.

Income derived from shipping-related financial assets (i.e. interest on cash reserves, normal treasury operations, etc) is not explicitly covered by the European tonnage tax models under the SAGs. This covers revenue from exceptional liquidity, long-term investments and income derived from activities. On the other hand, income derived from interest on working capital is eligible for tonnage taxation as it is seen by the EU as intrinsically linked to the business of operating ships²³. The European Commission states that inclusion of income from short-term investment of operating capital in tonnage tax regimes is compatible insofar it corresponds to revenue from the company's ordinary cash resources. Exactly what types of revenue are eligible for tonnage tax is still somewhat unclear in the light of this decision.

22. The principle of tax territoriality is markedly different in Hong Kong compared to Singapore. Whereas the territorial principle applies to all sources and types of income in Hong Kong, the territorial approach is not as universally applicable in Singapore, but is based on sectoral tax rules such as the MSI-SRS/AIS.

23. 2005/417/EC: Commission Decision of 30 June 2004 concerning a series of tax measures, which Belgium is planning to implement for maritime transport.

Capital gains from buying and selling assets/ships qualify under the tonnage tax system. These revenue streams are, however, only eligible for companies involved in ship operations in accordance with the wider tonnage tax regime requirements set out in the earlier section.

Other fiscal incentives

Both Hong Kong and Singapore offer eligible shipowners and operators fiscal incentives based on port state control performance (Annual Tonnage Charge Reduction Scheme) and environmental performance (Green Ship rebate), respectively. In both jurisdictions, the programmes discount the tonnage tax and provide incentives for improved standards of shipping. Hong Kong shipowners enjoy a 50 percent reduction in their annual tax upon completion of two years of continuous registry (qualifying period) with a zero detention record. Singaporean shipowners enjoy a 20 percent tonnage levy reduction if the registered ship goes beyond the environmental standard set by IMO's Energy Efficiency Design Index (EEDI). Such fiscal incentive schemes are not generally used in the EU, with the exception of Norway that currently has in place differentiated tonnage tax rates based on environmental performance of vessels²⁴. In addition, the differentiated

tax models are restricted by the general rule of section 3.1, subparagraph 18, in the SAGs specifying that the effective tax rates must be 'fairly in line with' the tonnage tax applied to the similar tonnage under tax regimes in other member states and that the reduced tonnage tax based on environmental criteria does not change this requirement.

Policy gaps in relation to taxation

Overall, the fiscal regime facilitated by the current SAGs provide for a relatively competitive framework for the European shipping sector. It is clear that such a fiscal framework is necessary to maintain a level playing field for EU shipping companies vis-à-vis global competition. As such, the primary recommendation for the purpose of supporting EU competitiveness is the continuation of the fiscal framework of the current SAGs.

However, in the light of aggressive policies from competitors, the current SAGs can be further improved from a competitiveness perspective. Monitor Deloitte's analysis reveals that the EU framework is less competitive with regard to several elements compared to the competing international centres. Following the ambition of the Athens Declaration or further

Table 4. Identified policy gaps for taxation and fiscal incentives

Gap ID	Description of identified gap	Primary policy owner	Size of gap
Tax.1	Higher eligibility criteria EU flag link requirements for tonnage tax eligibility are higher vis-à-vis the benchmarked centers	EU: State Aid Guidelines	
Tax.2	Narrower sectoral ring-fencing EU has more restrictions on activities than benchmark centres where the tax benefits cover more shipping actors and more sea-going vessels. Chartering activities (in-out) are restricted by objective thresholds	EU: State Aid Guidelines	
Tax.3	Narrower operational ring-fencing EU sets requirements for strict ring-fencing of income from non-shipping activities, compared to "inclusive approach" in other centers (e.g. interest income from cash reserves)	EU: State Aid Guidelines	
Tax.4	Lack of performance or environmental-based fiscal incentives to decrease TT Significant reductions in TT based on environmental performance, not allowed	EU: State Aid Guidelines	

24. <http://www.eftasurv.int/media/decisions/519-14-COL.pdf>

enhancement of the SAGs, the following elements and policy gaps should be considered.

3.2 Regulatory, economic and political factors

General regulatory, economic and political factors are pivotal for the attractiveness of shipping centres as they form the basis for all other factors. Shipping companies favour locations with quality rule of law by an independent judiciary, general trust in government and legal certainty. This allows for stability and transparency that are crucial for long-term investments of shipping companies.

As we saw, Singapore and Vancouver score high on these parameters and especially higher than their international competitors. Although Hong Kong isolated performs very well on the same indicators, its scores are somewhat hampered by the uncertainty created by the Chinese administration. Vancouver is considered attractive due to a mix of high quality of life and relatively low costs of living compared to Hong Kong and Singapore. The comparably low costs in Shanghai cannot outweigh the relatively poor general business environment and quality of life.

The EU framework for regulatory, economic and political factors

It is primarily the member states' policies that affect the fundamental regulatory environment for shipping. However, the EU influences several factors in this regard, most notably the overall legal certainty surrounding the tax and fiscal regime, the presence of international trade obstacles and the IMO.

With regard to legal certainty surrounding taxation and fiscal measures, it has been highlighted in the public consultations around the SAGs that the EU has displayed inconsistent or contradictory interpretations over the years and in different cases of how different components of a shipping operation should be treated for tonnage tax purposes. Examples have been put forward of situations where qualifying activities in the context of one member state approved under the SAGs have been challenged in later applications or notifications. The lack of general clarity around the limits of the permissible state aid according to the SAGs is generally problematic. It has also been put forward that the use of the SAGs as a one-size-fits-all

model (used as a tool for member state harmonisation) is somewhat problematic seen from a business perspective and in stark contrast to the pragmatic approach of MPA in Singapore. The facilitative nature of

‘[The ministers] agree that the EU and its member states need to intensify efforts at bilateral, plurilateral and international level towards ensuring free access to markets and further liberalisation of trade in maritime services, mainly through maritime transport agreements or free-trade agreements on a reciprocal basis’

Athens Declaration, 2014

the SAGs makes it a fundamentally flexible framework and should enable accommodation of the concrete needs of individual member states. However, in this regard, narrow legalistic interpretations of the SAGs by the European Commission could hamper this inherent flexibility.

The EU and member states are currently highly involved in the most important fora for the regulation of international shipping, the IMO and ILO. The EU can play a vital role in the development of improved global standards for the protection of the environment and further enhancement of safety by supporting member state efforts in a coherent and constructive manner. This role should be further improved by refraining from block building and ensuring that no policies are pushed unless wide-ranging consensus can be found among member states.

The EU is also active in negotiating multilateral free-trade agreements (FTAs) on the international stage – an important measure to ensure market access for EU shipping companies and the lowest amount of discriminatory administrative procedures for member states when trading in the global market.

Currently, the EU is arranging dialogues and annual meetings with existing trade partners such as China, Japan, Brazil and the US, seeking improved market conditions for industry and building alliances on issues of common interest at international level. These involvements are considered of high importance in a market where protectionist policies such as restrictive cabotage rules and restrictions on feedering and international relay of cargo are not uncommon among the EU's largest trade partners. Global political tendencies suggest that these negotiations will only become more important over time²⁵.

Future negotiations should look to existing well-functioning agreements such as the one between the EU and China where ongoing dialogue and further exchange are key issues.

The EU has successfully concluded a number of FTAs with key trade partners. Where appropriate, market access restrictions with third countries on matters related to maritime services are discussed by the Market Access Advisory Committee and followed up via the appropriate diplomatic channels. The EU supports the inclusion of the liberalisation of shipping services as well as ambitious market access commitments in the ongoing negotiation of a plurilateral Trade in Services Agreement (TiSA), which the EU is currently negotiating with 22 other WTO members. The EU's current work to negotiate FTAs is seen as an important contribution to the competitiveness of EU shipping in general.

Policy gaps

Monitor Deloitte's analysis and input through interviews point to two significant possible gaps in terms of the current policies. They relate primarily to the application and legal status of the SAGs, which for the time being are neither fully facilitative nor fully prescriptive. This gives rise to a perceived risk of interpretative policy change. In some of the centres (Hong Kong and Vancouver), rules governing fiscal treatment are written in primary legislation, and perceived policy risks are marginal.

Furthermore, it is a perceived disadvantage seen from the view of shipowners that the EU takes a legalistic view on applying the rules of the SAGs, whereas administrations in international centres are more pragmatic and business-friendly. The Singapore government is perceived as the frontier in terms of pragmatism and business-friendliness.

3.3 Availability of professional services

As we saw in chapter 2, Singapore, followed by Hong Kong, outperforms the other benchmarked centres in terms of availability of professional, intermediary and supporting services.

Naturally, the age and degree of maturity of the centres influence the breadth and depth of the wider maritime value chain, but policy measures may also accelerate the development of the cluster and its supporting services.

Table 5. Identified policy gaps for regulatory, economic and political factors

Gap ID	Description of identified gap	Primary policy owner	Size of gap
REP.1	Risk of interpretative policy change in SAGs The dynamic and interpretative methods of the EC gives rise to a significant perceived risk of legislative changes etc. In both Hong Kong and Vancouver, rules governing fiscal treatment is written in primary legislation and perceived policy risks are marginal	EU: State Aid Guidelines	
REP.2	Legalistic interpretations trumps pragmatism The EC takes a legalistic view on applying the rules of the SAGs, whereas administrations in international centers are more pragmatic and business friendly. The Singapore government is the frontier in terms of pragmatism and business-friendliness	EU: State Aid Guidelines	

25. PwC, Study on the Analysis and Evolution of International and EU Shipping, 2015.

In Singapore, the professional services related to shipping are also subject to tax benefits. This reflects that the strategy of MPA seeks development of the entire value chain of shipping (Maritime Cluster Fund, MSI-SSS/ML Awards). Furthermore, the Maritime Cluster Fund is set up to facilitate growth of Singapore's maritime cluster by supporting the industry's manpower, business development and productivity improvement efforts. The key focus of this fund is overall maritime competitiveness and not the competitiveness of a given type of company in a given sector. Shipowners and operators, technical and commercial maritime service providers, industry associations as well as tech/engineering companies with a maritime focus may apply for funding. The common denominator is the maritime theme, not an industry code.

In Dubai, the Maritime Sector Strategy outlines an ambitious plan for the development of the maritime professional services sector. The government is supporting the establishment of the Emirates Maritime Arbitration Centre (EMAC) inside the Dubai International Financial Centre (DIFC).

The EU framework for professional services

The EU does not currently have any measures in place targeted specifically at developing the professional services sector around the maritime sector.

The long maritime history of EU shipping means that most maritime institutions such as arbitration centres, P&I clubs, shipping associations, etc, are firmly established in Europe. For the same reasons, government interaction is low. The maritime-related professional services sector, to the extent it is supported directly, is only supported through General Block Exemption Regulation (GBER) measures in individual member states. As such, there are no explicitly formulated strategies or policy tools at EU level aimed at the professional services sector surrounding the core shipping sector.

Furthermore, the general focus by the EU in relation to maritime clusters tends to be narrowed down to the added value of traditional maritime sectors: shipping, ports, shipbuilding, offshore services, maritime equipment, etc²⁶. Things are different for the physical part of services surrounding the shipping cluster:

logistics and port performance and the shipbuilding and ship repair sectors. In these sectors, the EU has established a greater range of support measures. Measures supporting port development and logistics are set in the TEN-T and Maritime SAGs on support for short sea shipping and in the upcoming SAGs for public financing of port infrastructures.

The shipbuilding and ship repair sectors are also granted support through a series of measures targeting the fierce international competition from countries like China and South Korea and the absence of effective global trade rules. The investment-related support measures will be touched upon under availability of finance. These support measures are not directly targeted at shipping companies, but they do form part of the totality of the support measures granted to the EU shipping cluster.

Policy gaps in relation to professional services

There is a marked difference between the EU and the five benchmarked centres, except Shanghai, at a fundamental level in the way that professional services and services surrounding the core shipping operations are actively included in policies. In four of the five benchmarked centres, one of the core ambitions is to support the development of high value-added professional services jobs around the shipping operations. In Singapore in particular, the broader maritime cluster and the existence of a well-developed professional services sector are primary selling points. Singapore's way of looking at shipping and making policy to support shipping is wide-scoped and includes a perspective of the entire cluster of professional and physical services.

In the EU, on the other hand, the support measures are not as calibrated towards the same end goal due to the lack of a wider cluster focus. Oxford Economics concluded that only 615,000 jobs out of a total of 2.2 million jobs in the entire shipping cluster were based in the traditional shipping sector, whereas the others were in surrounding services²⁷. At the same time, benchmark studies on the performance of various EU maritime centres suggest that centres of excellence in various services sectors are spread across the European region, rather than being concentrated (a

26. Policy Research Corporation, 2008.

27. Oxford Economics, The economic value of the EU shipping industry – update, 2015.

in Singapore). According to a recent study, Hamburg is strongest in maritime technology, Oslo in maritime finance, Rotterdam in ports and logistics and London in maritime law²⁸. There is a need for an active EU policy supporting and strengthening the existing maritime clusters within the EU and the strong EU maritime professional services sector. Such strategies should allow individual member states to better activate and leverage the shared strength of the EU shipping community as a whole by focusing more on the possible synergies between these maritime centres of excellence that are spread across the EU. It is clear that a comparison of strategies between the EU and Singapore is unfair due to the considerable differences in the institutional complexity. There are, however, crucial learning points to be put forth, including the fact that a European cluster strategy must go beyond looking at the core shipping sector, although this should naturally be the starting point.

3.4 Ease of doing business

Ease of doing business concerns the key administrative processes for the shipping sector across such processes as company formation, resolving insolvency and registration of property, etc.

We found that Singapore is the highest scoring country ahead of Hong Kong and Canada in the benchmarking. Singapore performs above average on all sub-factors. In particular, the communication with authorities has been highlighted as crucial for the ease of doing business, and this is lacking in Shanghai and Dubai. The time and costs of trading across borders are also significantly higher in China and UAE with a substantial amount of administrative procedures.

The EU framework for ease of doing business

Ease of doing business is generally considered a national policy matter administered by individual member states. However, there are significant spill-overs from EU policy making into the ease of doing business, and the EU could potentially play a significant role in pushing for streamlining administrative processes and for burden reductions and for supporting such efforts at a national level. Most factors influencing the general ease of doing business are general and not shipping-specific. As such, initiatives at EU level to reduce administrative burdens and increase the overall ease of doing business have been pursued, most notably the comprehensive EU Project on Baseline Measurement and Reduction of Administrative Costs by Deloitte, Capgemini and Rambøll, 2010), and the EU's continued work to cut red tape on thirteen priority policy areas, including transport (EU Memo, 13/786).

'[The ministers] invite the European Commission to regularly review the existing union legislation applicable to shipping in order to avoid unnecessary regulatory and administrative burdens in the context of smarter regulation.'

Athens Declaration, 2014

Table 6. Identified policy gaps for availability of professional services

Gap ID	Description of identified gap	Primary policy owner	Size of gap
PS.1	Lack of cluster focus EU policy making is focused on the traditional core shipping sector and lacks integrated policies for the entire shipping cluster including the strong EU maritime professional service sector	EU/Member States	

28. Menon Economics, The leading maritime capitals of the world, 2012.

Besides the general measures pursued by the EU, some initiatives have also been put forward for easing administrative burdens on shipping actors in the EU. However, the ambition until now has been to establish a true European maritime transport space without barriers, removing unnecessary administrative obstacles to maritime transport within the internal market. This focus, as such, does not directly address the needs of global shipping actors, but is focused more on actors involved in short sea shipping. Whereas short sea shipping is a large business for EU-based shipowners and a sector in which competitive pressures from non-EU competitors and non-EU seafarers is considerable, there is a need to increase the ease of doing business for deep sea shipping companies as well. Given the competitive pressures on shipping companies involved in global shipping activities and since their incentives for relocation are more outspoken (due to no geographical link to EU), marginal differences in the ease of doing business for these companies will be just as important to address.

The intra-EU initiatives have aimed at simplifying customs formalities, improving electronic transmission through e-maritime systems and rationalising relevant EU regulations. These programmes have materialised in systems such as the Union Maritime Information and Exchange System (SafeSeaNet), Places of Refuge (PoR) and the Reporting Formalities Directive. On one hand, these systems are all good examples of how harmonisation of administrative procedures in the maritime sector is possible. On the other hand, these initiatives are not delivering direct competitive advantages for EU-flagged vessels. Initiatives should aim to do exactly this, thereby increasing the attractiveness of EU flags vis-à-vis Singapore, Hong Kong and other large flags.

The above initiatives are also good examples of how the EU policy focus does not directly target the ease of doing business for global shipping companies, but target the facilitation of intra-EU maritime transport of goods. Whereas promoting short sea shipping continues to be highly advisable from a global competitiveness and environmental perspective, there is still a lack of initiatives aimed at deep sea shipping. In Singapore and Hong Kong, the focus of policymakers is aimed at easing undertakings involved in global business and the perspective here is markedly different. Naturally, as noted earlier, it is hard to compare national administrations with EU as a whole on this parameter. Typical instruments for increasing ease of doing business for global shipping is stimulated by the EU via the trade negotiations, whereas national administrations use softer instruments such as increasing service delivery at the flag administration. However, initiatives to improve service delivery and ease of flying EU flags have been pushed from an EU level and can be improved further.

Policy gaps

The EU's continued focus on the reduction of administrative burdens on both general business and shipping-specific touchpoints is seen as highly important. However, so far these efforts have often not led to expected positive results in practice/reality, e.g. because of poor member state implementation, not enough harmonisation, etc. Furthermore, the policy gaps identified to a large extent relate to the lack of focus on ease of doing business for shipping companies involved in global shipping activities, rather than the ease of intra-EU maritime transport of goods.

Table 7. Identified policy gaps for ease of doing business

Gap ID	Description of identified gap	Primary policy owner	Size of gap
EoB.1	High focus on administrative procedures for intra-EU trade The EU tends to target the facilitation of intra-EU trade and the ease of doing business in relation to such activities. The lack of a view on global shipping companies, and their touch points with EU legislation, is seen as a policy gap.	EU/Member States	

3.5 Skills

The skills factor concerns the supply of skilled maritime labour, both onshore and onboard, as well as the personal taxation of these two groups of employees.

In the benchmarking, we have concluded that the best maritime centres on skills among the five centres are Hong Kong and Singapore. Both clusters provide strong schemes focused on supply-side development of their maritime skills base. They do this through large investments in co-funding programmes for maritime education and this public support goes beyond typical STCW courses for seafarers, but encompasses job creation in the entire maritime cluster. Furthermore, in Singapore, a wide variety of programmes are on offer tailored to different types of career development or initiations in the maritime sector through the Maritime Cluster Fund.

As such, both Singapore and Hong Kong have convergent systems in place for ensuring attractive initial training, entry to the profession, higher education and career development in both shipping and the broader maritime cluster. In Singapore, this approach is continuously revised due to a high level of involvement of industry. The supply- and demand-sides for skills are closely linked and supported by government funds.

Similar to the provisions set out in the current SAGs, Hong Kong and Singapore offer special support measures with regard to labour-related costs in shipping such as tax exemption on personal income for seafarers on board vessels registered in their flag registries.

The EU framework for skills

The ambition of the EU is to address all human resource-, training- and employment-related issues in shipping and attract and maintain European seafarers.

The current 220,000 EU seafarers represent 18 percent of the total number of seafarers globally. By allowing reduced rates of contributions for the social protection and reduced rates on income tax for EU seafarers (or other similar measures such as reimbursement of such costs), the EU guidelines

on state aid to maritime transport have created more favourable conditions for employment of EU personnel.

However, despite the increase of the EU-operated fleet between 2010 and 2016 (cf. figure 2), EU seafarers' employment did not increase in proportion, but lagged behind²⁹. This is partly explained by the fact that many modern ships need smaller crews owing to technological advances and automated systems and due to the decrease in the world share of EU-flagged vessels. This underlying employment dynamic in the maritime sector is a move away from traditional seagoing jobs to higher value-added onshore-based jobs. This demands a shift in the way the EU looks at maritime human resource issues. The European shipping industry points out that it is important to strengthen cooperation between the education- and employment-sides in order to fill skills gaps that will come as an effect of this shift and to align policy preferences between stakeholders.

A number of EU funding schemes are available for that purpose, but the scope still remains for far greater use of such schemes. The European Commission encourages and promotes social dialogue, which has delivered good results for the maritime sector. Notably, the European Commission supports the work of the relevant European social dialogue committees for maritime transport that is promoting actions intended to develop career opportunities and training schemes across the maritime economy. In addition, the recently launched Erasmus+ programme includes several initiatives of interest to blue economy stakeholders. For instance sector skills alliances aim to create European partnerships between industry, vocational and educational

'[The ministers] reaffirm the will to increase employment in the maritime sector as a whole and career mobility between on- and offshore jobs to support the functioning of EU maritime clusters.'

Athens Declaration, 2014

²⁹, EC working document on the implementation of the EU Maritime Transport Strategy 2009-2018. <http://data.consilium.europa.eu/doc/document/ST-12829-2016-INIT/en/pdf>

training institutes and regulatory bodies to define skills needed in a specific sector and to design and implement new curricula accordingly. Other knowledge alliances target higher education and aim to boost the relationship between industry and universities.

However, there is a gap in terms of an integrated targeting of skills development in the entire maritime cluster. As pointed out earlier, the maritime cluster includes sectors that are directly linked to the shipping industry, e.g. shipping services, port services, maritime works, shipbuilding and ship management and brokerage, and sectors that are indirectly linked, e.g. banking and financial services, R&D and education and marine equipment. A coordinated effort to ensure supply across this diverse cluster space is still absent at EU level. A narrow sectoral approach to skills anticipation and development is insufficient and lacks the coherence of approaches seen in both Hong Kong and Singapore.

Policy gaps

Monitor Deloitte's analysis points to the fact that there is no significant gap in the EU regulatory framework for subsidies to training as set out by the SAGs. Maritime training may be subsidised up to 100 percent of training costs under certain conditions. In practice, public funding levels are around 50 percent in the EU, which is lower than in Singapore who usually covers around 70-90 percent. The SAG framework for lowering effective tax and social security burdens is also effective and would leave behind a large policy gap if the SAG framework was to be rolled back. However, it has to be stressed that the possible measures under the SAGs also have to be implemented/adopted by the EU member states so that they can become effective.

There are minor gaps in the EU framework when comparing the framework with the international centres concerning mainly the accessibility of training. The most notably gaps have been listed in the table below.

Table 8. Identified policy gaps for skills

Gap ID	Description of identified gap	Primary policy owner	Size of gap
Skills.1	Higher eligibility requirements for trainees Training subsidies are available only for EU/EEA residents on EU/EEA flagged vessels, not in active employment, whereas there is no flag link requirement in Hong Kong or Singapore and Singapore also in some cases allows non-resident training (requirement of business sponsor)	EU: State Aid Guidelines	
Skills.2	Narrow scope of training schemes The SAG only allows training in context of STCW, whereas Singapore's and HK's approaches are cluster-wide and includes management/finance/law/brokering courses + seafarers on more vessel types	Member States	
Skills.3	Fewer types of offered training EU offer funding of certifiable STCW courses, whereas Singapore and HK offer funding of overseas exchange studies, extensive career conversion programmes, employer training grants and sign-on incentives for students	Member States	

3.6 Flag attractiveness and legal framework for vessel exploitation

Flag attractiveness and legal framework for vessel exploitation are two interlinked critical competitiveness factors. They concern the operational conditions set out by the flag administrations and are key for shipowners and operators due to their direct influence on operating costs. In an EU context, the flag attractiveness is even more essential to the overall competitiveness of EU shipping due to the requirements of flying EU flags at least to a certain extent to be eligible for tonnage tax. As no other jurisdiction in the benchmarking sets flag link as a prerequisite for attractive fiscal treatment, flag attractiveness is of less importance in those jurisdictions in order to offer a competitive framework for shipping.

As outlined in chapter 2, Singapore scores the highest on the flag attractiveness parameter. The Singapore flag is attractive due to its quality status internationally, the high service level and the degree of digitalisation provided by the Singapore Maritime and Ports Authority and the absence of any operational restrictions or national regulations going beyond the IMO/ILO conventions. On top of this, Singapore has an easy registration procedure, which includes fewer documents than other shipping centres and is performed through the one-stop shop of the Singapore Maritime and Ports Authority.

The EU framework for flag attractiveness and vessel exploitation

EU flags are under pressure from flag states that offer lower costs due to direct implementation of all IMO and ILO conventions without additional standards or crewing restrictions with regard to nationality requirements.

Flag attractiveness is to a large extent depending on member state policies and as such falls outside the scope of the current comparison in general. However, there are some EU legislation influencing the attractiveness of EU flags in general by imposing additional requirements compared to the level set by the relevant international conventions (examples here are the range of European directives and regulations on health and safety and environment).

There is a continued pressure for further improving safety and environmental standards in the EU, and this has some repercussions on the competitiveness of EU flags. In recent years, the EU has often tried to influence the agenda at IMO/ILO level by putting pressure on other non-EU member states, asking for accelerated introduction of higher standards to follow newly introduced EU standards. This policy practice, in the best case, means early transposition of stricter regulations, giving EU-flagged shipowners a competitive disadvantage vis-à-vis for instance Singapore-flagged ones. It is highly advisable that the EU does not pursue such premature implementation of higher standards, but continues to put pressure on adoptions of common and global standards.

In cases where the EU nonetheless decides to implement higher safety or environmental standards than IMO/ILO conventions themselves require, it should be ensured that the full economic effects on EU-flagged vessels are assessed beforehand and compared to a direct implementation of international conventions without any additional EU requirements. In cases where the economic effects are significant, supportive measures should be pursued to help EU-based shipowners adapt to the new regulations as otherwise the competitiveness of the EU shipping industry would be harmed. Above all, the EU should, however, restrain from implementing standards that go beyond international ones as supportive measures will still require additional financing from the industry itself and incur administrative burdens for them.

Furthermore, flag attractiveness is also highly influenced by the level of service provided by the flag registries and the national flag administrations. At the moment, there are very few initiatives at EU level to exploit economies of scale at member state flag registries. Many services of flag registries are the same, or very similar, and individual member states are pushing to increase service levels through the same channels (digital reporting, applications for certificates of recognitions, etc). The EU could support modernisation and digitalisation of member state flag registries through traditional funding programmes, research on the topic or actual promotions of one-stop-shop solutions for the member state flag registries to use. Such initiatives would eventually lower operating costs for EU-flagged vessels and increase the service level across the

different member state flag administrations.

Some formalised knowledge sharing measures are put in place in the context of the European Maritime Safety Agency where member state administrations are invited to participate in common training programmes. Training is provided by a dedicated team through seminars, workshops, experts' visits and information days covering all fields of EMSA's mandate – from port state control, maritime security and vessel traffic monitoring to port reception facilities, marine equipment and pollution prevention and response. Experts from the member states and international organisations are invited to share their experience with the course participants who have been designated by the member states' maritime administrations. Whereas EMSA's activities in their current form relate mostly to the coastal protection function of the member states, this could easily be expanded to support member states' flag state functions. Research into the feasibility of such initiatives could be led by already existing EU-funded maritime think tank consortia like the Maritime Transport Co-ordination Platform (MTCP).

Policy gaps

There are possible important policy gaps that may affect competitiveness negatively and possibly lead to de-flagging to outside the EU. These gaps have been listed in the table below.

'[The ministers] call upon the European Commission and the member states to continue to prioritise the improvement of the environmental, safety and social performance of shipping at EU and international level, while ensuring a global level playing field and fair competition and that quality shipping leads to a competitive advantage, in particular in global seaborne trade.'

Athens Declaration, 2014

Table 9. Identified policy gap for flag attractiveness and legal framework for vessel exploitation

Gap ID	Description of identified gap	Primary policy owner	Size of gap
Flag.1	Coherence of EU shipping framework and IMO/ILO standards Additional requirements imposed by the EU or on the national level (by EU Member States) e.g. for safety and environmental standards increase operating costs under EU/EEA flags vis-à-vis non-EU flags such as Singapore that pursue strict implementation of international IMO/ILO standards	EU/Member States	
Flag.2	Existence of Member State crewing restrictions Requirements of EU/EEA flags on crewing EU/EEA seafarers to a certain minimum extent lead to an increase in operating costs and limit much needed operational flexibility under such flags vis-à-vis bench-marked centers without such requirements	Member States	
Flag.3	Lack of cross member state digital solutions for global shipping Singapore are front-runners in digitization, while cross-member state digital systems for flag services are non-existing	EU/Member States	

3.7 Availability of finance

The maritime financial services sector is essential in terms of the ability of accessing capital and various financial products, but the internationalised character of the sector makes geography less central for the location decision of shipping companies.

All centres focus on development of their maritime financial markets, but they pursue this in markedly different ways. Singapore has extensive research programmes in place with the goal of developing their equity capital markets and Shanghai has built its maritime financial presence through direct involvement in ship financing and leasing. Hong Kong has a close link with the financial expertise in London, and some spill-over effects have been noted by industry experts. Vancouver similarly promotes its close integration with the maritime financial markets of New York, although this is a less significant competitive advantage according to industry experts.

As for direct subsidies, co-funding programmes and guarantees, Singapore offers a wide-ranging portfolio of programmes through the Maritime Singapore Green Initiative, the Maritime Cluster Fund and the Maritime Innovation and Technology Fund. While these are minor programmes nominally, especially compared to the money invested through the Chinese government's involvement in direct ship financing and leasing, they still provide significant support for especially vessel upgrades, R&D investments and productivity-improving capital investments for Singapore-based shipowners³⁰.

The EU framework for availability of finance

In general, the economic crisis has drastically reduced freight and charter rates, which in turn has led to often dramatically reduced ship values in recent years, making it very difficult for many shipowners to finance either an environmental upgrade of existing ships or the acquisition of new vessels, which are required to meet ever more stringent environmental regulations. The financial sector is under severe pressure and financial assets as well as whole shipping loan portfolios are currently on sale in some ship financing banks, which means that risk appetite is severely

limited for new shipping investments. Furthermore, the introduction of new regulations for the banking sector is expected to render the financial system even more averse to the risk inherent in the shipping sector. Various European banks are under pressure to reduce shipping exposures due to capital and funding constraints and the performance of their existing shipping loan portfolio. Proposed changes in ship financing (as per forthcoming Basel IV standard) is an area where EU shipping could become severely hampered due to their likely mandatory application in the EU as contrasted to other areas of the world and due to the dependence of many EU shipping companies on traditional banking loans. An increase in the capital requirements for banks could put these banks as well as SME shipping companies in Europe in a peculiar situation and in need of governmental or EU support.

‘[The ministers] underline the importance of financial support, as appropriate, for the adaptation of ships to new environmental and safety requirements, in particular in the context of short sea shipping.’

Athens Declaration, 2014

The maritime transport strategy of the EU stresses the importance of supporting the sectoral transition to green shipping or taking up new innovative technologies by providing financial solutions that accelerate investments. Currently, a range of investment tools exist in context of the EU and its surrounding institutions to support financing of newbuilding, retrofits and R&D projects/pilots (cf. table 10). However, there are major shortcomings to these programmes and their complexity. Furthermore, the current SAGs for maritime transport do not have a lot in them allowing for financial support of transitional capital investments to green shipping, etc.

30. The Singapore Green Initiative technology programme co-funds up to 50 percent of capex in development and adoption of green technologies. Funding is usually capped at EUR 1.3-2.0m per project.

EU and EIB initiatives

So far, the financing initiatives aimed at the shipping sector in an EU context have been aimed at supporting short sea shipping activities. Programmes such as Motorways of the Sea (MoS) within the Trans-European Transport Network (TEN-T) and the former Marco Polo II Programme have addressed the finance gap for intra-European investments needed to comply with new low sulphur standards, achieve modal shift to maritime transport, etc.

Seeing that these initiatives have been aimed mostly at maritime activities within the EU region, they are of less relevance for the global competitiveness of EU shipowners. That said, supporting the development of maritime infrastructure within the EU does have significant spill-over effects into the wider maritime cluster in terms of skills and technology.

In this context, EUR 353m were allocated for research and innovation in the area of maritime transport during the period 2009-2015 under the framework of Horizon 2020 as well as in the EU's previous R&I Framework Programme 7 (FP7).

Other tools are currently being piloted under the Connecting Europe Facility in connection with the EIB. One of them is the Green Shipping Financing Tool

Table 10. Current programmes in place for investment support in ships (newbuilding, retrofit and pilot programmes)³¹

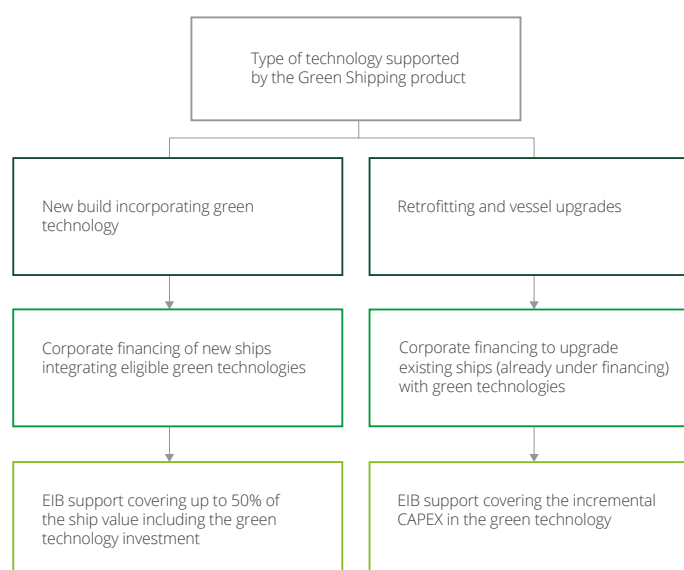
Investor	RTDI grants	Construction grants	Equity/Debt
Ship owner, Newbuilding/retrofit/pilot	MoS, CEF, H2020	CEF, MoS, State Aid	EIB (European Fund for Strategic Investments), CEF

Source: Financing for clean shipping investments, 2014, The Baltic Institute of Finland

(GSFT) programme that aims at crowding in commercial banks by de-risking the environmentally focused investments, cf. figure 7. The GSFT will be designed for general fleet renewal focused on greener shipping and being incremental to commercial lending (leveraging) and for the retrofitting of the existing fleet with green technologies³².

The wider EIB Transport Lending Policy³³ also puts an emphasis on the objectives of supporting inland water transport and European ports and logistics. However, the policy states that shipping carries around 90 percent of EU external trade and that the EIB's involvement is aimed at supporting the needs of this vital sector of the EU economy while at the same time further improving its sustainability. The policy also states that the EIB's approach to shipping closely follows EU policy and in particular the emphasis of the latter on growth and employment, the protection of the environment, energy efficiency, safety as well as research and development. Also, unless duly justified by the particular features of a project, the EIB will finance only ships operating under an EU flag to ensure compliance with European safety, operating and environmental norms.

Figure 7. EIB support offering through GSFT



31. Excerpt of most relevant funding schemes. For a full overview, see Vade-mecum for a better utilisation of EU instruments, 2016 (http://www.evolen.org/_upload/ressources/publications/dossiers_techniques/agenda_item_9b_sg_financing_vademecum.pdf)

32. EIB's Green Shipping Financing Programme, ESSF Meeting Presentation, 2016

33. EIB Transport Lending Policy, http://www.eib.org/attachments/strategies/transport_lending_policy_en.pdf

It has been noted that finance programmes in the context of the EU or the EIB impose very high requirements on the users, and involvement in any of the programmes may be highly demanding. Secondly, in most EIB programmes, the shipowners/promoters are expected to be well established and experienced operators of their vessels and are also expected to have the necessary competences to undertake the works proposed under the programme³⁴. Together with the administrative complexity of the programmes this would leave many SME shipowners ineligible for general EIB support.

Furthermore, as highlighted by the creation of the ESSF sub-group for better utilisation of EU finance instruments, the offerings are often lacking transparency, and the industry often lacks the full overview of programmes.

Policy gaps

Consequently, a number of policy gaps have been identified in relation to shipping financing. These have been summarised in the table below.

Table 11. Identified policy gaps for availability of finance

Gap ID	Description of identified gap	Primary policy owner	Size of gap
Fin.1	High focus on intra-EU investment support Current investment programmes are primarily targeted at intra-EU trade facilitation and financial support is often contingent on the investment being of relevance for intra-EU trade (under CEF, H2020, EIB investment programmes)	EU/EIB	
Fin.2	High administrative complexity for EU financial offerings The application process for financial support, and follow-on requirements for documentation are perceived as too complicated and time consuming	EU/EIB	
Fin.3	Uncertainty surrounding new Basel regulations Proposed changes in ship financing (as per Basel IV) due to their de facto mandatory application in the EU, and higher impact due to bank loan reliance, as contrasted to other areas of the world, are a major source of risk for shipping companies	EU/Member States	

34. Green Shipping Programme Loan, data sheet, 2016 <http://www.eib.org/infocentre/register/all/66405398.pdf>

3.8 Cross-cutting factors

Apart from the policy gaps related to specific competitiveness factors, Monitor Deloitte has identified two cross-cutting gaps relating to the overall maritime strategy pursued in an EU context.

The first gap relates to the fact that the governance surrounding the maritime policy agenda is fragmented at EU level with multiple arenas of policy making across multiple directorate-generals with different views and different strategic agendas. Comparing the complex political and administrative reality of the EU with that of Hong Kong, Singapore or Dubai is not entirely fair, but key learning points can be put forth. The three jurisdictions share the common trait of having sought to consolidate the maritime agenda administratively and strategically

with one or two primary stakeholders (in form of the Hong Kong Maritime and Port Board, the Singapore Maritime and Ports Authority and Dubai Maritime City Authority). These strong concentrations of political and administrative power give rise to more strategic clarity and a good basis for full alignment, cooperation, coordination and reporting.

Secondly, EU lacks the promotional setup for shipping that is currently being pushed in both Vancouver, Singapore, Hong Kong and Dubai. These jurisdictions do a lot to attract shipping-related activities through highlighting what they have on offer. Promotional activities are largely a matter for national policymakers in an EU context, even though the collective strength of EU is often what shipping actors argue is the key to the strength of individual member states.

Table 12. Identified cross-cutting policy gaps

Gap ID	Description of identified gap	Primary policy owner	Size of gap
Cross.1	Lack of a comprehensive, globally oriented EU shipping and maritime strategy There is a need of formulating a renewed overall strategy for shipping and the wider maritime sector that also focuses on the global competitiveness of the shipping and wider maritime sector	EU/Member States	
Cross.2	Lack of a common platform for promotion of EU Shipping All international centers are aggressively involved in promotional activities, outlining their attractiveness for potential businesses. These activities are currently only undertaken at Member State level, if at all, no common promotion strategy exists for the EU Shipping cluster in its entirety	EU/Member States	

4. Policy recommendations

Based on the assessment of the policy gaps, the key policy recommendations concern the need for a comprehensive EU policy regarding shipping, the legal clarity around the application of the SAGs, flag link eligibility criteria for entering the tonnage tax and the deviation from IMO/ILO conventions in EU and member state regulation.

Overall, the EU is still a competitive place to locate shipping activities as witnessed in the development in the world share of ships operated from within the community and as underlined by many interviewed stakeholders. However, there are clear signs that the competitiveness of EU shipping is under pressure. The EU is experiencing cases of relocation of shipping activities and de-flagging, despite its ambition of the opposite, and slower growth rates compared to its competitors. This suggests that underlying dynamics displace some shipping activities to other jurisdictions.

This study has shown that there is an overall solid EU policy framework that has instituted a competitive tonnage tax regime in most member states bringing EU shipping centres more or less on par with other competing centres in terms of fiscal competitiveness. But there are EU policies and EU policy gaps that make EU less attractive to shipowners and to shipping activities. A number of these have been identified and highlighted vis-à-vis the five international shipping centres benchmarked in this study.

In this chapter, Monitor Deloitte presents a number of key recommendations in order to strengthen shipping policy in the EU and remedy the identified policy gaps. We put forward one generic policy concerning the overall EU policy for shipping, and three specific recommendations are put forward related to the eligibility criteria for the tonnage tax regime, the legal clarity of SAGs and the implementation of IMO/ILO conventions in EU and member state regulation. In

addition, Monitor Deloitte proposes a number of more detailed recommendations further related to the tax regime, crewing restrictions, availability of financial support, digitalisation of administrative procedures to the benefit of global shipping actors, etc.

The recommendations build on a particular perspective of EU policies that hitherto have not been predominant across the different policy domains that the EU needs to activate to match its competitors. In that perspective, the EU needs to look at its policies with a view to improving its competitiveness at a global level. While policies to promote intra-EU trade and short sea shipping are of high priority, the shipping industry faces a challenge from global competitors with ambitions to become global centres. Therefore, the EU needs to reorient and further develop its policies in order to be a globally competitive maritime region in the longer run.

Therefore, the overall and generic recommendation is first of all to **formulate a comprehensive, globally oriented shipping and maritime policy in the EU**. This policy should have two significant features. Firstly, it should have a strong focus on supporting the global competitiveness of the shipping and wider maritime sector. While emphasising the inherent global nature of shipping, the current maritime transport strategy and the majority of the initiatives launched to a large extent focus on the competitiveness of waterborne transport internal to the EU and other provisions related to safety and security. But both markets, short sea shipping and global shipping, are important for Europe. In fact, the largest share of EU shipping is international and cross-trading, carrying cargoes between third countries. This means that it earns its living outside the EU, doing business with trading partners outside the EU. The global challenge of EU shipping requires the EU to formulate a more globally oriented policy.

Secondly, the policy should be comprehensive by cutting across policy fields like transport, taxation, environment, etc., and thereby cover the key competitiveness factors. Monitor Deloitte's benchmark analysis has revealed that the strategies of the international centres are comprehensive in the sense that policies are aligned and coherent across competitiveness factors in order to support the distinctive position that the cluster aspires to achieve globally. Following up on its 2009-2018 Maritime Transport Strategy, the EU could take a similar

step and unfold a comprehensive policy supporting the ambition to be globally competitive as a location for shipping activities. In the following, the specific recommendations emanating from the assessment of the policy gaps will be presented. This assessment has formed the basis for putting forward the specific recommendations for policy at EU level.

The recommendations have been presented with a focus on three priority recommendations. All recommendations have been summarised in a policy map.

4.1 Prioritising policy issues

Monitor Deloitte has prioritised the identified gaps through two steps. Firstly, we have looked at the size of the gap compared to the policies that have been identified in the international centres. In case the EU policies in a given area are the far less attractive, we consider the gap sizeable. Secondly, we have assessed the importance of the gap based on the weight of the competitiveness factor that the policy gap concerns, cf. the overall benchmark index presented in chapter 2, and in relation to specific factors of relevance for shipping in the EU. The assessment and priority of the gaps have been presented in the table and detailed below.

Table 13. Prioritising identified policy gaps

Factor	Gap ID	Description of identified gap	Primary policy owner	Size of gap	Importance	Priority
Taxation and financial incentives	Tax.1	Higher eligibility criteria EU flag link requirements for tonnage tax eligibility are higher vis-à-vis the benchmarked centers	EU: State Aid Guidelines			High
	Tax.2	Narrower sectoral ring-fencing EU has more restrictions on activities than benchmark centres where the tax benefits cover more shipping actors and more sea-going vessels. Chartering activities (in-out) are restricted by objective thresholds	EU: State Aid Guidelines			Medium
	Tax.3	Narrower operational ring-fencing EU sets requirements for strict ring-fencing of income from non-shipping activities, compared to "inclusive approach" in other centers (e.g. interest income from cash reserves)	EU: State Aid Guidelines			Medium
	Tax.4	Lack of performance or environmental-based fiscal incentives to decrease TT Significant reductions in TT based on environmental performance, not allowed	EU: State Aid Guidelines			Low
Professional services	PS.1	Lack of cluster focus EU policy making is focused on the traditional core shipping sector and lacks integrated policies for the entire shipping cluster including the strong EU maritime professional service sector	EU/ Member States			Low
Regulatory, economic and political factors	REP.1	Risk of interpretative policy change in SAGs The dynamic and interpretative methods of the EC gives rise to a significant perceived risk of legislative changes etc. In both Hong Kong and Vancouver, rules governing fiscal treatment is written in primary legislation and perceived policy risks are marginal	EU: State Aid Guidelines			High
	REP.2	Legalistic interpretations trumps pragmatism The EC takes a legalistic view on applying the rules of the SAGs, whereas administrations in international centers are more pragmatic and business friendly. The Singapore government is the frontier in terms of pragmatism and business-friendliness	EU: State Aid Guidelines			Medium
Ease of doing business	EoB.1	High focus on administrative procedures for intra-EU trade The EU tends to target the facilitation of intra-EU trade and the ease of doing business in relation to such activities. The lack of a view on global shipping companies, and their touch points with EU legislation, is seen as a policy gap	EU/ Member States			Medium

Factor	Gap ID	Description of identified gap	Primary policy owner	Size of gap	Importance	Priority
Skills	Skills.1	Higher eligibility requirements for trainees Training subsidies are available only for EU/EEA residents on EU/EEA flagged vessels, not in active employment, whereas there is no flag link requirement in Hong Kong or Singapore and Singapore also in some cases allows non-resident training (requirement of business sponsor)	EU: State Aid Guidelines			Medium
	Skills.2	Narrow scope of training schemes The SAG only allows training in context of STCW, whereas Singapore's and HK's approaches are cluster-wide and includes management/finance/law/brokering courses + seafarers on more vessel types	Member States			Low
	Skills.3	Fewer types of offered training EU offer funding of certifiable STCW courses, whereas Singapore and HK offer funding of overseas exchange studies, extensive career conversion programmes, employer training grants and sign-on incentives for students	Member States			Low
Flag attractiveness and legal framework for vessel exploitation	Flag.1	Coherence of EU shipping framework and IMO/ILO standards Additional requirements imposed by the EU or on the national level (by EU Member States) e.g. for safety and environmental standards increase operating costs under EU/EEA flags vis-à-vis non-EU flags such as Singapore that pursue strict implementation of international IMO/ILO standards	EU/ Member States			High
	Flag.2	Existence of Member State crewing restrictions Requirements of EU/EEA flags on crewing EU/EEA seafarers to a certain minimum extent lead to an increase in operating costs and limit much needed operational flexibility under such flags vis-à-vis bench-marked centers without such requirements	Member States			Medium/high
	Flag.3	Lack of cross member state digital solutions for global shipping Singapore are front-runners in digitization, while cross-member state digital systems for flag services are non-existing	EU/ Member States			Medium
Availability of finance	Fin.1	High focus on intra-EU investment support Current investment programmes are primarily targeted at intra-EU trade facilitation and financial support is often contingent on the investment being of relevance for intra-EU trade (under CEF, H2020, EIB investment programmes)	EU/EIB			Medium
	Fin.2	High administrative complexity for EU financial offerings The application process for financial support, and follow-on requirements for documentation are perceived as too complicated and time consuming	EU/EIB/ Member States			Medium
	Fin.3	Uncertainty surrounding new Basel regulations Proposed changes in ship financing (as per Basel IV) due to their de facto mandatory application in the EU, and higher impact due to bank loan reliance, as contrasted to other areas of the world, are a major source of risk for shipping companies	EU/ Member States			Medium
Cross cutting	Cross.1	Lack of a comprehensive, globally oriented EU shipping and maritime strategy There is a need of formulating a renewed overall strategy for shipping and the wider maritime sector that also focuses on the global competitiveness of the shipping and wider maritime sector	EU/ Member States			High
	Cross.2	Lack of a common platform for promotion of EU Shipping All international centers are aggressively involved in promotional activities, outlining their attractiveness for potential businesses. These activities are currently only undertaken at Member State level, if at all, no common promotion strategy exists for the EU Shipping cluster in its entirety	EU/ Member States			Low

4.2 Specific recommendations

Based on the assessment of the policy gaps, the specific policy recommendations concerning the improvement of the competitiveness of the EU are the following:

- **Cross.1: Formulate a comprehensive, globally oriented shipping and maritime policy in the EU**

There is a need for formulating a renewed, overall comprehensive policy for shipping with two significant features. Firstly, it should have a strong focus on supporting the global competitiveness of the shipping and wider maritime sector. While emphasising the inherent global nature of shipping, the current maritime transport strategy and the majority of the initiatives launched to a large extent focus on the competitiveness of waterborne transport internal to the EU and other provisions related to safety and security. But both markets, short sea shipping and global shipping, are important for Europe. In fact, the largest share of EU shipping is global and cross-trading, carrying cargo between third countries. This means that it earns its living outside the EU, doing business with trading partners outside the EU. The global challenge of EU shipping requires the EU to formulate a more globally oriented policy. Secondly, the policy should be comprehensive by cutting across policy fields like transport, taxation, environment, etc, and thereby cover the key competitiveness factors.

Monitor Deloitte's benchmark analysis has revealed that the strategies of the benchmarked centres are comprehensive in the sense that policies are aligned and coherent across competitiveness factors in order to support the distinctive position that the cluster aspires to achieve globally. EU could take a similar step and unfold a comprehensive policy supporting the ambition to be globally competitive as a location for shipping activities.

- **REP.1: Improve legal clarity around the application of the SAGs**

The uncertainty pertaining to how the SAGs are interpreted in specific cases give rise to some degree of risk. This risk is related to questions on how different components of a shipping operation

should be treated for tonnage tax purposes, and what types of income are accepted as arising from qualifying activities. This is highlighted by the lack of clarity surrounding the European Commission's gradual shift from the targeting of maritime transport to the inclusion of maritime services, the treatment of ancillary activities, chartering ratios and the treatment of financial income. Whereas this shift is welcome, seen from a competitiveness perspective there is still uncertainty about the degree of flexibility that member states are allowed under the SAGs. While the maritime SAGs should remain soft regulation, there is an apparent need for continued flexibility in the member states' application of the guidelines. A one-size-fits-all model that drives out the particularities of individual member state shipping sectors would be harmful to the overall competitiveness of EU shipping.

Secondly, there is a perceived risk around the lack of clear time horizons for the applicability of the current SAGs. This makes them inherently risky from a business perspective as they can be amended at a rather short notice due to changing political preferences of the European Commission. It also has a detrimental effect on the level of business-friendliness. Rightly or wrongly, national administrations are very reluctant to entering into open discussions with shipping companies because of the perceived risk of an infringement procedure.

The recommendation is that the EU should increase the clarity around the applicability of the SAGs by clarifying the principles applied to describe the activities that qualify for European tonnage regimes. Also, to the extent possible, the EU should aim at setting medium/long-term horizons for the applicability of the SAGs to induce increased legal certainty. Finally, the EU should not question previous decisions that were duly notified and approved.

- **Tax.1: Assess and ease the flag link eligibility criteria for entering the tonnage tax regime**

The current flag link requirement in the tonnage tax regime is restricting the operational freedom of shipowners and operators in the EU, even though the SAGs contain a pragmatic degree of flexibility regarding the use of EU flags. While a shipowner has sometimes little choice under which flag the vessel

has to fly, in general, this choice is determined by the overall standards and professionalism practiced by the flag administration as well as by the costs and bureaucracy connected with a flag. EU flags might not always provide the most attractive commercial framework for shipowners, and requirements could lead to increased operating costs or lack of market access. Too rigid an insistence on the country of the flag may be counterproductive and discourage the use of EU flags. The consequence may be that over time, the EU registers will lose further ground to the growth centres contrary to the stated EU objective.

Furthermore, the economic value of belonging to a quality EU register for shipowners has been eroded by the high level of international harmonisation on safety and environmental factors. Hence, by insisting on a flag link eligibility requirement for the application of the tonnage tax regime, the EU will lose attractiveness and may over time lose operational and ownership activities. The graphs presented in chapter 1 suggest that the correlation between share of operational activities and the size of the EU-flagged fleet is non-existing, and that the argument of the flag link being a prerequisite for increased economic activity in the EU may be obsolete.

The recommendation is to consider easing, or as a minimum not further restricting, the current flag link requirements set up in the SAGs. Instead, the EU should maintain and focus on its requirement concerning strategic and commercial management activities, which is closer to the primary requirements in other jurisdictions, including Singapore and Dubai.

- **Flag.1: Avoid deviating from or going beyond IMO/ILO conventions in EU and member state regulation**

There is a continued pressure for higher safety and environmental standards in the EU. Whereas such efforts are also principally positive from a competitiveness perspective, it is equally important that the EU does not act as first movers and impose stricter regional regulations for international shipping. Implementation of regulations outside IMO/ILO will increase the operating costs relative to flag states, such as Singapore, pursuing regular implementation of IMO/ILO conventions and should be avoided.

The implementation of IMO/ILO conventions is mainly the responsibility of member states, but specific conventions are implemented through EU directives and regulations (MLC and aspects of SOLAS, MARPOL, Hong Kong Convention on Ship Recycling). Furthermore, the implementation of conventions and flag attractiveness in general are to a large extent depending on member state policies. However, there is some EU legislation influencing the attractiveness of EU flags in general due to situations where EU directives and regulations impose ship operators with stricter minimum requirements than the international conventions (examples here are the extensive range of European directives and regulations on health and safety, environment and labour relations). Furthermore, the EU may encourage member states to avoid excessive and burdensome regulation and advocate for regulatory reform.

In order for the EU to offer competitive conditions for reflagging of existing vessels and flagging of new ones, the deviation from or going beyond IMO/ILO conventions should be prevented. Furthermore, current regulation should be reviewed in order to reduce unnecessary detailed and burdensome regulation. In cases where the EU implements higher safety or environmental standards than IMO/ILO conventions themselves require, it should be ensured that the full economic effects on EU-flagged ships are assessed compared to a regular implementation of international conventions and full reliance on unified interpretations adopted by the IMO. In cases where the economic effects are significant, supportive measures should be pursued to help EU-based shipowners to adapt to the new regulations.

In addition to the four high-priority recommendations, there is a range of additional high-priority recommendations that serve the purpose of safeguarding policies that are currently cornerstones of the EU shipping policy. High priority should be given to the continuation or extension of current policies at EU level.

Table 14. List of existing key policies

Existing key policies
Overall fiscal framework facilitated by the SAGs, allowing the continuation of the current tonnage tax systems upheld by member states.
Focus on the continued expansion of FTAs negotiated collectively by the EU and on leveraging the collective power of EU member states in international negotiations.
Labour cost provisions of the SAGs on income tax exemption for seafarers and exemption of social contributions.
Training and upskilling provisions of SAGs and continuously allowing for full cost recovery of seafarers' onboard training.
Promotion and work on cross-EU reductions in administrative burdens.
Focus on feedback mechanisms between the EU policy framework and industry stakeholders.
Focus on financial support of the environmental upgrade of the EU fleet.
Focus on financial support of R&D investments in new maritime technology.

4.3 Other recommendations

The other identified gaps give rise to additional recommendations. These recommendations have been summarised in the table below.

Table 15. Summary of all identified policy gaps, their priority and corresponding policy recommendations

Gap ID	Description of identified gap	Priority	Policy recommendation
Tax.1	Higher eligibility criteria	High	Consider easing flag link requirements, or as a minimum do not tighten the requirements further.
Tax.2	Narrower sectoral ring-fencing	Medium	Consider expanding tonnage tax coverage (and other general SAG provisions) to all seagoing vessels.
Tax.3	Narrower operational ring-fencing	Medium	Consider widening the scope for ancillary revenues eligible under the tonnage tax system.
Tax.4	Lack of performance or environmental-based fiscal incentives to decrease TT	Low	Allow for member states to give tonnage tax rebates in cases where shipowner or operator meet given performance measures, going beyond the lower thresholds upheld by the European Commission.
PS.1	Lack of cluster focus	Low	Actively include perspectives on a wider maritime cluster, including the professional services sector, in policy making. Facilitate professional networks in the maritime services sector to reap synergies of European centres of excellence across EU member states and different shipping sectors.
REP.1	Risk of interpretative policy change in SAGs	High	Focus on improving clarity around the interpretation of the SAGs. Seek to extend the applicability of the SAGs explicitly to induce legal certainty for a minimum of 10 years.
REP.2	Legalistic interpretations trump pragmatism	Medium	Increase member state autonomy around the implementation of SAGs by using a positive and facilitative demarcation as interpretative practice rather than negative prescriptive practice.

Gap ID	Description of identified gap	Priority	Policy recommendation
EoB.1	High focus on administrative procedures for intra-EU trade	Medium	Seek reorientation of focus towards global shipping touchpoints with EU legislation rather than focusing excessively on administrative burdens for intra-EU trade and short sea shipping. Commission more research into administrative touchpoints between EU legislation and global shipping companies.
Skills.1	Higher eligibility requirements for trainees	Medium	Consider lowering eligibility requirements for training of seafarers on board EU vessels, easing supernumerary condition.
Skills.2	Narrow scope of training schemes	Low	Promote member state provision of onshore upskilling schemes and training schemes for a wider maritime cluster.
Skills.3	Fewer types of offered training	Low	Promote member state provision of new types of training and upskilling offerings such as extensive career conversion programmes, cross-EU internship programmes, industry co-funding, etc.
Flag.1	Coherence of EU shipping framework and IMO/ILO standards	High	Make sure that EU standards do not detract from or go beyond IMO/ILO conventions.
Flag.2 (see vessel exploitation policy gap)	Existence of member state crewing restrictions	Medium/ high	Promote that member state relax existing crewing restrictions or extend them to restrict crewing of EU seafarers rather than just national seafarers as is the case in some EU jurisdictions.
Flag.3	Lack of cross-member state digital solutions for global shipping	Medium	Promote digitalisation of flag state services in EU flag administrations with inspiration from current programmes such as EfficienSea.
Fin.1	High focus on intra-EU investment support	Medium	Make sure that EU standards do not detract from or go beyond IMO/ILO conventions.
Fin.2	High administrative complexity for EU financial offerings	Medium	Promote that member state relax existing crewing restrictions or extend them to restrict crewing of EU seafarers rather than just national seafarers as is the case in some EU jurisdictions.
Fin.3	Uncertainty surrounding new Basel regulations	Medium	Promote digitalisation of flag state services in EU flag administrations with inspiration from current programmes such as EfficienSea.
Cross.1	Lack of a comprehensive, globally oriented EU shipping and maritime strategy	High	Formulate a comprehensive, globally oriented EU shipping and maritime strategy.
Cross.2	Lack of a common platform for promotion of EU shipping	Low	Establish a common platform for promotion of the entire EU shipping cluster by focusing on different EU maritime centres of excellence and cross-EU agglomeration effects.

Annex 1

Overview of indicators used in the benchmark model and corresponding local and global weights.

Comp. factor	Sub factor	Operationalisation	Data source	Description	Local weight (%)	Global weight (%)
Ease of doing business		Company formation	World Bank Ease of Doing Business index	Reflects the time, cost and number of procedures required starting up a local company. The higher these are, the more costly it is to get a firm running. The overall ranking is based on the three scores, each score having equal weight. The score minimum capital paid-in requirements is left out of our study because none of the benchmarking countries have such requirements. <i>Country level, 2016</i>	35,0	2,6
		Registering property	World Bank Ease of Doing Business index	Reflects the number of procedures, time, cost and quality of land administration of registering property. The latter is an index depending on reliability of infrastructure, transparency of information, geographic coverage and land dispute resolution. The four factors are equally weighted. <i>Country level, 2016</i>	15,0	1,1
		Paying taxes	World Bank Ease of Doing Business index	Reflects the number of hours per year to prepare, file, return and pay taxes, plus the number of tax payment. The ease of paying taxes depend negatively on both the time and the number of payments. The two factors are equally weighted. <i>Country level, 2016</i>	5,0	0,4
		Enforcing contracts	World Bank Ease of Doing Business index	Reflects the number of days to resolve commercial sale dispute, the attorney, court and enforcement cost and the quality of the judicial process. The quality is an index reflecting the court structure, case management, court automation and alternative dispute resolution. The factors weight equally in the final factor. <i>Country level, 2016</i>	10,0	0,8
		Trading across borders	World Bank Ease of Doing Business index	Reflects the overall time and cost of both importing and exporting. The time indicates number of hours for documentary and border compliance. The four factors are equally weighted. <i>Country level, 2016</i>	25,0	1,9
		Resolving insolvency	World Bank Ease of Doing Business index	Reflects the recovery rate by secured creditors and the strength of insolvency framework. The latter is a measure of insolvency law's quality. <i>Country level, 2016</i>	10,0	0,8
Total					100	7,5

Comp. factor	Sub factor	Operationalisation	Data source	Description	Local weight (%)	Global weight (%)
Taxation and fiscal incentives		Effective rate of taxation for shipping companies (operations)	Deloitte Tax Data	Effective tax rate for shipping companies under given national shipping incentive, tonnage tax system or wider tax system, depending on system. <i>Country level, 2016</i>	25,0	7,5
		Possibility for avoiding double taxation	Deloitte Tax Data	Measured as the number of double taxation agreements each country, where the shipping center is located, have arranged with other countries both bilaterally and multilaterally. This number is scored relatively to the country with the most tax treaties (China) on a 1-10 ranking. The number 10 indicates the highest number among the five countries. <i>Country level, 2016</i>	12,5	3,8
	Fiscal incentive for shipping	Available rate of depreciation for ships	Deloitte Tax Data	The faster a firm can depreciate assets, such as vessels, the higher the present value of the tax savings is, as the tax base is lowered earlier. Not relevant for shipowners opting for fiscal incentives such as tonnage tax, as no capital allowances are available. <i>Country level, 2016</i>	2,5	0,8
		Tonnage taxation/levies	Deloitte Tax Data	The rate of tonnage tax/levies payable by shipowners registered in the jurisdiction. <i>Country level, 2016</i>	7,5	2,3
		Ability to accommodate ancillary revenue streams in tax incentive schemes	Deloitte Tax Data + Expert interviews	Indicates the broadness of the scope of the offered shipping incentives (e.g. whether shipping companies can include ancillary revenue from other activities into the shipping incentive/tonnage tax system). <i>Country level, 2016</i>	15,0	4,5
		Qualifying requirements for tax incentives	Desk research	Assessment of the strictness of eligibility requirements to the special fiscal treatment. <i>Country level, 2016</i>	15,0	4,5
	Corporate Tax	Corporate income tax rate	World Bank Ease of Doing Business	Reflects only the profit tax as a percentage of total profit. <i>Country level, 2016</i>	10,0	3,0
	Other incentives	Existence of other fiscal incentives	Expert interviews	Existence of any other fiscal incentive schemes, leading to a lower tax for shipping companies etc. <i>Country level, 2016</i>	12,5	3,8
Total					100	30

Comp. factor	Sub factor	Operationalisation	Data source	Description	Local weight (%)	Global weight (%)
Skills	Structural labour force	Labour force with a tertiary education	Global Competitiveness Index	Indicates the overall educational level in the country, where the cluster is located. Other things being equal, a higher educationally level, means a higher level of skills (and not the potential number qualified for a maritime), % <i>Centre level, 2016</i>	5,0	0,8
		Percent of work force organized in unions	International labour organization Data-base	Indicates the bargaining power the labour force have in general, % <i>Country level, 2013</i>	5,0	0,8
		Labour cost	Statista	Standardized average monthly wage, U.S dollars. Adjusted PPP <i>Country level, 2012</i>	20,0	3,0
	Labour policies	Ease of getting a visa	Emigra	Ranking depending on the time it takes to get visa, the number of documents required and the working permit length. Ranking from 1 to 10 ranking (10=easiest) <i>Country level, 2015</i>	7,5	1,1
		Personal income taxation	Deloitte Tax Data	% rate for 200.000 USD income <i>Country level, 2016</i>	20,0	3,0
		Taxation of seafarers personal income	PwC Paying Taxes Analysis	Tax rate for seafarers personal income onboard ships of domestic register, % <i>Registry level, 2016</i>	15,0	2,3
	Maritime education	Share of STCW recognition	Desk research	Share of STCW recognition among 5 large shipping nations, % <i>Country level, 2016</i>	7,5	1,1
		Top 100 universities	Times higher education	Number of top 100 universities offering accounting and finance, Business and management, general engineering, and law <i>Centre level, 2016</i>	5,0	0,8
		Maritime Training funding	Expert interviews and desk research	Existence of any funding schemes supporting the upskilling of seafarers/maritime personell or career conversion into maritime etc. Ranking from 1 to 10 (10 indicates the highest government funding) <i>Country level, 2016</i>	15,0	2,3
Total					100	15,0

Comp. factor	Sub factor	Operationalisation	Data source	Description	Local weight (%)	Global weight (%)
Legal framework for vessel exploitation		Restrictions on crew nationality and size	EY, Shipping Industry Almanac	Indicates whether there are limitations regarding the personal working on a vessel flying under a certain flag (with respect to nationality). <i>Registry level, 2016</i>	70,0	3,5
		Requirements for and restrictions on chartering	EY, Shipping Industry Almanac	Indicates whether there are limitations regarding the personal working on a vessel flying under a certain flag (with respect to nationality). <i>Registry level, 2016</i>	30,0	1,5
Total					100	5

Comp.factor	Sub factor	Operationalisation	Data source	Description	Local weight (%)	Global weight (%)
Flag attractiveness	Ratification of IMO/ILO conven-tions	IMO flag state rating	IMO Data-base	Index of extent ratification IMO and ILO conventions and IMO flag state rating <i>Country/registry level, 2015</i>	25,0	3,1
		D-MLC national requirements	Desk Research + expert interviews	The best scenario from a shipowner's point of view is a minimum implementation, so any over implementation is seen as negative. Ranking from 1 to 10 (10=minimum implementation) <i>Country/registry level, 2016</i>	10,0	1,3
		"Gold-plating" of IMO conventions	Desk Research + expert interviews	The best scenario from a shipowner's point of view is a minimum implementation, so any over implementation is seen as negative. Ranking from 1to 10, done by experts, incl. desk research <i>Country/registry level, 2016</i>	5,0	0,6
	Ship registration	Documents required	H. Dickinson + Desk research	Number of documents required in the registration process <i>Registry level, 2015</i>	5,0	0,6
		Registration Fees	Desk research	Max registration fee for new vessel registration <i>Registry level, 2015</i>	10,0	1,3
	Administration of registry	Level of digitalization	UN e-government database	Online Service Index from the E-Government Database <i>Country level, 2016</i>	5,0	0,6
		Quality of service	Expert interviews	Expert ranking 1-10 of service provision in the five centers <i>Centre level, 2016</i>	30,0	3,8
		Extent of delegation to RO's and number of RO's	IMO and Paris MoU	Share of top-rated (Paris MOU) RO's approved by country <i>Registry level, 2016</i>	10,0	1,3
Total					100	12,5

Comp. factor	Sub factor	Operationalisation	Data source	Description	Local weight (%)	Global weight (%)
Availability of professional services	Non-physical services	Number of maritime legal experts and listed maritime arbitrators	Who's who legal + arbitration association websites	Sum of maritime legal experts from 'Who's who legal' in center and number of maritime arbitrators from Arbitration websites <i>Centre/Country level, 2016</i>	20,0	3,0
		Availability of ship brokers / shipping agency service	Lloyds List online	Sum of number of ship brokering companies and shipping agencies, directories.lloydslist.com <i>Centre level, 2016</i>	20,0	3,0
		Availability of ship management firms	Lloyds List online	Number of ship management companies, directories.lloydslist.com <i>Centre level, 2016</i>	10,0	1,5
		Share of maritime insurance premia	IUMI	% of global premiums <i>Country level, 2016</i>	10,0	1,5
		Number of P&I clubs	IUMI	Number of P&I clubs established in centre <i>Centre level, 2016</i>	20,0	3,0
	Administration of registry	Logistics performance index	World Bank LPI	Overall quality of ports and logistics services. Subset index of the following port indicators from World Bank LPI; Infrastruc-ture, Ease of arranging shipments, Quality of logistics service, Tracking and tracing, Timeliness <i>Country level, 2015</i>	15,0	2,2
		Availability of ship engineering service + shipping repair service	Lloyds List online	Number of ship engineering service companies (incl. ship repair), directories.lloydslist.com <i>Centre level, 2016</i>	5,0	0,8
Total					100	15,0

Comp. factor	Sub factor	Operationalisation	Data source	Description	Local weight (%)	Global weight (%)
Availability of finance		Presence of mandated syndicated loan providers	Maritime Money	Share of top 14 mandated syndicated loan bookrunners and lead arrangers, % <i>Centre level, 2014-2015 average</i>	20,0	0,5
		Share of total global syndicated loan volume	Baltic-Exchange	Share of total global syndicated loan volume <i>Country level, 2012-2015 average</i>	20,0	0,5
		Financial market development	World Economic Forum	World Economic Forum Competitiveness Report (Indicators 8.01-8.07) <i>Country level, 2016</i>	20,0	0,5
		Shipping firms on stock exchange	Clarksons Weekly	Mil. gross tonnage on stock exchange, <i>Centre level, 2016</i>	20,0	0,5
		Existence of financial other subsidy/grant schemes	Expert interviews + desk research	Research in to available schemes. Ranking from 1 to 10 (10=largest, most comprehensive scheme portfolio)	20,0	0,5
Total					100	2,5

Comp.factor	Sub factor	Operationalisation	Data source	Description	Local weight (%)	Global weight (%)
Regulatory, economic and political factors	Regulatory	Risk of change in regimes such as tax regimes	World Bank Database on political stability	Index of political stability by the World Bank. <i>Country level, 2016</i>	20,0	2,5
		International influence at IMO and ILC	IMO Data-base	Sum of proposals and participants at the 2015-2016 IMO meetings. <i>Registry level, 2015-2016</i>	15,0	1,9
	Political	Quality of rule-of-law	World Justice Project	Performance is assessed through 44 indicators organized around 8 themes: constraints on government powers, absence of corruption, open government, fundamental rights, order and security, regulatory enforcement, civil justice, and criminal justice <i>Country level, 2016</i>	15,0	1,9
		Extent to which bureaucracy does not hinder business activity	World Bank Database	Index of government effectiveness from Institute for Management and Development World Competitiveness Yearbook <i>Country level, 2014</i>	10,0	1,3
	Economic	WEF macro-economic environment index	World Bank Database	Third pillar in World Bank index, based on five indicators; Government Budget balance, Gross national savings, inflation, government debt, country credit rating <i>Country level, 2016</i>	10,0	1,3
		GDP per head	World Bank Database	USD at PPP <i>Country level, 2016</i>	10,0	1,3
		Quality of life	Mercer	Quality of life from expat survey in centres <i>Centre level, 2016</i>	10,0	1,3
		Cost of living	Expatisan's cost of living Index	Relative to the city with the highest cost of living <i>Centre level, 2016</i>	10,0	1,3
	Total				100	12,5

Annex 2

Interview programme for the project:

Type	Interviewed sources
Authority	• European Commission - DG Competition • European Commission - DG Move • Singapore Maritime Authority • Transport Canada (written input) • Hong Kong Marine Department (written input, co. HKMPB)
Companies	• Maersk Line • PGS • CMA Ships • Thorvald Klaveness, Shanghai • Thorvald Klaveness, Singapore • DS Norden • Schulte Group
Cluster organisations	• Vancouver International Maritime Centre
Shipping associations	• Singapore Shipping Association • International Chamber of ShippingHong Kong Shipping Association • Union of Greek Shipowners • UK Chamber of Shipping • Danish Shipowners Association • Joint Cyprus Shipowners Association • Royal Association of Netherlands Shipowners (KVNR) • EUSA workshop
Other	• Hong Kong Maritime and Port Board (written input) • Various input from participants at Danish Maritime Days

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