



# The economic contribution of the UK Maritime Business Services industry

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A Cebr report for Maritime UK  
and Maritime London

May 2022

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**Authorship and acknowledgements**

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NB The industry figures making up the broad Maritime Sector are not always additive because some of the reports have been customised to cater for the overlap between certain industries. Simply adding together the industries would therefore produce a degree of double counting. Nonetheless, the broad Maritime report has had this double counting stripped out.

The report does not necessarily reflect the views of Maritime UK.

London, May 2022

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## Headline findings

- The Centre for Economics and Business Research (Cebr) has been commissioned by Maritime UK to quantify the economic contribution of the Maritime Business Services (MBS) industry to the UK economy. This report forms one of ten reports assessing the contribution of the Maritime Sector as a whole, at industry-level, in Scotland, Wales, the Liverpool City Region and the Solent LEP region.
- The Maritime Business Services industry consists of various highly productive and specialised activities, including Financial, Legal, Insurance, Shipbroking, Education, Ship Surveying, Accountancy and Consultancy activities.
- The Maritime Business Services industry makes a substantive macroeconomic contribution to the UK through business turnover, Gross Value Added (GVA), employment and through the compensation of employees (COE). **It is estimated that the industry directly supported just over £6.6 billion in business turnover, £3.0 billion in GVA and 23,800 jobs in 2019.**



- This respectively equates to 12.1% of turnover, 16.1% of GVA and 10.5% of employment directly supported by the wider UK Maritime sector in 2019.
- Maritime Insurance is the largest constituent activity within the industry in terms of economic activity, directly contributing £1.5 billion in GVA and directly supporting around 8,600 jobs in 2019. Combined, Maritime Insurance services, Shipbroking and Legal activities dominate the industry, with 78% of GVA and 70% of employment.
- Furthermore, **employees in the industry are found to be highly productive** in each year considered; **each employee is estimated to contribute an average of £126,535 in GVA in 2019; this compares favourably to the Maritime Sector value of £82,329.** The **average profitability** (gross profit as a share business turnover) of the Maritime Business Services industry **was just over 18% in 2019**, close to the Maritime Sector average of 20%.
- By extension of its significant direct contributions to GVA and employment, the Maritime Business Services industry also helps to raise millions of pounds each year to the UK Exchequer. The industry contributed an **estimated total of £1 billion in tax revenues in 2019**, spread across VAT, Corporation Tax, Income Tax, National Insurance Contributions (NICs) and Business Rates.
- After quantifying the aggregate economic impacts through the industry supply chains and induced effects on expenditures, **it is estimated that the Maritime Business Services**

industry helped to support a total of £6.4 billion of GVA in 2019. This implies that, for every £1 in GVA directly contributed by the industry, a total of £2.13 in GVA is supported across the wider UK economy.

- These aggregate economic impacts associated with the Maritime Business Services industry also extend to business turnover, employment and the compensation of employees. It is estimated that the Maritime Business Services industry helped to support a total of £13.7 billion in turnover, 81,200 jobs and £3.2 billion through the compensation of employees in 2019.



- **Most of the economic activity directly contributed and more widely supported by the Maritime Business Services industry is found to be in London.** In 2019, it is estimated that the industry in London directly contributed £5.7 billion of GVA (approximately 85% of the industry total) and 19,000 jobs (around 80% of the industry), indicating a greater productivity than the UK average for the MBS industry. After indirect and induced effects are considered, the aggregate contribution from London rises to £5.0 billion of GVA and 55,900 jobs.
- We expect the MBS industry to experience a contraction over the five-year horizon to 2025 in real terms. Our forecast indicates that the industry's output is **set to grow at a Compounded Annual Growth rate (CAGR) of 1.8% over the considered period. This translates into cumulative nominal growth of 7.5% for 2021-2025, in nominal terms,** and is less than the growth experienced over the five years directly preceding the pandemic.

# 1. Introduction

Cebr is pleased to present this report to Maritime UK and Maritime London on the economic impact of the Maritime Business Services (MBS) industry on the UK economy. For the purposes of this study, the Maritime Sector is broadly defined as comprising of the individual Shipping, Ports, Marine Engineering and Scientific (MES), Leisure Marine and Maritime Business Services (MBS) industries; each of these industries comprises numerous and diverse activities which are reflected in the study.

This report forms one of ten reports on the economic contribution of the Maritime Sector. The other reports focus on the economic contribution of each of the other four industries at UK level, the contribution of the sector in Scotland, Northern Ireland, Liverpool City Region and the Solent LEP, and the contribution of the Maritime Sector at UK-level. It is therefore important to consider this report as part of the wider framework set out in the ten reports, which set out the impact of the Maritime Sector both at a national and regional level.

In this context, the MBS industry comprises a variety of high-value activities for which the UK is acknowledged as a world leader, including shipbroking, legal, insurance, consultancy, accountancy and financial services. For Maritime insurance, the UK boasts a 35% share of global Maritime Insurance premiums, and 60% of Protection and Indemnity (P&I) insurance.<sup>1</sup> The combination of the UK's stable business environment, the depth of its available talent pool, and the agglomeration effect stimulated by the close proximity of shipbroking, insurance and financial activities within the City of London, all help to maintain the UK's leading position as a Maritime Business Services hub.

A key aspect of the Maritime Sector's Maritime 2050 strategy is to maintain this position as a global leader in MBS. The industry is also a major net exporter to international markets, thereby making a significant contribution to UK trade.

Our examination spans the period from 2010 to 2019 (inclusive), with the latter being the latest year for which full data are available, and endeavours to capture the full economic 'footprint' of the MBS industry. As such, our report is not confined to direct ongoing contributions to GDP and employment through the maritime sector's operations and activities in the UK, but also provides assessments of the associated indirect and induced multiplier impacts.

Maritime UK previously commissioned Cebr in 2017 and in 2019 to produce the same study focused on measuring the impact of the maritime sector to the UK economy.

## 1.1 About Maritime UK

Maritime UK is the umbrella body for the maritime sector, bringing together the shipping, ports, services, engineering and leisure marine industries. Their purpose is to champion and enable

<sup>1</sup> Maritime UK. (2019) ['Maritime Business Services'](#).

a thriving maritime sector. Maritime UK has responsibility for the coordination and delivery of industry recommendations within Maritime 2050.

## 1.2 Purpose of this report

This research provides up-to-date insights on the size and performance of the UK Maritime Business Services (MBS), presenting a range of statistics and figures which demonstrate different aspects of the economic value brought by the sector to the UK economy. The intention of this is to empower Maritime UK and Maritime London with a thorough and comprehensive knowledge and evidence base, such that they can support and advocate for the sector across the UK.

As such, Cebr has focused on the following key economic indicators: business turnover, employment, Gross Value Added (GVA), the compensation of employees, the Exchequer contribution (through tax revenues raised) and exports of goods and services.

The study also seeks to identify the contribution of Maritime Business Services at a regional level (across the former Government Office Regions), after accounting for the relatively high concentration of economic activity taking place in the City of London.

It should be noted that given the data lags associated with many of the official national statistics used within this study, it is not possible for us to extend our analysis to cover the full extent to which the sector was directly affected by the COVID-19 pandemic in 2020/21. As such, because of the timeframe examined in this report, this research offers a picture of the value of the maritime sector right before the pandemic occurred. Further to this, our research does consider the impacts of Covid in our Forward Look section, where we provide forecasts for the Maritime Sector as well as for each of its five constituent industries and the four regions included within our analysis.

## 1.3 Overview of the study and methodology

### Objectives of the study

This report provides a thorough and comprehensive examination of the role of Maritime Business Services (MBS) in the UK and its constituent sub-regional economies. It presents a range of analyses demonstrating different aspects of the value contributed by the overall industry, including direct contributions to GDP and employment, indirect and induced multiplier impacts and the Maritime Business Services industry's contribution to the UK Exchequer through tax revenues raised.

To produce a robust study, it is necessary to analyse the available data to ensure that it captures the full range of activities that should be included in establishing the total economic 'footprint' of the industry. Following the collation of the necessary data capturing these activities, the values of key economic indicators were established to demonstrate the impact of the sector. The key macroeconomic indicators include:



- GVA<sup>2</sup> contributions to UK and regional GDP generated by Maritime Business Services, directly and through indirect and induced multiplier impacts.
- Jobs supported by the sector, including direct, indirect and induced jobs through multiplier impacts.
- The value of the turnover of MBS and, again, the turnover supported in the UK and regional economies through multiplier impacts.
- The value of employee compensation<sup>3</sup> generated by MBS, representing the total remuneration of employees operating in the sector.
- The contribution of Maritime Business Services through revenues raised for the Exchequer.
- The value of goods and services exported by the industries comprising the MBS industry.

In addition to the core modelling and analysis, we also undertake a range of comparisons to contextualise the findings, including:

- How the economic indicators vary over the period 2010-2019.
- How the economic indicators vary across the different industries of the maritime sector.
- How the economic indicators for MBS vary across the different UK nations and regions.
- How the indicators for MBS compare with other important sectors of the UK economy.

### **Mapping the UK Maritime Business Services industry**

Here we set out how the Maritime Sector and, by extension, how the MBS industry has been defined for the purposes of the study. On a holistic level, the wider Maritime Sector can be disaggregated into the Shipping, Ports, Leisure Marine, Marine Engineering and Scientific and Maritime Business Services industries, which in themselves are formed of numerous individual and distinct activities.

Building up on the experience gained through previous studies for Maritime UK, Cebr has subsequently undertaken a mapping exercise based on the previous study to identify how each of these five industries align with the national accounts. For most industry activities, a

<sup>2</sup> GVA, or gross value added, is a measure of the value of production in the national accounts. Conceptually it can be considered the value of what is produced, less the value of intermediate goods and services used to produce it. GVA is distributed in three directions – to employees, to shareholders and to government. It is often used as the proxy for the contribution of a sector or industry to GDP: strictly this relationship is  $GVA + \text{Tax on products} - \text{Subsidies on products} = \text{GDP}$ .

<sup>3</sup> Compensation of employees (COE) or employee compensation, is the total remuneration, in cash or in kind, payable by an employer to an employee in return for work done by the latter. This consists of wages paid to employees; employers' actual social contributions (excluding apprentices); employers' imputed social contributions (excluding apprentices); and employers' social contributions for apprentices.

corresponding Standard Industrial Classification (SIC) code exists which enables the identification and quantification of the direct economic impacts using publicly available data sources. A minority of activities do not map neatly against the SIC framework, necessitating the use of industry or local-level data for quantification purposes.

In order to identify these economic impacts, Cebr has followed the definition of the Maritime Business Services industry as comprising the major activity groupings listed below:

- Shipbroking services;
- Maritime Insurance services;
- Maritime Financial services;
- Maritime Legal services;
- Ship Surveying and Classification activities;
- Maritime Education (including Maritime university courses and cadetships);
- Maritime Consultancy; and
- Maritime Accountancy.

The first stage of the study involved mapping the activities of the Maritime Business Services industry against the national accounts framework, in order to establish clarity on the precise definition of the industry as it maps against the Standard Industrial Classification (SIC) framework. In essence, this involves taking each of the industry's activities, and mapping these to the most relevant Standard Industrial Classification (SIC) code in order to identify the activity's economic data.

However, the activities of the Maritime Business Services industry do not map neatly onto the SIC framework. For instance, while Accountancy services and activities can be identified through SIC code 69201, there is no separate distinction within the national accounts framework for Maritime Accountancy activities specifically. Similarly, while Ship surveyor activities can be identified through SIC code 71200, this particular activity is bundled with a number of other (in this context) unrelated activities. As a result, this limits the use of publicly available data sources such as the Annual Business Survey to gather data on the Maritime Business Services industry. Cebr has therefore drawn upon desk research, meetings and insight from industry representatives, existing analysis, and industry and company-level data to quantify the contributions made through Maritime Business Services activities.

### **Quantifying the direct economic impacts of the Leisure Marine industry and data sources**

To analyse the Maritime Business Services industry, Cebr has drawn from several data sources for each of the different sub-industries. As such, this section will outline the unique methodology of each sub-industry in turn.

## **MBS 1 – Shipbroking**

Previously we primarily drew from The City of London Corporation and Maritime London's, 'The UK's Global Maritime Professional Services: Contribution and Trends'<sup>4</sup> (produced by PwC), to quantify the economic contribution of Shipbroking to the MBS industry. This study provides an estimate for GVA in 2014 and rather than scaling the data for the whole period (2010 to 2017) using the closest available SIC code, we used a bottom-up analysis of the industry to reveal its trends. This involved a series of targeted searches in Bureau Van Dijk's 'Financial Accounts Made Easy' (FAME) database.

However, for this new study we expanded upon this previous approach and further developed its methodology, allowing us to carry out a bottom-up analysis using FAME. Turnover, GVA, employment, wages & salaries, and compensation of employees were calculated using this approach, and exports were estimated based on the ratios for the nearest SIC code found within the ONS' Supply-Use tables.

## **MBS 2 – Maritime Insurance**

Building on the methodology we developed in our last study, the analysis of Maritime Insurance has been principally driven by insight from representatives of the industry from the International Underwriting Association (IUA). The statistical report by the IUA mapped out the Maritime Insurance market from 2010 to 2019 (inclusive).<sup>5</sup> Using insights into market shares of major firms in the industry from representatives at the IUA in 2019, we were able to scale the report's findings appropriately to account for the entire industry. We augmented these findings with results from targeted FAME searches to derive each key macroeconomic indicator.

## **MBS 3 – Maritime Financial Services**

For Maritime Financial services, we relied predominately on the findings from The City of London Corporation and Maritime London's 2016 study, scaling the results over the period by growth trends found from the broader financial sector and SUTs data. This was again supplemented by FAME data.

## **MBS 4 – Maritime Legal Services**

This sub-industry's analysis was driven heavily by insight from representatives from the London Maritime Arbitrations Association (LMAA), and the legal sector report from TheCityUK: 'Legal Excellence, Internationally Renowned UK Legal Services 2021'.<sup>6</sup> This report is for the whole legal industry in the UK and was scaled-down to Maritime Legal Services using the ONS Business Register and Employment Survey (BRES) and shares of Maritime Solicitors

4 PwC (2016). 'The UK's Global Maritime Professional Services: Contribution and Trends.'

5 IUA. (2021). 'London Company Market Statistics Report'.

6 TheCityUK. (2021). 'Legal Excellence, Internationally Renowned UK Legal Services 2021'.

from major law firms. Similar to the other sub-industries, these GVA figures were used alongside ratios found in ONS datasets and FAME searches to acquire the other macroeconomic indicators.

### **MBS 5 – Ship Surveyor and Classification Activities**

For Ship Surveyor and Classification activities, Cebr contacted those classification society members of the International Association of Classification Societies (IACS)<sup>7</sup> with a registered UK office, in order to ascertain employment in the years 2010 to 2019 inclusive. The direct economic contribution from these activities has then been estimated using these employment statistics as a basis, complemented by results found in FAME and ABS.

### **MBS 5 – Maritime Education**

For Maritime Education, a partial bottom-up approach was implemented, utilising FAME and financial accounts of institutions. The list of education institutions was taken from Maritime London's member list and through discussions with representatives from the MBS industry. This was augmented with ONS datasets and the aforementioned 2016 PwC study.

### **MBS 6 – Maritime Consultancy**

The analysis for Maritime Consultancy was entirely a bottom-up analysis through financial accounts, annual reports and company data. Similar to the other Maritime Sector sub-industries, we use FAME, ABS, BRES and other publicly available data to derive ratios from the closest relevant SIC code to generate the complete list of macroeconomic indicators.

### **MBS 7 – Maritime Accountancy**

For Maritime Accountancy, data from the The City of London Corporation and Maritime London's prior study were used. Similar to Maritime Financial services, this was scaled over the 2010 to 2019 period, based on growth rates found in the ONS SUTs. This analysis was also complemented with additional findings from FAME to produce the set of macroeconomic indicators.

## **Quantifying the aggregate economic impacts of the Leisure Marine Industry**

After collation and interrogation, the direct economic impacts for the Maritime Business Services industry have then been embedded within Cebr's economic impacts models of the UK economy. For each of the activity groups, the direct impacts are then combined with bespoke economic multipliers to generate indirect, induced and so aggregate impacts.

These multipliers were calculated by Cebr using our input-output modelling approaches, as these activities are not 'standard' sectors reported in the ONS' input-output tables. Cebr's models establish the relationships between industries through supply chain linkages, as well

<sup>7</sup> The International Association of Classification Societies (IACS) is a not-for-profit membership organisation of classification societies that establish minimum technical standards and requirements that address maritime safety and environmental protection and ensures their consistent application.

as industries' linkages with government, capital investors and the rest of the world (through trade).

The models produce three types of impact for four indicators – business turnover, GVA, the compensation of employees, and employment. The three types of impact are:

- **Direct impact:** this is the value and jobs supported directly by the economic activities of the UK marine industry.
- **Indirect impact:** this is the value and jobs supported in industries that supply inputs to the UK marine industry.
- **Induced impact:** this is the value and jobs supported in the wider economy when the direct and indirect employees of the marine industry spend wages and salaries on final goods and services.

These three impacts are then combined to convey the aggregate impact associated with each activity within the marine industry in terms of GVA, employment, business turnover, and the compensation of employees.

### Changes from 2019 Cebr study

Beyond the changes discussed elsewhere in this section, the main change in our methodology affecting our analysis for the MBS industry is reflected within our aggregate impact analysis. Since our 2019 study, Cebr has made several changes to our input-output models, which underpin the calculation of the aggregate impacts. Firstly, we have updated the underlying supply-use data within the models, to reflect updated ONS data released over the intermediary period. This means the models now represent a more contemporaneous structure of the economy. Secondly, we have further refined our input-output modelling framework. The conceptual framing of our methodology remains the same, but for industries which span multiple SIC codes (such as the Maritime Sector and many of the constituent industries) the models themselves have been adjusted to remove potential double-counting and simplify the required data inputs.

There have been other changes made elsewhere in the analysis which affect some of the other constituent industries of the Maritime Sector, and these can be found in the Maritime Sector and respective industry reports.

## 1.4 Structure of the report

The remainder of the report is structured as follows:

- **Section 1** provides a more detailed overview of how the Maritime Sector has been defined, and how the MBS industry fits within this description. Further information is also provided on how the key macroeconomic indicators have been captured or estimated;
- **Section 3** outlines the direct economic impacts of the MBS industry. We consider the direct impacts through GVA, employment, the compensation of employees, and contribution to the UK Exchequer through tax revenues contributed by the industry.

- **Section 4** considers the multiplier impacts of the MBS industry, through the activities it stimulates through its supply chain, and in the wider economy when employees directly and indirectly employed by the industry spend their wages and salaries in the wider economy.
- **Section 5** examines the direct and multiplier impacts of the MBS industry at a regional level, as disaggregated by the 12 International Territorial Level 1 regions (ITL 1).<sup>8</sup>
- **Section 6** provides forecasting analysis for the MBS industry in the context of the current economic climate, with a focus on the impact of Covid-19 on the sector.
- **Annex: Full set of direct economic impacts by region** contains the full set of direct economic impacts of the Shipping industry by region.

<sup>8</sup> These are: Scotland, Wales, Northern Ireland, the East of England, the East Midlands, London, the North East, the North West, the South East, the South West, the West Midlands, and Yorkshire and the Humber.

## 2. The Maritime Sector and the Maritime Business Services industry

Here we set out how the wider Maritime Sector has been defined for the purposes of the study. On a holistic level, the wider sector can be disaggregated into the Shipping, Ports, Marine Engineering and Scientific (MES), Leisure Marine and Maritime Business Services (MBS) industries, which in themselves are formed of numerous individual and distinct activities, of which the latter is the focus of this report.

### 2.1 The definition of the Maritime Sector and its constituent industries

Building up on the experience gained through previous studies for Maritime UK, Cebr has subsequently undertaken a mapping exercise based on the previous study to identify how each of these five industries align with the national accounts. For most industry activities, a corresponding Standard Industrial Classification (SIC) code exists which enables the identification and quantification of the direct economic impacts using publicly available data sources. A minority of activities do not map neatly against the SIC framework, necessitating the use of industry or local-level data for quantification purposes.

- **Shipping industry**
  - International passenger transport (cruise and ferry);
  - Domestic and inland waterway passenger transport;
  - International freight transport (bulk, container, gas and tanker);
  - Domestic & inland waterway freight transport;
  - Other shipping activity.
- **Ports industry**
  - Warehousing and storage;
  - Port activities and management;
  - Stevedores, cargo and passenger handling;
  - Border agency, HMRC and public sector employees operating in ports.
- **Leisure Marine industry**
  - Recreational marine activities and general marine services;
  - Boatbuilding (marine leisure vessels);
- **Marine Engineering and Scientific industry**
  - Shipbuilding;
  - Marine renewable energy;
  - Marine support activities for offshore oil and gas, engineering and mining;



- Marine science and academic activities, including government vessels and technical consulting;
- **Maritime Business Services industry**
  - Shipbroking services;
  - Maritime Insurance services;
  - Maritime Financial services;
  - Maritime Legal services;
  - Ship Surveying and Classification activities;
  - Maritime Education (including Maritime university courses and cadetships);
  - Maritime Consultancy; and
  - Maritime Accountancy.

Here we focus solely on the Maritime Business Services industry. The remainder of this section focuses on how the direct economic impacts of the constituent activities have been measured, in light of difficulties in establishing how the industry maps against the national accounts framework.

## 2.2 Quantifying the direct economic impacts of the MBS industry at a national level

As discussed earlier in this report, in Section 1.3, Cebr enhanced the methodology developed in our 2019 study. Although the proportion of the economic impacts estimated using a partial or full bottom-up analysis approach now represents over 92% of the economic value of the MBS industry, there are still some gaps where we have to rely on the 2016 PwC study (specifically for the financial and accountancy sub-industries). Table 1 below summarises the approach taken to quantify the direct economic impact of each of the industry's constituent activities.

Table 1: Estimation approach taken to estimate other direct economic impacts of the Maritime Business Services industry

INDUSTRY	ACTIVITY	ESTIMATION APPROACH	SOURCE(S)
Maritime Business Services Industry	Shipbroking	Further developed our existing bottom-up methodology that relies on a series of targeted FAME searches. This allowed us to calculate most of the economic indicators of interest and, wherever to do so this way, relied on publicly available data to augment our results.	FAME, ONS Supply-Use Tables, Cebr Analysis
	Maritime Insurance	We anchored the analysis on data from IUA reports and scaled for the rest of the industry based on market shares which were driven by insight from industry representatives. We augmented these findings with results from targeted FAME searches to derive each key macroeconomic indicator.	IUA, FAME, ABS, ONS Supply-Use Tables, Cebr Analysis
	Maritime Financial	Based upon the findings from PwC's 2016 report and augmented by the use of the ONS' Supply-Use Tables and FAME data.	PwC, FAME, ONS Supply-Use Tables, Cebr Analysis
	Maritime Legal	Using data from TheCityUK's annual reports, and augmented by FAME, BRES, and ABS data as well as desk research on proportion of maritime solicitors from major law firms.	TheCityUK, FAME, ABS, ONS Supply-Use Tables, Cebr Analysis



	Ship Surveying and Classification	Cebr contacted some of the relevant companies in this sub-industry to ascertain employment over the 2010-2019 period; and these figures, along with a partial bottom-up FAME-based approach, were used to estimate the figures.	FAME, ABS, ONS Supply-Use Tables, Cebr Analysis
	Maritime Education	A partial bottom-up approach was utilised, utilising FAME data and supplemented with ONS datasets and the 2016 PwC study.	FAME, PwC, ONS Supply-Use Tables, Cebr Analysis
	Maritime Consultancy	Further developed our existing bottom-up methodology that relies on a series of targeted FAME searches. This allowed us to calculate most of the economic indicators of interest and, wherever to do so this way, relied on publicly available data to augment our results.	FAME, ONS' Supply-Use Tables, Cebr Analysis
	Maritime Accountancy	Based upon the findings from PwC's 2016 report, and augmented by the use of the ONS' Supply-Use Tables and FAME data.	PwC, FAME, ONS Supply-Use Tables, Cebr Analysis

Source: Maritime UK, Cebr analysis

## 2.3 Quantifying the direct economic impacts of the industry at regional level

In this final subsection we set out the approach taken to disaggregate the direct and aggregate economic impacts at a regional level. Ordinarily, the approach taken to disaggregate the direct economic impacts of the Maritime Business Services industry would involve combining the direct economic impacts at UK-level with publicly available statistics which can be disaggregated at a regional level. However, this approach is precluded as a result of the difficulties in mapping the industry against the national accounts framework.

When conducting our bottom-up analysis of the MBS industry, we found that between 75% and 85% of MBS activities were located in the London region. Therefore, we have distributed regional activity for each indicator based on these findings, for example London was found to account for 84% of MBS GVA and thus the remaining 26% was allocated based on the economic activity of the Ports industry in each region.<sup>9</sup> For further information on the regional disaggregation of Ports industry activities, please refer to Cebr's separate report on the economic activity of the UK Ports industry.

Other adjustments have been made to the regional disaggregation of the key macroeconomic indicators which represent the direct economic impacts of the Maritime Business Services industry, in order to reflect differences in economic performance across the regions. These are as follows:

<sup>9</sup> The allocation of MBS activity based on port activity comes from the assumption that maritime related services primarily operate within or close to Ports. Data on this type of activity is not generally available to produce a rigorous disaggregation and thus we rely on this assumption which may over and understate certain regions, but should reflect major maritime hubs.

- To account for regional differences in productivity (GVA per employee), the breakdown of GVA has been adjusted using the ONS GVA per employee by region statistics.<sup>10</sup>
- To account for regional differences in wages and salaries, estimated wages and salaries paid to employees in the Maritime Business Services industry have been adjusted using differentials taken from Annual Survey of Hours and Earnings (ASHE).
- To account for regional variation in the ratio of compensation of employees to GVA in different sectors, the compensation of employees for the industry have been adjusted using regional differentials implied by the closest industry, as sourced from the Annual Business Survey.

The results of this analysis are shown in the Section **Error! Reference source not found.** of this report. The next sections in this report set out the direct and aggregate economic impacts of the Maritime Business Services industry in the UK.

10 ONS, 2019. Subregional Productivity: Labour Productivity (GVA per hour worked and GVA per filled job) indices by UK ITL1, ITL2 and ITL3 subregions.

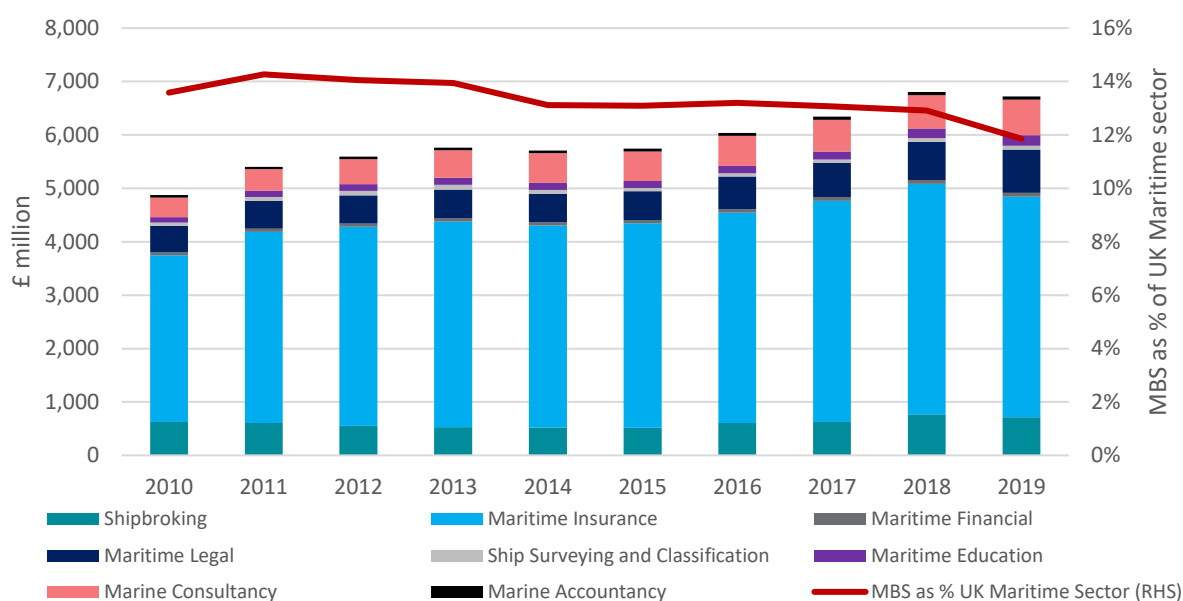
### 3. The direct economic impact of the Maritime Business Services industry in the UK

In this section we set out estimates for the direct contribution of the Maritime Business Services industry to the following key macroeconomic indicators: business turnover, GVA, employment, the compensation of employees, and the Exchequer contribution through tax revenues raised. After quantifying the direct contributions made through the first three of these activities, the contribution that the Maritime Business Services industry makes to the wider UK Maritime sector is then examined.

#### 3.1 The direct economic impact through turnover

Figure 1 below shows the breakdown of business turnover generated by the Maritime Business Service industry and its constituent activities between 2010 and 2019. Overall, the industry contributed an estimated £6.7 billion in business turnover in 2019, slightly below the 2018 peak of £6.8 billion but still well above the average of £5.9 billion between 2010 and 2019. This growth can be mainly attributed to Maritime Insurance Services and Shipbroking.

Figure 1: The estimated turnover of the Maritime Business Services (MBS) industry, £ million and share of the Maritime sector's total turnover, 2010 to 2019



Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

Maritime Insurance, Shipbroking and Maritime Legal services dominate the business turnover generated by the industry, accounting for 84% of turnover in 2019. From within this grouping, Maritime Insurance contributes the largest proportion of business turnover generated, with approximately £4.1 billion in 2019.

An interesting point to mention is that the insurance market has shown significant growth over the period (up £1 billion in 2019 compared to 2010). The general view of the industry is that

growth in maritime insurance is soft, in correlation with a slow growth within the wider Shipping industry. It is however clear that the insurance market dominates the MBS industry and in 2019 had a turnover of approximately £3.3 billion more than the next largest sub-industry, Marine Legal.

Profitability (as measured using the ratio of gross profits to turnover) in the Maritime Business Services industry is estimated to have increased since 2010. Table 2 shows trends in profitability across each activity. The overall profitability of the industry now lies close to the Maritime Sector average and the sub-industries Maritime Education, Marine Consultancy, Ship Surveying and Classification and Shipbroking exceeding the Maritime sector average significantly.

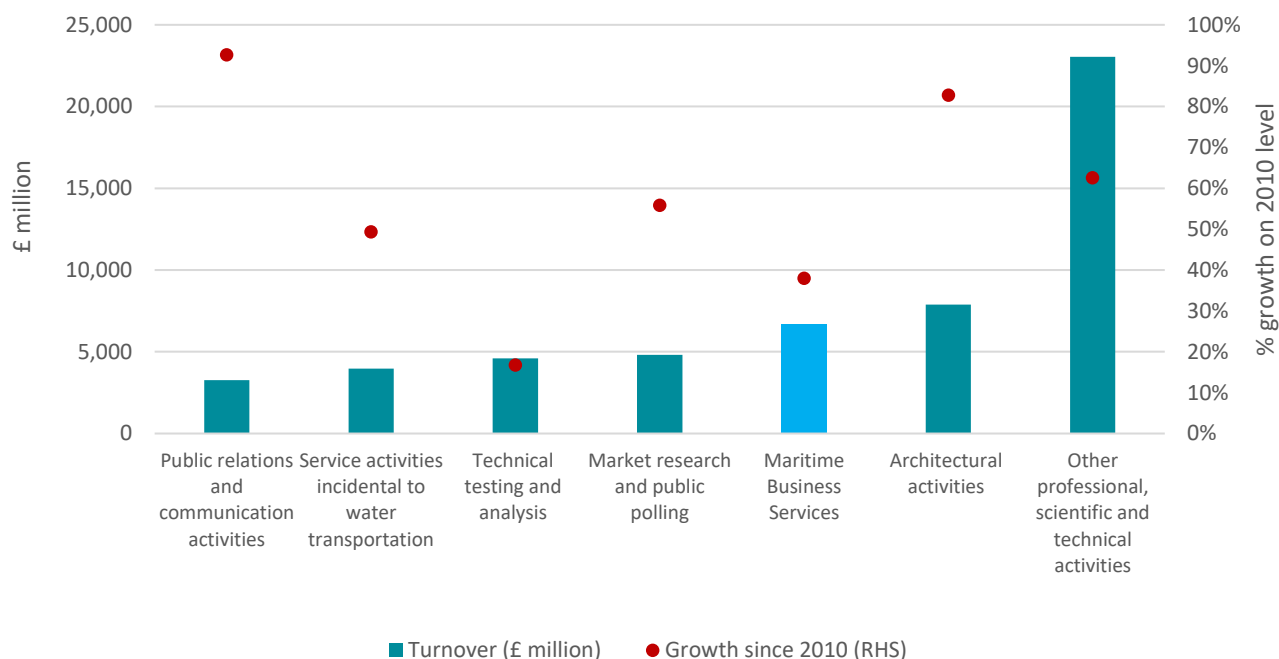
Table 2: Estimated average profitability (gross profit ratio) of the Maritime Business Industry and constituent activities

Profitability	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>UK Maritime sector</b>	<b>18%</b>	<b>18%</b>	<b>20%</b>	<b>20%</b>	<b>20%</b>	<b>19%</b>	<b>21%</b>	<b>19%</b>	<b>19%</b>	<b>20%</b>
<b>UK MBS industry</b>	<b>15%</b>	<b>16%</b>	<b>18%</b>	<b>19%</b>	<b>21%</b>	<b>16%</b>	<b>18%</b>	<b>19%</b>	<b>19%</b>	<b>18%</b>
Shipbroking	47%	48%	45%	48%	31%	38%	38%	39%	37%	44%
Insurance	10%	12%	16%	18%	23%	15%	19%	21%	20%	18%
Financial	16%	18%	16%	14%	13%	13%	16%	15%	15%	14%
Legal	7%	7%	8%	9%	10%	9%	8%	8%	7%	7%
Ship Surveying & Classification	38%	36%	40%	28%	31%	32%	31%	28%	28%	29%
Education	23%	23%	25%	28%	37%	38%	33%	29%	33%	31%
Consultancy	33%	33%	33%	32%	32%	32%	32%	34%	34%	35%
Accountancy	21%	20%	13%	26%	30%	49%	34%	22%	23%	24%

Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

To place this direct contribution in context, Figure 2 below compares turnover in the MBS industry against that of comparable industry activities; nominal turnover growth against the 2010 level is also shown for each industry activity. Turnover data for the comparable industries has been sourced from the Annual Business Survey (ABS).

Figure 2: The estimated turnover of the Maritime Business Services industry against comparable industries in 2019, £ million, and growth against the 2010 level



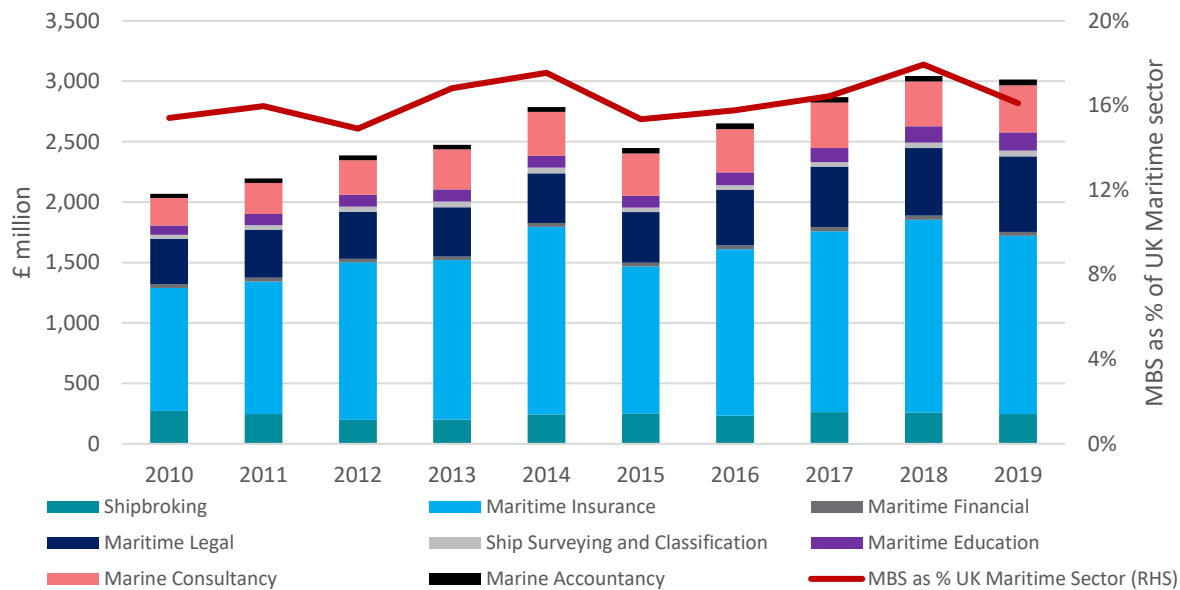
Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

The Maritime Business Services industry, with £6.7 billion of turnover directly generated in 2019, ranks ahead of market research and public polling (£4.8 billion), technical testing and analysis activities (£4.6 billion), service activities to water transport (£4.0 billion) and public relations and communication (£3.3 billion), but behind architectural activities (£7.9 billion) and other professional, scientific and technical activities (£23.0 billion). As shown in Figure 2 above, business turnover generated by the Maritime Business Services industry was 38% greater in 2019 than in 2010. Turnover growth for the comparable industries and activities listed above was sporadic; while business turnover from architectural activities grew by 83% between 2010 and 2019, turnover from technical testing and analysis was only 17% greater over the same period.

### 3.2 The direct economic impact through GVA

Figure 3 below shows this direct impact, disaggregated by industry activities in the years 2010 to 2019 inclusive. It is estimated that the Maritime Business Services industry directly contributed a total of £3.0 billion in GVA in 2019, rising from £2.1 billion in 2010. It is an industry dominated by Insurance, Legal services and Marine Consultancy; these activities accounted for an average of 82% of the direct GVA contribution. Of the remaining share, the largest contributor was Shipbroking, which contributed £247 million of GVA in 2019. Maritime Insurance contributed the lion's share of GVA in each year, with £1.5 billion of GVA in 2019. Overall, the Maritime Business Services industry is estimated to have contributed 16.1% of the UK Maritime Sector's direct contribution through GVA in 2019.

Figure 3: The direct contribution of UK Maritime Business Services industry through GVA, £ million, and the industry's share of the Maritime sector's total direct contribution through GVA, 2010 to 2019



Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

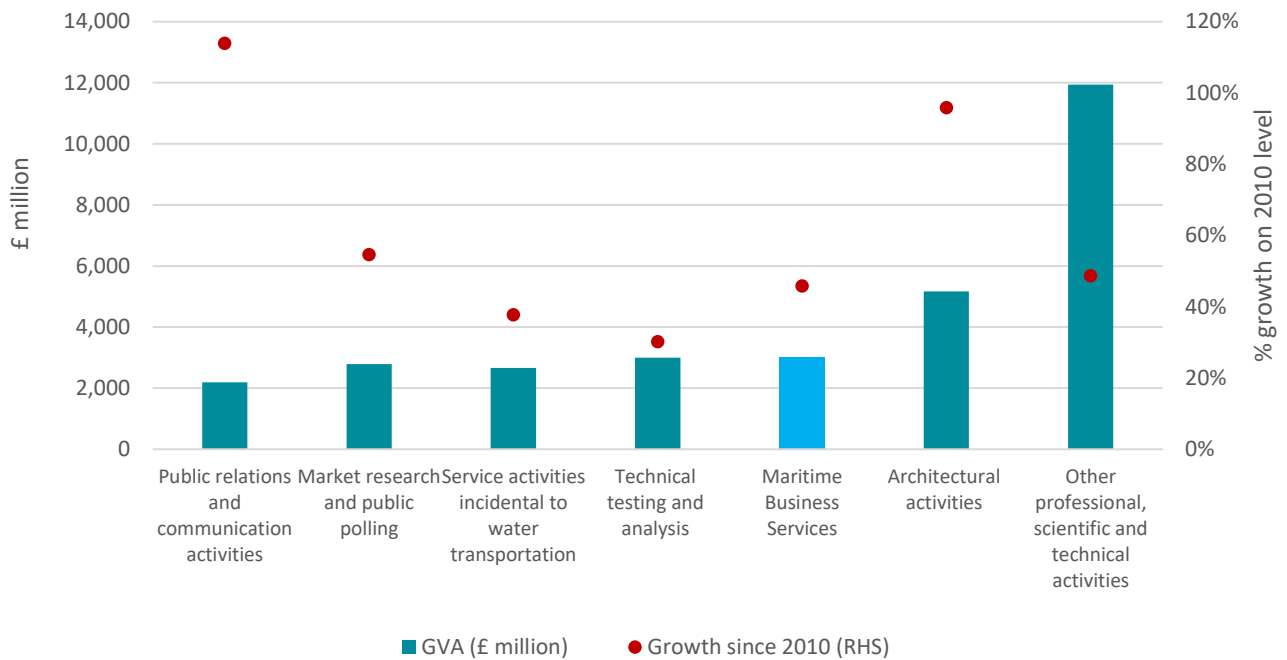
Maritime Education, although small compared to the rest of the MBS industry, is becoming an increasingly important area for the wider Maritime Sector. Although not distinct in

Figure 3 above, Maritime Education's direct GVA contribution has increased by 103% over the period 2010 to 2019. This is in line with the Maritime 2050 strategy where a key area of development is in people. Skills are vitally important in the Maritime Sector and with the emergence of international competitors, such as Singapore, it is important the UK retain its skill advantage.<sup>11</sup>

Following Figure 3, Figure 4 below compares GVA trends in the Maritime Business Services industry against those of comparable activities. In terms of the direct GVA contribution in 2019, the industry is third behind architectural activities (£5.2 billion) and other professional, scientific and technical activities (£11.9 billion) with its £3.0 billion in GVA. The industry's GVA was 46% higher in 2019 than in 2010.

11 Department for Transport. (2019). 'Maritime 2050'.

Figure 4: The estimated GVA of the Maritime Business Services industry against comparable industries in 2019, and growth against the 2010 level

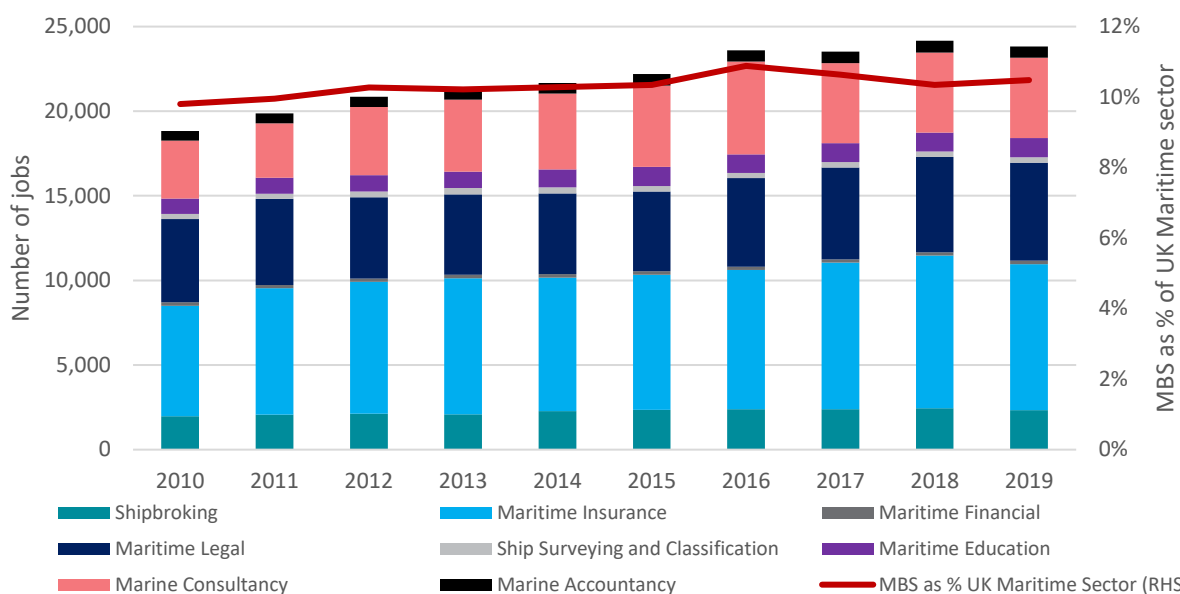


Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

### 3.3 The direct economic impact through employment

In addition to its contribution through GVA, the Maritime Business Services industry also directly supports a significant number of jobs. Figure 5 below highlights the direct contribution of the Maritime Business Services industry to UK employment, again disaggregated by individual industry activity.

Figure 5: The direct contribution of UK Maritime Business Services industry through employment, thousands of jobs, and the industry's share of the Maritime sector's direct employment contribution, 2010 to 2019



Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

It is estimated that the Maritime Business Services industry directly supported around 23,800 jobs in 2019, an increase from 18,800 jobs in 2010. The industry's share of total employment directly supported by the Maritime sector increased over this period, rising from 9.7% to 10.5% of Maritime sector employment. As with GVA, in each year Maritime Insurance, Legal Services and Marine Consultancy directly contributed the majority of employment within the industry – 80% of employment in 2019. After this, Shipbroking directly supported around 2,300 jobs in 2019.

Given the emphasis placed on skill development and retaining the comparative advantage the UK has in the MBS industry, employment may continue to grow across the eight sub-industries while the UK strives to meet its goals of the Maritime 2050 strategy.<sup>12</sup>

Based on trends presented in Figure 3 and Figure 5, employees operating in the Maritime Business Services industry are highly productive, as measured by GVA per employee. Table 3 below shows the estimated productivity of each industry activity across the years 2010 to 2019 and compared against the average productivity level of the Maritime Sector as a whole. We observe that the Maritime Business Services industry as a whole is almost twice as productive in every year considered – largely driven by the Insurance services, Financial services and Ship Surveying industries. This is typically the case with service-based industries and is hence not surprising to see the MBS industry significantly above the Maritime Sector and UK average.

Table 3: Productivity (GVA per job) in the MBS industry and constituent activities

GVA per employee	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
UK economy	46,953	47,857	48,973	50,158	51,356	52,546	53,779	55,066	56,088	56,670

<sup>12</sup> Department for Transport. (2019). 'Maritime 2050'.

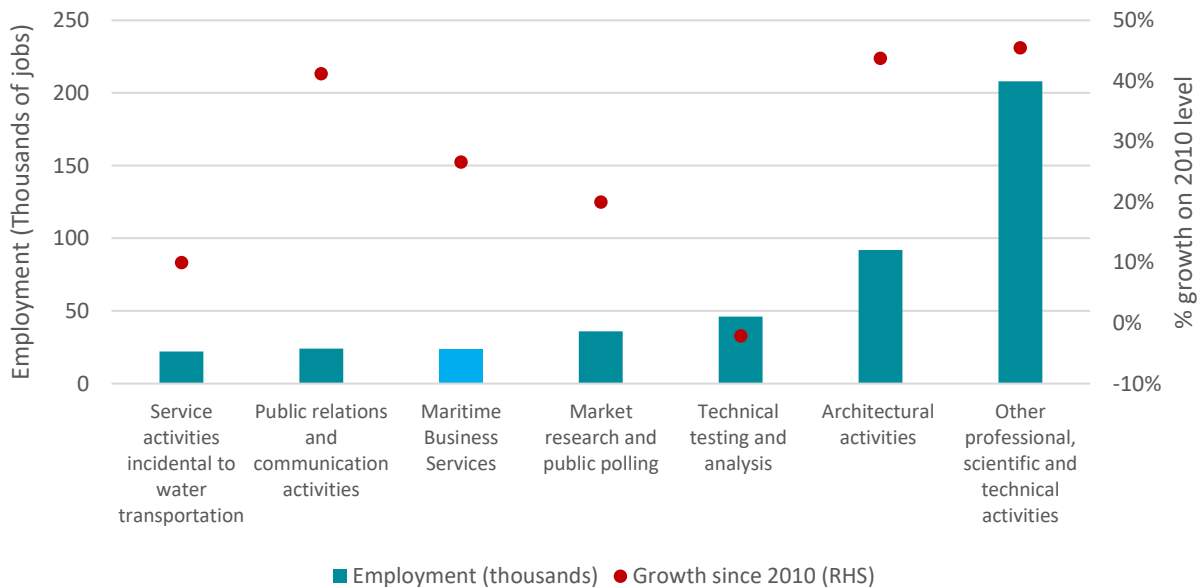


<b>Maritime Sector</b>	<b>69,874</b>	<b>68,882</b>	<b>78,847</b>	<b>70,510</b>	<b>75,398</b>	<b>74,352</b>	<b>77,567</b>	<b>79,005</b>	<b>72,625</b>	<b>82,310</b>
<b>MBS industry</b>	<b>109,867</b>	<b>110,463</b>	<b>114,381</b>	<b>116,045</b>	<b>128,611</b>	<b>110,255</b>	<b>112,342</b>	<b>122,031</b>	<b>125,905</b>	<b>126,535</b>
Shipbroking	137,872	118,817	94,141	95,821	107,106	106,413	97,313	110,175	106,378	105,788
Insurance	155,840	146,808	167,137	164,096	196,655	152,323	167,363	172,865	176,641	170,718
Financial	163,284	167,118	150,554	153,210	150,000	158,697	172,615	178,009	179,047	172,805
Legal	75,879	78,258	81,056	85,239	86,247	88,599	88,034	91,961	98,990	107,625
Ship Surveying & Classification	114,732	117,961	126,103	132,993	136,961	115,702	116,831	117,305	140,439	143,436
Education	75,251	86,088	89,935	93,097	91,667	92,975	96,172	101,949	108,073	113,082
Consultancy	67,100	80,154	71,203	77,997	80,634	72,527	65,458	79,273	78,237	81,967
Accountancy	59,969	61,555	62,318	58,065	64,802	65,264	69,489	68,597	65,043	73,335

Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

Figure 6 below compares the direct contribution that the Maritime Business Services industry made through UK employment in 2019 against comparable industries and activities. The direct employment contribution of the Maritime Business Services industry is smaller than a number of comparable activities, despite having grown by 27% between 2010 and 2019.

Figure 6: The estimated employment of the MBS industry against comparable industries in 2019, and growth against the 2010 level

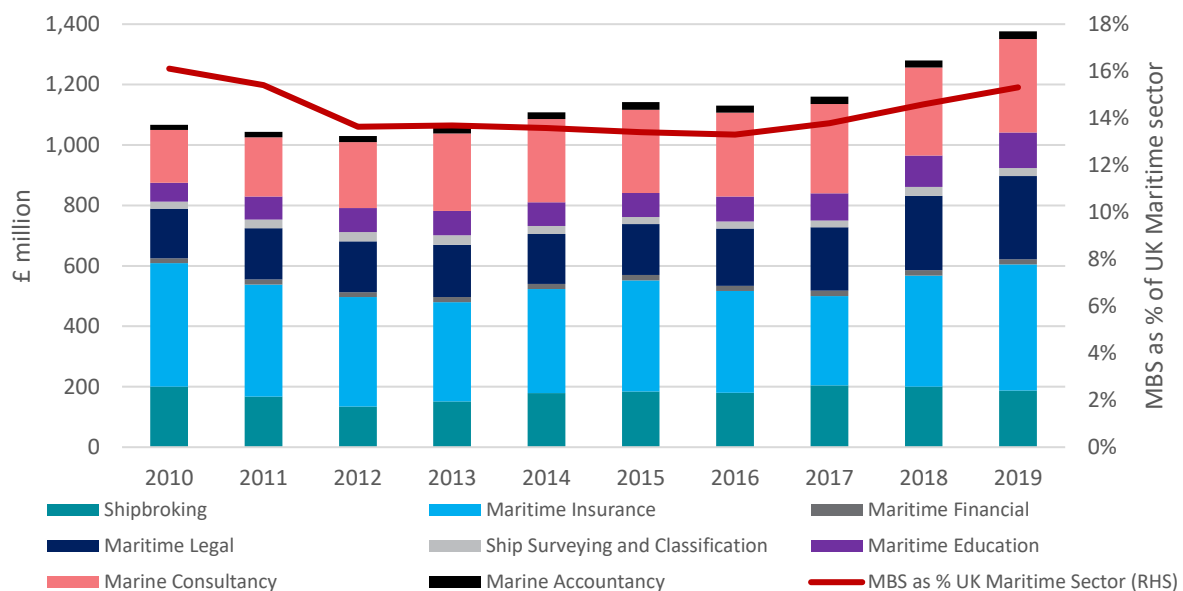


Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

### 3.4 The direct economic impact through the compensation of employees

Figure 7 below illustrates the compensation of employees which is directly supported by the Maritime Business Services industry, disaggregated by activity. It also illustrates the proportion of all direct employee compensation in the Maritime Sector which is directly supported by the industry.

Figure 7: The direct contribution of MBS through the compensation of employees, 2010 to 2019, £ million



Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

It is estimated that the Maritime Business Services industry directly contributed approximately £1.4 billion through the compensation of employees in 2019, growing from £1.1 billion in 2010. Once again, Maritime Insurance, Marine Consultancy and Legal services support the largest amount of direct employee compensation. Overall, the total value of compensation of employees directly supported across the Maritime Sector from the UK Maritime Business Services industry is estimated to be 15.3% in 2019, down from 16.1% in 2010.

### 3.5 The direct contribution to the UK Exchequer

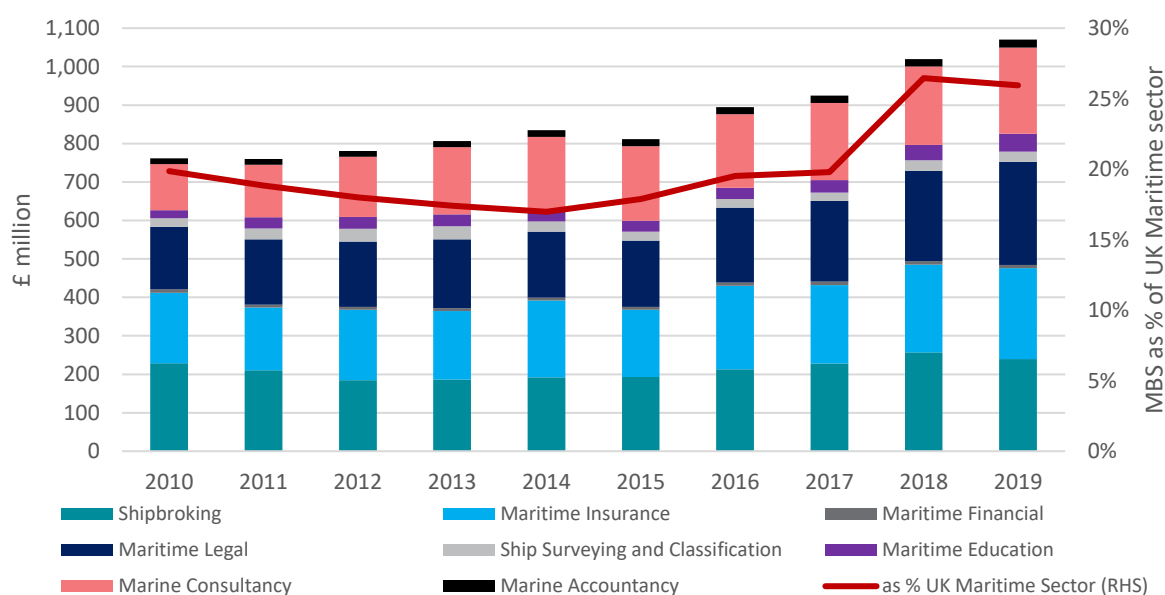
This section discusses the contribution of the Maritime Business Services industry to the UK Exchequer. For each activity within this industry, Cebr have calculated the contributions in terms of:

- Income Tax;

- National Insurance Contributions (NICs) – from both employees and employers;
- VAT;
- Corporation Tax;
- National Non-Domestic Rates (Business Rates).

For the personal taxes listed above, Income Tax and NICs revenues have been calculated by applying tax rates to the estimated wages and salaries paid to employees operating in each industry activity; rates and thresholds have been sourced from HMRC for the years 2010 to 2019. Wages and salaries for employees have been sourced from the Annual Survey for Hours and Earnings (ASHE).<sup>13</sup> For the business taxes listed above, Corporation Tax revenues have been estimated by applying HMRC estimates for Average Effective Tax Rates (AETRs) to the estimated Gross Profit of each industry activity. Business Rates have been estimated using the average level of Business Rates paid as a proportion of GVA, drawing upon the ONS Annual Business Survey (ABS). Figure 8 below shows the direct contribution of the Maritime Business Services industry to the UK Exchequer, disaggregated by industry. It is estimated that the industry directly contributed about £1.1 billion of tax revenues in 2019, or around 20.6% of the Maritime Sector total.

Figure 8: The direct contribution of the Maritime Business Services industry to the Exchequer, £ million, 2010 to 2019



Source: HMRC, FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

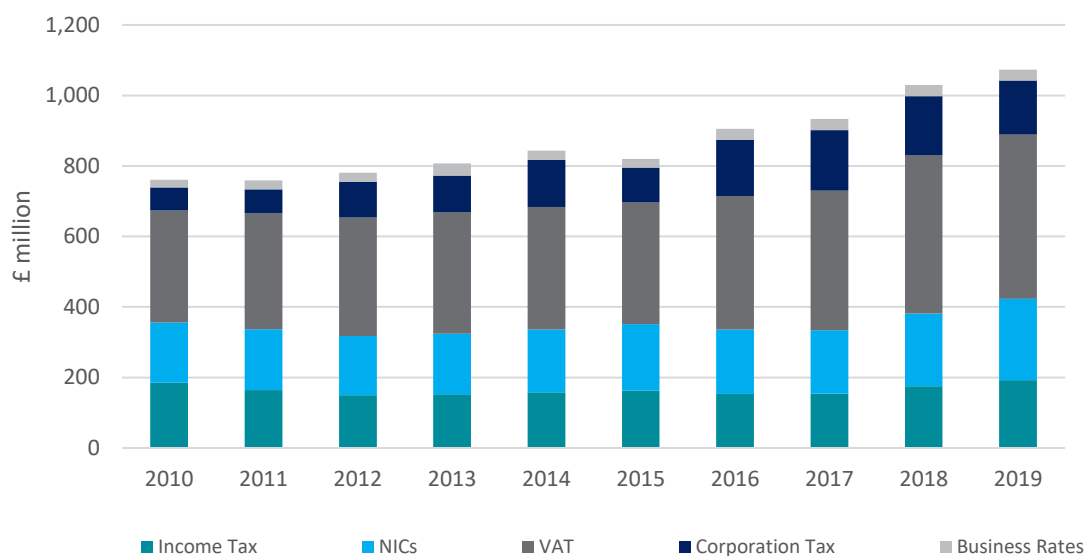
Maritime Insurance, Legal services and Shipbroking contributed, on average, 69.7% of the Maritime Business Services industry's contribution to the Exchequer throughout the time

13 Ibid

period, falling from 75.5% in 2010 to 69.5% in 2019. In aggregate, the industry's direct Exchequer contribution grew by 41%, from £760 million in 2010 to £1.1 billion in 2019.

Figure 9 below disaggregates the Exchequer contribution by tax head, across 2010 to 2019.

Figure 9: The direct contribution of Maritime Business Services to the Exchequer, £ million, 2010 to 2019, by tax head



Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

VAT forms the bulk of Exchequer contributions from the Maritime Business Services industry, averaging 43% of tax receipts from the sector from 2010 to 2019; this is despite the assumed zero contribution from those businesses performing Maritime Financial and Insurance activities. After VAT, the industry is estimated to have contributed £420 million in Income Tax and National Insurance Contributions in 2019.

### 3.6 The direct contribution to the UK's export of goods and services

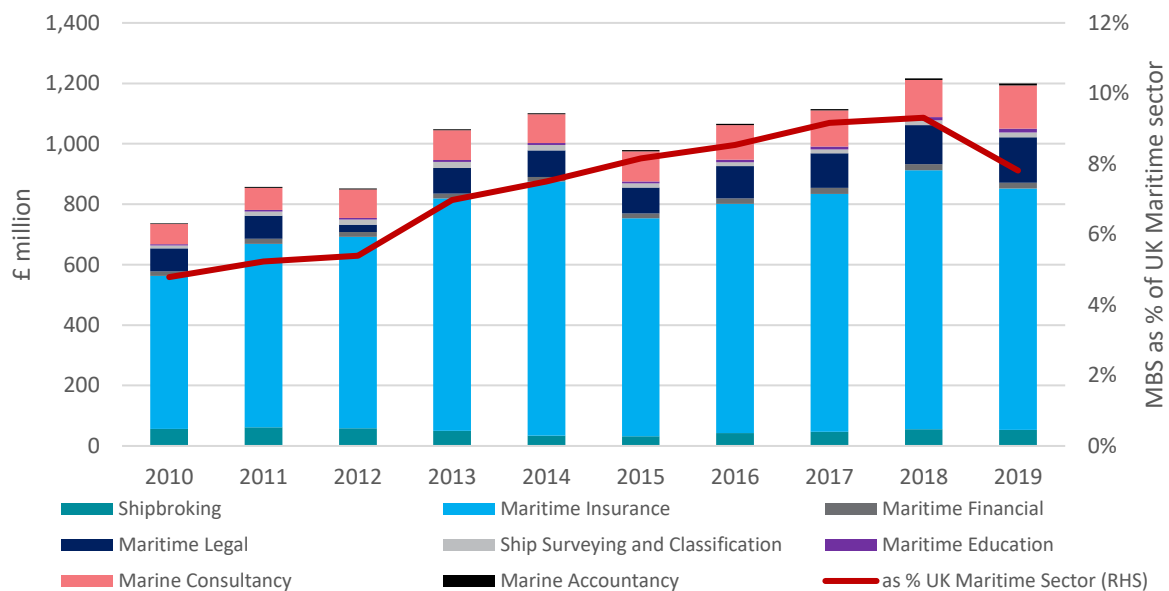
In this final subsection we consider the contribution that the Maritime Business Services industry makes to goods and services exported from the UK. No data exist on industry exports, which have instead been estimated by assuming that the level of exports for an industry activity is the same as that of the wider sector within which it sits.

For example, exports from Maritime Legal activities expressed as a proportion of turnover from this activity is assumed to be the same as that of the wider Legal services sector. Exports of

goods and services across each industry activity have been estimated using the ratio of goods and services exports to wider industry turnover as sourced from the ONS Supply Use Tables.

Figure 10 below shows trends in exports of goods and services from the Maritime Business Services industry between 2010 and 2019, and exports expressed as a share of total Maritime Sector exports across the same period. The Maritime Business Services industry exported goods and services valued at £1.2 billion in 2019; exports have grown considerably over the period considered, up from £737 million in 2010. The proportion of sector exports supported by the Maritime Business Services industry has risen from 4.8% in 2010 to 7.8% in 2019.

Figure 10: Exports of goods and services from the Maritime Business Services industry, £ million, 2010 to 2019



Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

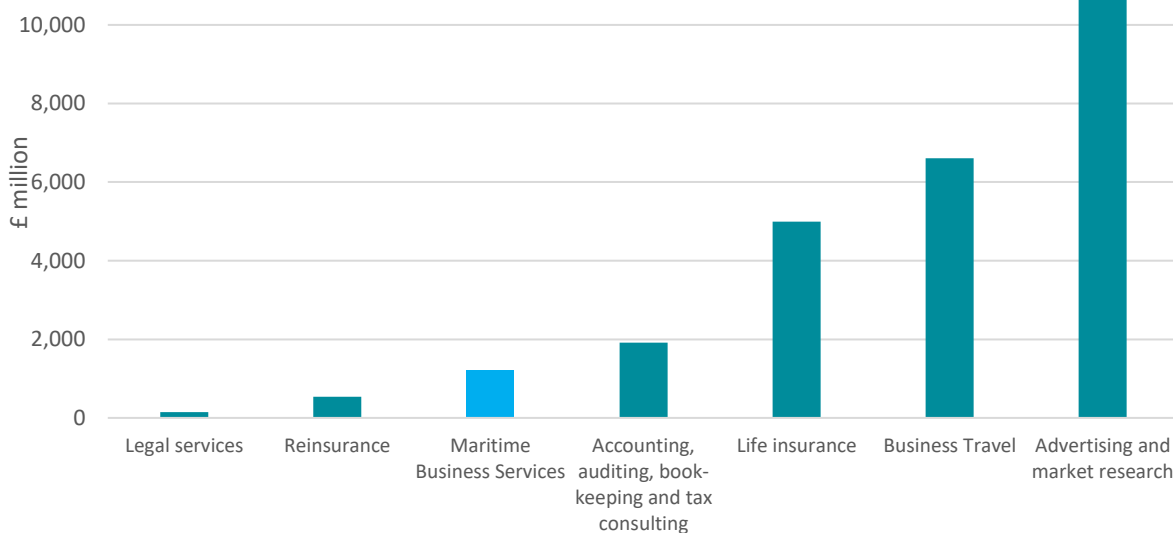
Figure 10 clearly illustrates the MBS industry's importance to the wider Maritime Sector. Despite increasing competition in Singapore and Greece, the UK MBS industry is growing year on year, aside from a dip in 2015 and 2019. This also reflects the UK's ambition to maintain the UK as a global hub for Maritime Business Services and the relevant investment into the industry will help sustain this continued growth. One of the substantial goals of the 2050 strategy is to promote the UK regime to SMEs and international companies as a prime location for business.<sup>14</sup>

To place the value of Maritime Business Services exports in context, Figure 11 below shows industry exports in 2019 in comparison to exports of comparable services, drawing upon information from the ONS Pink Book. These comparable services are different to those used

<sup>14</sup> Department for Transport. (2019). 'Maritime 2050'.

in other sections due to the way data is structured in the Pink Book. Maritime Business Services – with exports of £1.2 billion in 2019 – lies ahead of exports from the Reinsurance and Legal Services (£538 million and £151 million respectively) and behind industries like Accounting and auditing (£1.9 billion), Business Travel (£6.6 billion) and Advertising and market research (£10.7 billion).

Figure 11: Exports of services from the Maritime Business Services industry in 2019 against comparable activities, £ million



Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

In the next section we examine how the direct contribution that the Maritime Business Services industry makes through turnover, GVA, employment and the compensation of employees translates into aggregate economic impacts through indirect and induced effects.

## 4. The aggregate economic impact of the Maritime Business Services industry in the UK

This section sets out the aggregate economic impacts of the Maritime Business Services industry, by taking into account the indirect (or supply chain) and induced (employee spending) impacts that arise from the activities of firms within this industry.

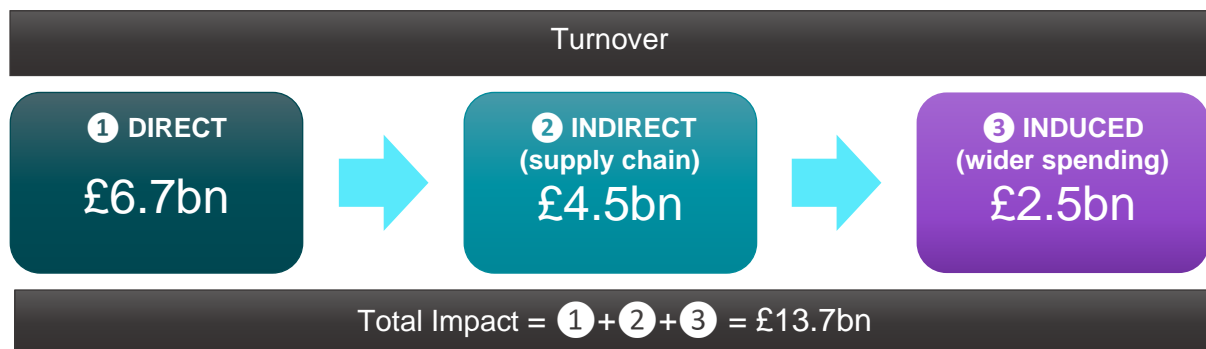
The four macroeconomic indicators for which the aggregate economic impact have been calculated are as follows: turnover; GVA; employment; and the compensation of employees. Multipliers have been generated from Cebr's economic impact model for the UK.

### 4.1 The aggregate economic impacts through turnover

Figure 12 below illustrates the direct, indirect and induced impact of the Maritime Business Services industry within the UK. The MBS industry directly contributed £6.7 billion, indirectly contributed £4.5 billion through wider supply chain impacts and had an induced effect of £2.5 billion. In turn the MBS industry's aggregate impact in 2019 is £13.7 billion.

**Therefore, after combining each industry activity, for every £1 of turnover initially generated by the Maritime Business Services industry, the UK economy as a whole experiences support in turnover of £2.04.**

Figure 12: Turnover multiplier impacts of the UK Maritime Business Services industry in 2019



Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

Table 4 below shows the estimated aggregate turnover impacts from the individual industry activities when taken in isolation. It is clear that Maritime Insurance is the dominant activity within the wider industry followed by Marine Legal and Shipbroking services.

Table 4: Turnover impact of the Maritime Business Services industry in 2019, £ million

Turnover in 2019	Direct Impact	Indirect Impact	Induced Impact	Aggregate Impact
<b>TOTAL</b>	<b>6,722</b>	<b>4,517</b>	<b>2,484</b>	<b>13,722</b>
Shipbroking	714	480	264	1,457
Insurance	4,133	2,777	1,527	8,436
Finance	67	45	25	137
Legal	811	545	300	1,655
Ship Surveying and Classification	71	48	26	145
Education	201	135	74	410
Consultancy	663	445	245	1,353
Accountancy	63	42	23	129

Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

Table 5 below presents in each year the direct contribution to turnover from the Maritime Business Services industry, alongside our estimate of the composite turnover multiplier that applies to the entire industry, together with some indicative estimates for the aggregate impact.<sup>15</sup> We observe that total MBS turnover impact has grown by £3.8 billion over the period to £13.7 billion.<sup>16</sup>

Table 5: Direct and aggregate turnover impact of the Maritime Business Services industry, 2010 to 2019, £ million

	Direct Impact	Composite domestic output multiplier	Total turnover impacts
2010	4,872	2.04	9,946
2011	5,404		11,033
2012	5,592		11,416
2013	5,762		11,763
2014	5,707		11,652
2015	6,341		12,324
2016	6,036		12,322
2017	6,341		12,945
2018	6,805		13,893
2019	6,722		13,722

Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

<sup>15</sup> Note that we are applying our multipliers as calculated using our latest input-output model, to the figures for the whole decade. So we are in effect assuming the multipliers calculated based on the 2019 direct impacts also apply back to 2010.

<sup>16</sup> Figures may not match due to rounding.

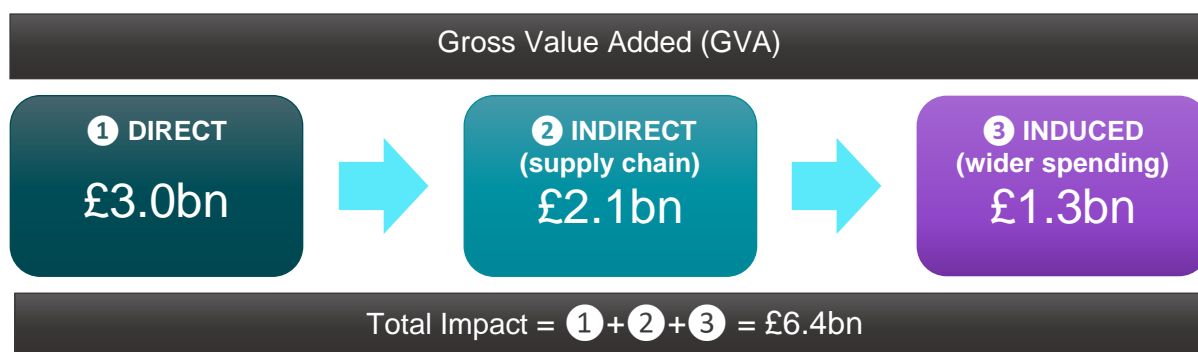


## 4.2 The aggregate economic impacts through GVA

Figure 13 below illustrates the GVA multipliers for the Maritime Business Services industry within the UK. The MBS industry directly contributed £3.0 billion in GVA, indirectly contributed £2.1 billion through supply chains and had an induced effect of £1.3 billion. The aggregate impact on GVA is £6.4 billion.

**Therefore, for every £1 of GVA initially contributed by the Maritime Business Services industry, the UK economy as a whole sees a stimulus in GVA of £2.13.**

Figure 13: GVA multiplier impacts of the UK Maritime Business Services industry in 2019



Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

Table 6 below shows the estimated aggregate GVA impacts from Maritime Business Services industry activities when taken in isolation. Given the relatively high contribution that the combined Maritime Insurance, Marine Legal Services and Shipbroking make directly through GVA (see previous section), it is unsurprising that these activities also contribute the largest proportion of the aggregate GVA impact.

Table 6: GVA impact of the MBS industry in 2019, £ million

GVA in 2019	Direct Impact	Indirect Impact	Induced Impact	Aggregate Impact
<b>TOTAL</b>	<b>3,015</b>	<b>2,120</b>	<b>1,290</b>	<b>6,425</b>
Shipbroking	247	174	106	526
Insurance	1,474	1,036	631	3,141
Finance	33	23	14	71
Legal	625	439	267	1,331
Ship Surveying and Classification	46	33	20	99
Education	152	107	65	323
Consultancy	389	273	166	829
Accountancy	49	34	21	104

Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

From the above we can see that the combined Maritime Insurance had the largest aggregate GVA impact of £3.1 billion in 2019, followed by Marine Legal and Marine Consultancy services.

Table 7 below presents the direct contribution to GVA alongside our estimate of the composite GVA multiplier that applies to the entire industry, an estimated 2.13 in 2019. The aggregate

GVA impact from the Maritime Business Services industry has increased from £4.4 billion to £6.4 billion in 2019.

Table 7: Direct and aggregate GVA impact of the Maritime Business Services industry, 2010 to 2019, £ million

	Direct Impact	Composite GVA multiplier	Total turnover impacts
2010	2,068	2.13	4,407
2011	2,195		4,677
2012	2,385		5,083
2013	2,473		5,271
2014	2,786		5,936
2015	2,446		5,214
2016	2,651		5,650
2017	2,869		6,115
2018	3,043		6,486
2019	3,015		6,425

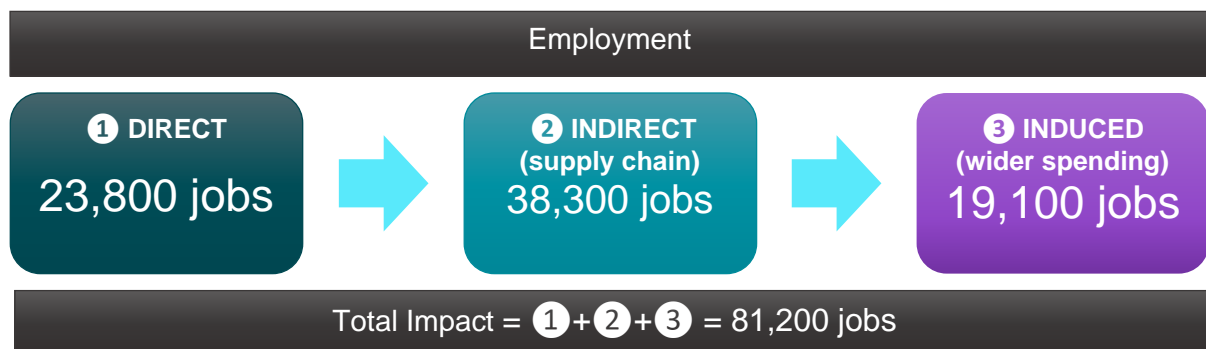
Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

### 4.3 The aggregate economic impacts through employment

Here we examine the aggregate economic impact of the Maritime Business Services industry through employment. Figure 14 below illustrates the employment impacts of the Maritime Business Services industry within the UK. The MBS industry directly supports 23,800 jobs, indirectly supports 38,300 jobs and has an induced effect of supporting 19,100 further jobs. The aggregate impact of the MBS industry on employment is 81,200 jobs.

**In other words, for every job initially supported by the Maritime Business Services industry, the UK economy as a whole supports 3.41 jobs.**

Figure 14: Employment multiplier impacts of the UK Maritime Business Services industry in 2019



Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

The combined number of jobs directly supported by all Maritime Business Services sub-industries in 2019 was 23,800, while 81,200 were supported once the indirect and induced impacts of the industry are taken into account. Table 8 below shows the estimated aggregate employment impacts from the Maritime Business Services industry activities when taken in isolation. This makes clear Maritime Insurance's importance to the industry.

Table 8: Aggregate employment impact of the Maritime Business Services industry, 2019, thousands of jobs

Employment in 2019	Direct Impact	Indirect Impact	Induced Impact	Aggregate Impact
<b>TOTAL</b>	<b>23.8</b>	<b>38.3</b>	<b>19.1</b>	<b>81.2</b>
Shipbroking	2.3	3.8	1.9	8.0
Insurance	8.6	13.9	6.9	29.4
Finance	0.2	0.3	0.2	0.7
Legal	5.8	9.3	4.6	19.8
Ship Surveying and Classification	0.3	0.5	0.3	1.1
Education	1.1	1.8	0.9	3.8
Consultancy	4.7	7.6	3.8	16.2
Accountancy	0.7	1.1	0.5	2.3

Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

Table 9 below presents the direct contribution to employment alongside our estimate of the composite employment multiplier that applies to the entire industry, an estimated 3.41 in 2019. The aggregate employment impact from the Maritime Business Services industry is estimated to have increased from 64,100 jobs in 2010 to 81,200 jobs in 2019.

Table 9: Direct and aggregate employment impact of the Maritime Business Services industry, 2010 to 2019, number of jobs

	Direct Impact	Composite Employment multiplier	Total turnover impacts
2010	18,822	3.41	64,131
2011	19,867		67,691
2012	20,853		71,052
2013	21,314		72,622
2014	21,659		73,799
2015	22,189		75,602
2016	23,598		80,403
2017	23,513		80,115
2018	24,173		82,363
2019	23,825		81,176

Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

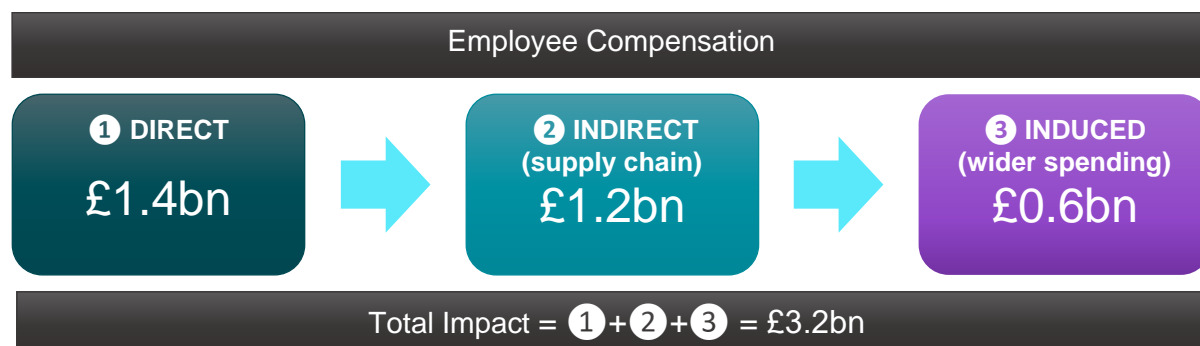
#### 4.4 The aggregate economic impacts through the compensation of employees

In this final subsection we consider the aggregate economic impact of the Maritime Business Services industry through the compensation of employees. Figure 15 below illustrates the direct, indirect and induced compensation of employee impacts associated with the industry.

Here the interpretation is that, for every £1 of employee compensation directly supported by the Maritime Business Services industry, '£x' of wages and salaries and other employee remuneration is supported in total throughout the economy through supply chain (indirect) and employee spending (induced) channels. For example, for each £1 of employee compensation in MBS in 2019, £0.89 is supported through the supply chain and an additional £0.41 is supported through employee expenditures – yielding an aggregate impact of £2.31.

For the Maritime Business Services industry as a whole, for every £1 initially contributed through the compensation of employees in 2019, a total of £2.31 in employee compensation was supported in the UK economy.

Figure 15: Aggregate contribution of Maritime Business Services to the compensation of employees



Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

Table 10 shows the estimated aggregate impacts through the compensation of employees from Maritime Business Services industry activities, when taken in isolation. A total of £3.2 billion through the compensation of employees was supported by the Maritime Business Services industry in 2019, with this total once again dominated by Maritime Insurance Services (£1 billion) and Marine Legal (£0.6 billion).

Table 10: Impact through the compensation of employees of the Maritime Business Services industry in 2019, £ million

Compensation of employees in 2019	Direct Impact	Indirect Impact	Induced Impact	Aggregate Impact
<b>TOTAL</b>	<b>1,376</b>	<b>1,229</b>	<b>569</b>	<b>3,174</b>
Shipbroking	187	167	77	431
Insurance	418	373	173	963
Finance	17	15	7	40
Legal	275	245	114	634
Ship Surveying and Classification	27	24	11	62
Education	118	105	49	271
Consultancy	309	276	128	714
Accountancy	25	23	10	58

Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

Table 11 below presents the direct contribution to compensation of employees (COE) alongside our estimate of the COE multiplier that applies to the entire industry, an estimated 2.7 in 2019. The aggregate impact of Maritime Business Services grew from £2.5 billion in 2010 to £3.2 billion in 2019.

Table 11: Direct and aggregate compensation of employees (COE) impact of the Maritime Business Services industry, 2010 to 2019, £ million

	Direct Impact	Composite Employee Compensation multiplier	Total turnover impacts
2010	1,067	2.31	2,460
2011	1,044		2,407
2012	1,029		2,374
2013	1,059		2,442
2014	1,108		2,556
2015	1,142		2,633
2016	1,131		2,608
2017	1,160		2,675
2018	1,280		2,951
2019	1,376		3,174

Source: FAME, IUA, TheCityUK, PwC, ONS, Cebr analysis

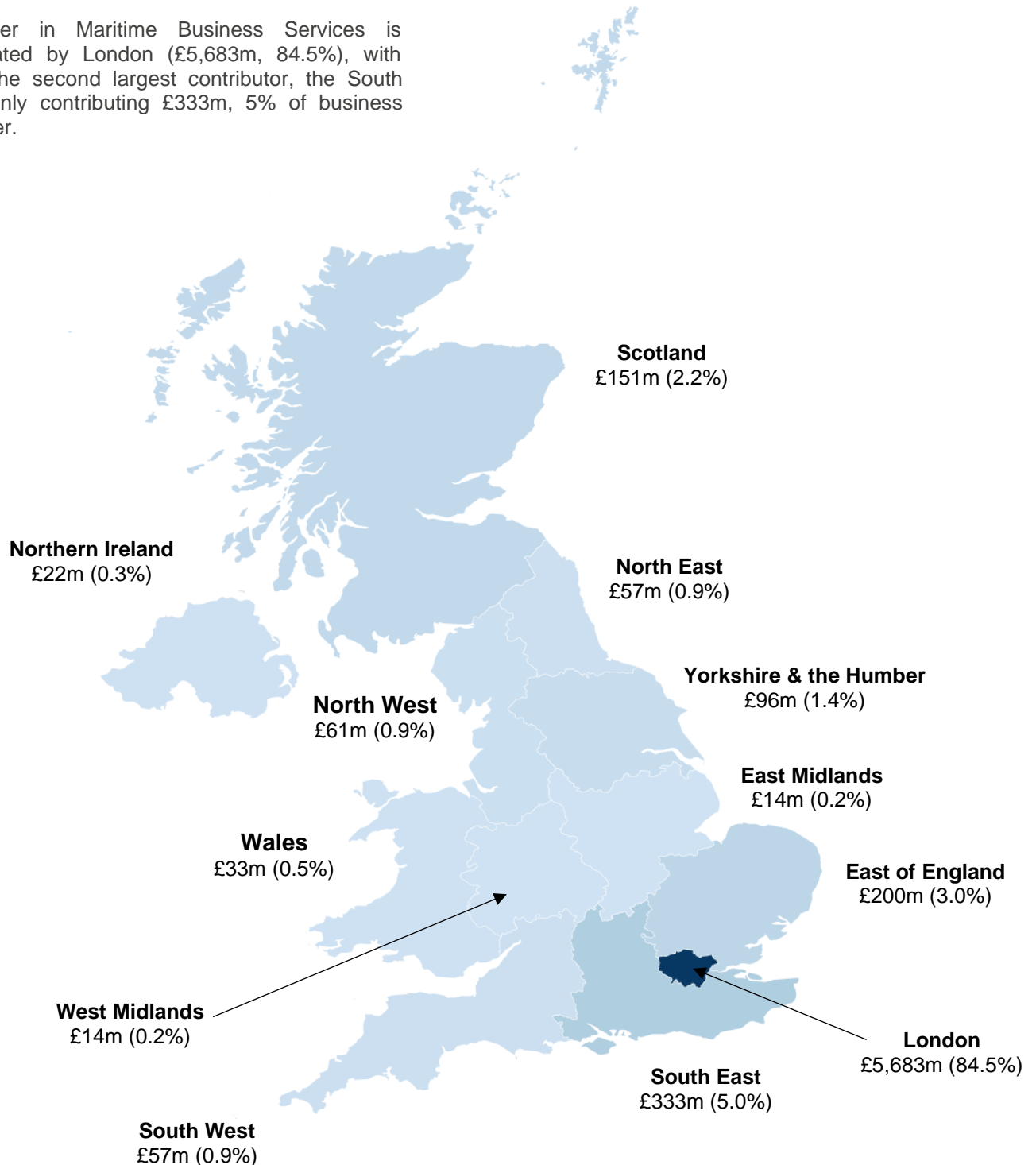
The next and final section covers the direct and aggregate economic impacts of the Maritime Business Services industry at regional level.

## 5. The regional economic impact of the Maritime Business Services industry

### 5.1 The direct economic impact of the Marine Engineering and Scientific industry by UK region

Figure 16: Regional breakdown of turnover directly contributed by the MBS industry, £ million, 2019

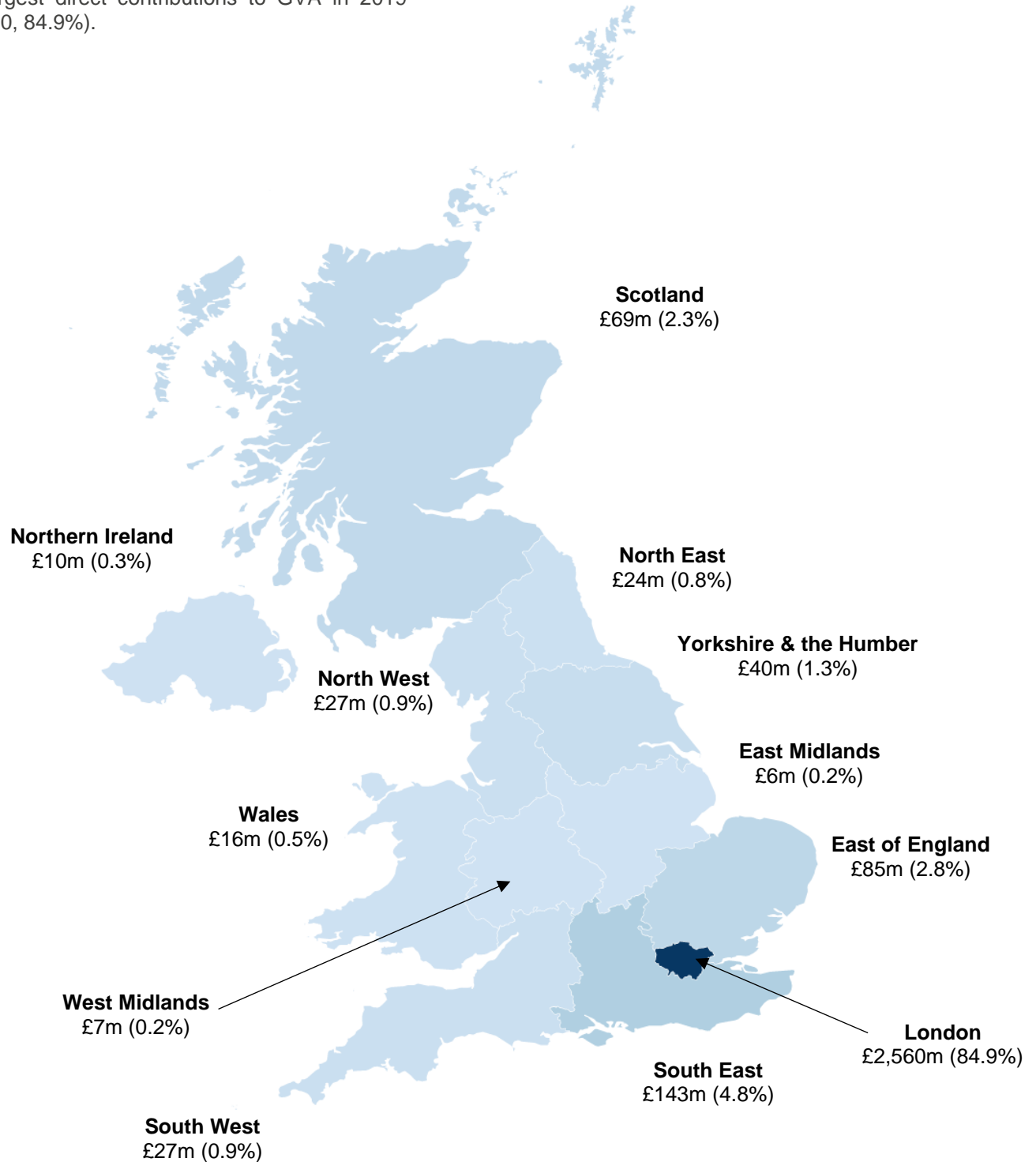
Turnover in Maritime Business Services is dominated by London (£5,683m, 84.5%), with even the second largest contributor, the South East only contributing £333m, 5% of business turnover.



Source: FAME, IUA, TheCityUK, PwC, ABS, BRES, ONS, Cebr

Figure 17: Regional breakdown of GVA directly contributed by the MBS industry, £ million, 2019

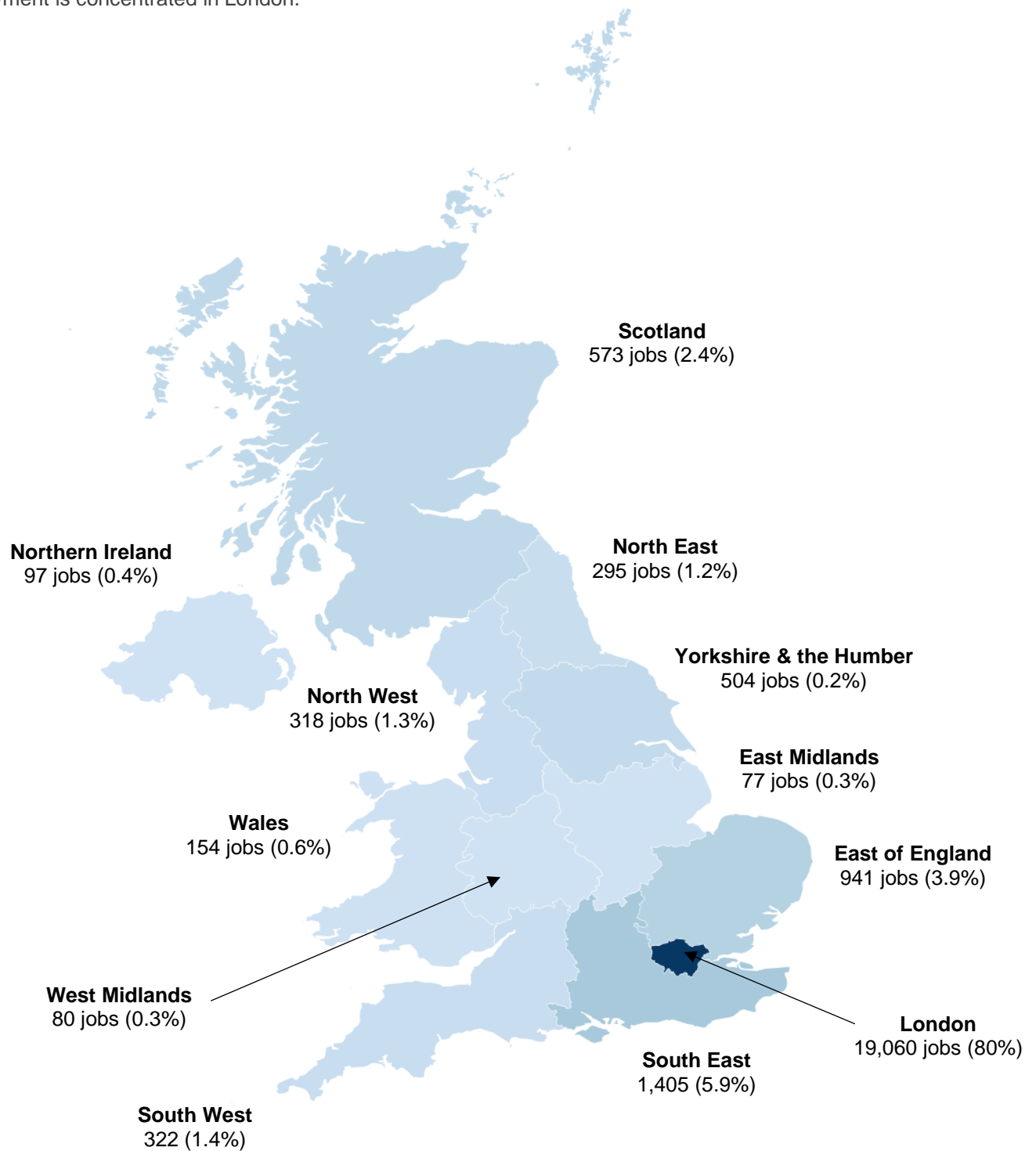
An inspection of the regional breakdown of GVA yields similar results, with London making by far the largest direct contributions to GVA in 2019 (£2,560, 84.9%).



Source: FAME, IUA, TheCityUK, PwC, ABS, BRES, ONS, Cebr

Figure 18: Regional breakdown of employment directly contributed by the MBS industry, 2019

Once again, the majority (80%) of the direct employment is concentrated in London.



Source: FAME, IUA, TheCityUK, PwC, ABS, BRES, ONS, Cebr



Figure 19: Regional breakdown of the COE directly contributed by the MBS industry, £ million, 2019

London again contributes the majority of employee compensations with £1.15 billion (83.5%).

After London, the South East had the second largest contribution (£71 million, or 5.2%).



Source: FAME, IUA, TheCityUK, PwC, ABS, BRES, ONS, Cebr

## 5.2 The aggregate economic impact of the Maritime Sector by UK region

This final subsection examines the aggregate economic impact of the Maritime Business Services industry across each region for the four macroeconomic indicators covered in the previous subsection.

In order to estimate the aggregate economic impact of the industry at regional level, the direct economic impacts as already estimated were combined with Cebr's suite of regional economic impact models, within which the activities of the Maritime Business Services industry were separately identified and isolated. It should be noted that the economic impact multipliers as estimated for each region are necessarily lower than the equivalent multiplier for the Maritime Business Services industry as a whole, reflecting the leakage of impacts when the activity of the industry in a particular region imports inputs from elsewhere in the UK outside that region.

### The aggregate economic impacts for business turnover and GVA by region

Table 12 below shows the breakdown of direct and aggregate economic impacts for business turnover and GVA in 2019, alongside the composite industry multiplier for each region. It is estimated that from a total of £6.7 billion in turnover and £3 billion in GVA directly contributed by the Maritime Business Services industry in 2019, a total of £13.7 billion and £6.4 billion respectively was sustained in the UK economy. The highest multiplier impacts are actually found in the South West and in the East of England in 2019, rather than London, which has lower multipliers than most other regions.

Table 12: Regional breakdown of the direct and aggregate impacts through turnover and GVA by the Maritime Business Services industry in 2019

Region	Turnover, £m			GVA, £m		
	Direct Impact	Industry Multiplier	Total impact	Direct Impact	Industry Multiplier	Total impact
Scotland	151	2.0	307	69	2.1	147
Wales	33	2.0	65	16	2.1	33
Northern Ireland	22	2.0	45	10	2.1	22
East of England	200	2.0	406	85	2.1	181
East Midlands	14	2.0	28	6	2.1	14
London	5,683	1.8	10,484	2,560	1.9	4,964
North East	57	2.0	114	24	2.1	49
North West	61	2.0	124	27	2.1	58
South East	333	2.0	669	143	2.1	302
South West	57	2.1	118	27	2.1	58
West Midlands	14	2.0	29	7	2.1	14
Yorkshire and the Humber	96	2.0	196	40	2.1	86

Source: FAME, IUA, TheCityUK, PwC, ABS, BRES, ONS, Cebr analysis

## The aggregate economic impacts for employment and the compensation of employees by region

Finally, Table 13 below shows the breakdown of direct and aggregate economic impacts for employment and the compensation of employees in 2019, alongside the composite industry multiplier for each region. The industry in London is estimated to have supported around 55,900 jobs and £2.4 billion in employee compensation across the UK economy in 2019.

Table 13: Regional breakdown of the direct and aggregate impacts through employment and the compensation of employees by the Maritime Business Services industry in 2019

Region	Employment, 000s			Compensation of Employees, £m		
	Direct Impact	Industry Multiplier	Total impact	Direct Impact	Industry Multiplier	Total impact
Scotland	0.6	3.3	1.9	31	2.3	72
Wales	0.2	3.2	0.5	7	2.2	15
Northern Ireland	0.1	3.3	0.3	4	2.3	10
East of England	0.9	3.4	3.2	45	2.3	103
East Midlands	0.1	3.4	0.3	3	2.3	7
London	19.1	2.9	55.9	1,150	2.0	2,352
North East	0.3	3.2	0.9	13	2.2	28
North West	0.3	3.3	1.1	13	2.3	31
South East	1.4	3.3	4.6	71	2.3	163
South West	0.3	3.4	1.1	14	2.3	33
West Midlands	0.1	3.3	0.3	5	2.3	11
Yorkshire and the Humber	0.5	3.3	1.7	20	2.3	45

Source: FAME, IUA, TheCityUK, PwC, ABS, BRES, ONS, Cebr analysis

## 6. The Maritime Business Services industry: A forward look

In this final section of the report, we present projections of the Maritime Business Services industry for the period 2021-2025. The section starts off by discussing the conceptual approach that we have developed to produce projections of the direct economic impacts after 2019 and then present our forecasts of the turnover and GVA over the period 2021-2025.

### The MBS industry Forecast (2021-2025)

#### Modelling approach

We investigate the relationship between the Marine Business Services industry and a number of relevant economic variables through an econometric approach. Our findings show that the performance of the MBS industry is primarily explained by trends in the finance & insurance sectors' turnover and the index of services for water transport. By modelling growth in turnover over growth in these two variables, we find that the MBS industry is more strongly correlated with finance and insurance activities; an increase of 1% in the latter's turnover is associated with a 0.47% increase in the MBS industry turnover.

#### Modelling Assumptions

Finance and insurance activities, index of water transport

Cebr's Forecasting and Thought Leadership team produces regular forecasts of key economic indicators for the UK national and regional economies which have directly informed our analysis. For our Maritime Business Services industry forecast we rely on our own projections for UK finance and insurance sectors. After a relatively modest improvement in 2021 of 3.7%, Cebr expects the annual growth rate to increase to around 4.5% over the period 2022-2025. This exceeds our projection of the GDP trajectory, which is expected to grow at a moderate Compounded Annual Growth rate (CAGR) of 2.4% over 2021-2025 in real terms. A high level of uncertainty characterises the forecast as the global recovery from the pandemic and the potential development of new variants, as well as the ongoing outcome of Brexit negotiations could easily shift the projections.

#### The 2021-2025 forecast

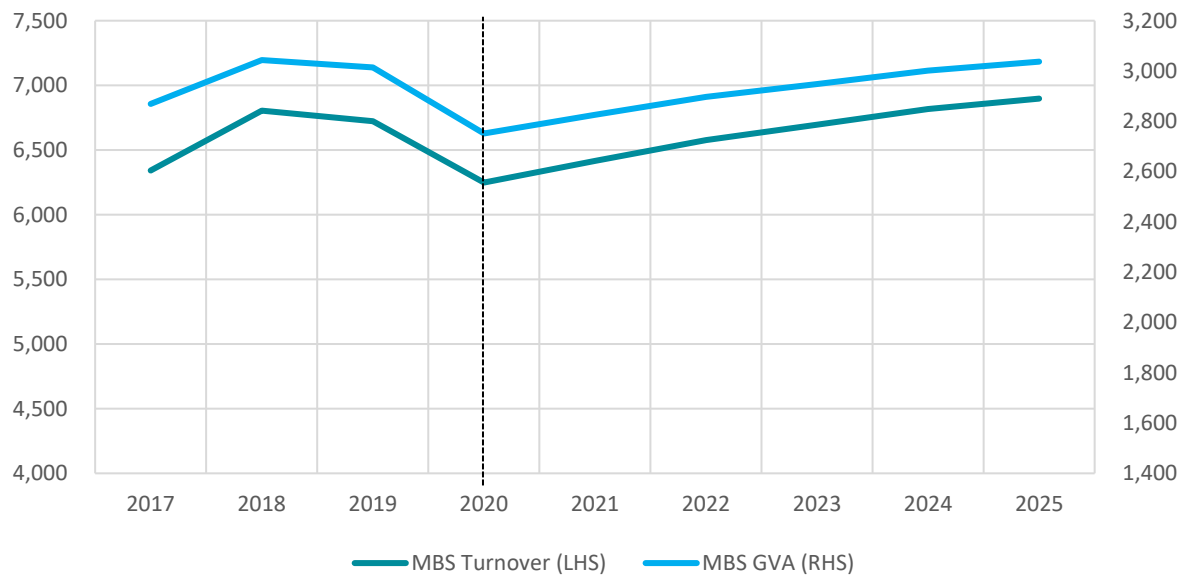
Figure 20 shows the MBS industry experiencing a very modest rate of growth given the rebound over 2020, and then gradually having a slower rate of increase over the five-year horizon. Using macroeconomic indicators,<sup>17</sup> such as the finance and insurance sector GVA, we were able to produce a nowcast for the MBS industry in 2020. Cebr estimates that the industry suffered a contraction in the range of 7% in 2020 as a result of the pandemic.

<sup>17</sup> These are published with more frequency than most of the other data sources used within our study, which for the most part operate on a two-year data lag.

Our forecast indicates that turnover and GVA are set to grow at a relatively low Compounded Annual Growth rate (CAGR) of 1.8% over the considered period. This translates into cumulative nominal growth of 7.5% for 2021-2025, which is smaller growth than that of the years before the pandemic hit if taking this five-year period at face value. However, due to the contraction suffered in 2020, we do not expect the industry to reach its 2019 levels until 2024.

In line with the rest of the analysis, turnover and GVA have been projected in nominal terms. When the forecast is considered alongside projected inflation, real cumulative growth over the 2021-2025 period is negative, at -4.9%.

Figure 20: MBS industry's turnover and GVA trends and projections, 2017 to 2025, £ million



Source: FAME, IUA, TheCityUK, PwC, ABS, BRES, ONS, Cebr analysis

## Annex: Full set of direct economic impacts by region

Table A.1: Direct economic impact of the MBS industry through turnover, £ million, 2010 to 2019

TURNOVER	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
England	4,729	5,230	5,425	5,575	5,531	5,575	5,862	6,168	6,615	6,522
Scotland	87	100	104	128	106	105	123	124	134	146
Wales	42	57	46	42	54	45	32	33	37	32
Northern Ireland	14	18	17	17	16	18	20	16	20	21
East of England	134	134	147	128	131	123	138	158	196	196
East Midlands	16	16	15	15	14	13	9	12	15	14
London	4,055	4,521	4,700	4,854	4,801	4,821	5,053	5,305	5,681	5,578
North East	82	80	93	142	138	89	79	58	60	56
North West	126	132	151	150	135	143	181	163	176	187
South East	135	142	147	122	163	208	212	264	308	327
South West	33	30	49	58	47	57	44	41	50	56
West Midlands	8	6	9	9	12	15	18	10	13	14
Yorkshire and the Humber	140	168	116	97	91	108	129	157	115	94

Source: UKCoS, British Marine, PwC, FAME, ONS, Cebr analysis

Table A.2: Direct economic impact of the MBS industry through GVA, £ million, 2010 to 2019

GVA	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
England	2,006	2,122	2,311	2,390	2,697	2,376	2,576	2,789	2,956	2,923
Scotland	38	42	47	57	53	45	53	59	61	66
Wales	18	24	19	19	28	18	14	14	17	15
Northern Ireland	6	7	7	7	8	7	8	8	9	10
East of England	50	50	60	52	62	49	59	68	86	83
East Midlands	6	6	6	6	6	5	4	5	6	6
London	1,726	1,833	1,993	2,066	2,332	2,042	2,212	2,387	2,525	2,493
North East	29	30	39	55	64	39	37	26	26	23
North West	66	68	75	82	80	79	93	90	100	107
South East	52	54	64	54	80	85	89	118	133	140
South West	14	13	21	26	24	24	19	17	23	26
West Midlands	3	2	4	4	6	6	8	4	6	7
Yorkshire and the Humber	59	67	49	44	43	46	55	73	51	39

Source: UKCoS, British Marine, PwC, FAME, ONS, Cebr analysis

Table A.3: Direct economic impact of the MBS industry through employment, jobs, 2010 to 2019

EMPLOYEES	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
England	18,182	19,117	20,121	20,500	20,870	21,466	22,860	22,846	23,423	23,044
Scotland	367	396	433	515	431	423	499	508	513	552
Wales	207	264	208	202	265	206	154	139	166	148
Northern Ireland	66	77	73	73	70	79	81	73	86	93
East of England	638	631	740	626	671	625	737	777	943	905
East Midlands	86	86	77	84	76	71	51	67	76	74
London	14,476	15,330	16,100	16,465	16,717	17,113	18,202	18,148	18,637	18,355
North East	411	414	521	721	753	544	500	334	326	283
North West	927	914	1,008	1,062	1,029	1,103	1,268	1,129	1,172	1,203
South East	576	598	689	572	765	951	978	1,192	1,296	1,352
South West	191	172	274	329	275	322	252	214	271	310
West Midlands	48	33	47	51	66	83	102	48	65	77
Yorkshire and the Humber	830	939	665	590	517	655	771	937	636	483

Source: UKCoS, British Marine, PwC, FAME, ONS, Cebr analysis

Table A.4: Direct economic impact of the MBS industry through the compensation of employees, £ million, 2010 to 2019

COMPENSATION OF EMPLOYEES	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
England	1,034	1,010	997	1,023	1,075	1,109	1,100	1,122	1,245	1,336
Scotland	20	20	21	26	20	20	22	29	24	30
Wales	9	11	8	8	11	9	6	6	7	7
Northern Ireland	3	3	3	3	3	3	3	3	4	4
East of England	30	27	27	23	29	26	25	27	35	43
East Midlands	4	3	3	3	3	3	2	2	2	3
London	870	847	825	876	896	936	929	938	1,049	1,106
North East	18	16	19	21	30	18	17	11	12	12
North West	42	47	49	47	50	48	54	54	58	65
South East	29	28	36	23	34	41	37	51	53	69
South West	7	6	11	11	11	12	8	7	10	14
West Midlands	2	1	2	2	3	3	3	2	2	5
Yorkshire and the Humber	32	35	24	18	20	23	23	31	22	19

Source: UKCoS, British Marine, PwC, FAME, ONS, Cebr analysis

