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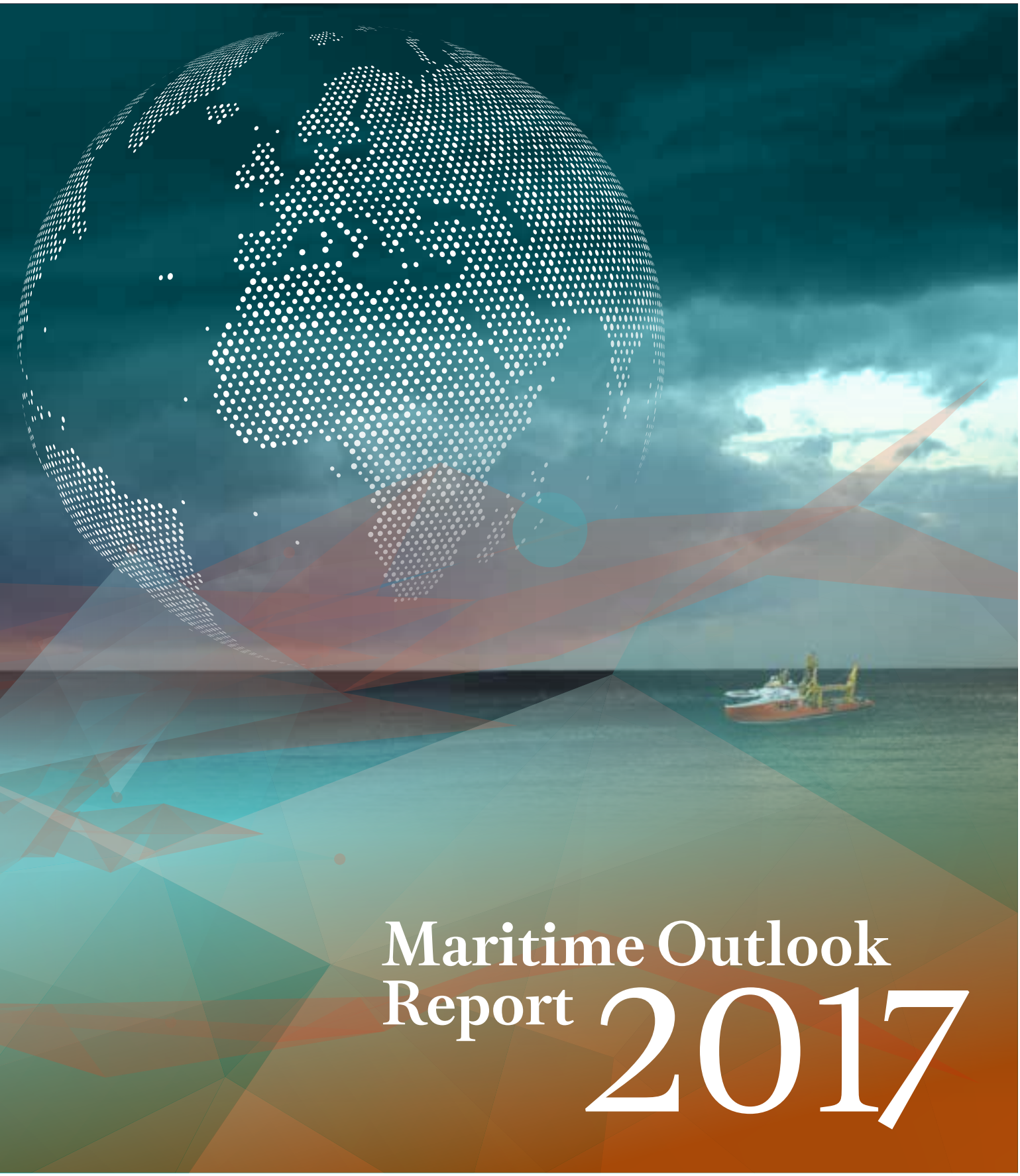

Maritime Outlook Report 2017

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MARITIME OUTLOOK REPORT 2017

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FOREWORD

A time of new challenges, and new opportunities

Politically, the world was turned upside down in 2016. Britain voted to withdraw from the EU, and the U.S. signalled a U-turn in their approach to international cooperation and trade. These events have set a new stage for Norway, and for our industry.

2017 may be the year that China assumes a leading role in promotion of globalisation and international cooperation. It may also be a defining year for Europe and the future of European integration. As negotiations on the terms of Great Britain's exit from the EU proceed, elections are being held in several major European countries. We ask ourselves: How will these new developments shape international cooperation? The answers hold great significance for our industry.

In a time when many are experiencing uncertainty and turmoil, it is perhaps more important than ever to stand firmly behind the fundamental values that our industry seeks to safeguard.

We support an international legal order that regulates the use of force, and is built on international law and universal human rights. We acknowledge the UN Sustainable Development Goals as the foundation for building a better and more just world, where eradication of poverty, combating inequality, and finding solutions to meet climate challenges are the main priorities.

We must strengthen international cooperation and trade across borders. In an unstable world, we need unifying leaders who demonstrate integrity, calmness and wisdom. We need leaders who pursue common solutions and cooperation when addressing collective challenges. It is in all our best interests to safeguard these values, and it is a responsibility we all share.

Our own industry is facing challenging and demanding times. The traditional segments of Norwegian shipping have been burdened with overcapacity, weak demand and tight margins since the financial crisis. Now, offshore markets have taken a severe and sudden turn for the worse, brought about by the crash of oil prices. By February 2016, 100 ships and 16 rigs belonging to members of the Norwegian Shipowners' Association were in layup. One year later, 158 ships and 25 rigs are in layup, and this unfortunate situation seems likely to persist through 2017.

In this year's Maritime Outlook Report, we present developments in the maritime industry in 2016, and our members' expectations for 2017. Last year was marked by declining revenues and profitability, further staff cuts, and more ships in layup. Expectations are for this demanding situation to last through 2017. No significant changes in the number of vessels in layup is anticipated. Revenues and profitability are expected to decline further, especially in the offshore segments. Nor is the overall number of jobs in shipping companies expected to rise in the coming year.

In view of the demanding market situation facing many of our members, we are happy to report that Norway has maintained its position as the world's sixth largest shipping nation in 2016, measured in fleet value. Also uplifting is the growing number of ships


PHOTO: NR/N. TOURRENCE

being flagged home to Norway. The reasons for this are many, the most important of which are changes in the trade area limitations, a strengthened tax refund scheme for seafarers, and improved service in the Norwegian Maritime Authority.

The focus on shipping and our sector's global social responsibility is intensifying. We are expected to operate in an ethically responsible manner, to take responsibility for reducing our climate and environmental footprint, and to contribute to society above and beyond the basic commercial requirements. Norwegian quality shipping must strive to be known for its leading role in climate and environmental issues, and for clearly acknowledging our responsibility to society. A strong Norwegian flag will support these efforts, and strengthen Norway's position in defining ambitious goals for international shipping.

Local communities, owners, seafarers and suppliers along Norway's coastline are all uneasy about the future. They know better than most, though, that a life on the sea is one of ups and downs. From its history as a supplier of cheap freight, Norway has gone on to develop a global shipping industry of the highest quality. Our maritime services are now in demand around the world. Over the course of a few decades, we have built up the most advanced offshore industry in the world. The source of this development is, amongst others, found in the tradition of fisheries deeply rooted in our coastal communities.

The ocean industries exchange knowledge and skills with each other. This is the base from which we will continue to pursue new opportunities in the ocean space. Not at the expense of today's enterprises, but in addition to, and with the benefit of their expertise.

We are fully engaged in exploring the sea and the opportunities that lie beneath the ocean surface. In a world that will grow by two billion people by 2050, we must find new solutions that contribute to sustainable and environmentally responsible global growth.

The OECD estimates that the ocean industries can double their contribution to global value creation by 2030. The sea contains enormous potential for energy efficient transportation, and production of food, energy, metals, and minerals. Future growth in the ocean industries depends on our ability to harvest these resources sustainably, and to manage the oceans from a holistic perspective.

New opportunities will be created, and they will have a scope and dimension far beyond what we know today. What we do know, is that the sea will play a key role in resolving one of the greatest global challenges now facing society: ensuring sustainable growth for a growing population. We are standing at the threshold of the *Century of the Sea*.

Sturla Henriksen
CEO
Norwegian Shipowners' Association

SUMMARY

Shipping is global by nature, and is directly influenced by international trends and global developments. In Chapter 1 of this year's Maritime Outlook Report, *New trade winds*, we examine the trends and challenges impacting the global landscape in which shipping navigates. With President Trump in the White House, the U.S. is expected to pursue fundamentally different foreign and trade policies than those of previous administrations. In Europe, the decision of Great Britain to withdraw from the EU represents a break in 60 years of European integration. And while the U.S. turns more of its attention to domestic affairs, and Europe devotes considerable energy to the Brexit-negotiations, China appears increasingly more likely to assume a lead role in matters of globalisation and international cooperation.

The three regional analyses in Chapter 1 address American trade policies, prospects for the European economy, and Chinese perspectives on globalisation and international cooperation. Common to all three is a perception of heightened risk that is contributing to uncertainty for the industry.

In Chapter 2, *Norwegian shipping – status and trends in 2017*, we see that Norway maintained its position as the world's sixth largest shipping nation in 2016, measured by fleet value. This is the same position as in the previous year, with Greece, Japan, China, the U.S. and Germany ahead of Norway.

The Norwegian fleet was valued at USD 51 billion in 2016, down from USD 65 billion in 2015, a decline of 21 per cent. The offshore segment has seen the greatest decline in value, with a drop of 29 per cent. The value of the global fleet was at USD 914 billion in 2016, down 13 per cent from the previous year.

The Norwegian foreign-going fleet has grown in deadweight tonnes (dwt) over the past year, while the number of ships has remained stable. The fleet now numbers 1716 ships with a total of 43.4 million dwt, an increase of 6 per cent in tonnage from 2015. The number of ships sailing under Norwegian flag has increased, and the Norwegian International Register (NIS) has gained considerable strength during the year. At the same time the Outlook Report shows that a large percentage of the shipping companies, particularly in the offshore segments, have numerous ships in layup and weak earnings.

The average age of the Norwegian fleet continues to drop, indicating strong fleet renewal. The average age for ships was 9.9 years at the beginning of 2017. Orders from Norwegian international shipowners have fallen by half over the past year, both in volume and in value. Norwegian yards have almost no new orders from Norwegian international shipowners. For the global shipbuilding industry, new orders are at their lowest point in 30 years.

In Chapter 3, *Maritime Outlook 2017*, we see that 2017 will be a challenging year for shipowners. Norwegian shipowners experienced five consecutive years of increasing revenues from 2010 to 2015. This trend was dramatically reversed from 2015 to 2016, with a fall in turnover of 16 per cent. If the prognoses in this report are correct, this downward trend will continue in 2017, though perhaps with less force than in 2016.

Norwegian international shipping companies had a collective turnover in 2015 of NOK 279 billion, an increase of 5 per cent from the previous year. Estimates from this year's member survey show that their collective turnover fell by 16 per cent in 2016, to NOK 234 billion. Turnover figures for all shipowners in the member survey are calculated in Norwegian kroner. Fluctuations in exchange rates may therefore influence the figures for collective turnover.

Shipowners' expectations last year, as presented in the Maritime Outlook Report for 2016, indicated an anticipated reduction in turnover of 3 per cent. In fact, turnover fell by 16 per cent in 2016. The deviation of 13 per cent is due to weaker results in all segments. The deviation is most significant among offshore contractors, where decline was anticipated at 4.6 per cent, while the estimated decline is now a daunting 28 per cent.

Shipowners expect a decline in turnover in 2017 of 10 per cent. If this prognosis is correct, the collective turnover for shipowners in 2017 will be NOK 210 billion, down from NOK 279 in 2015.

Expectations for profitability in 2017 are low. Half of the shipowning companies surveyed expect weaker results in 2017 than in 2016. 27 per cent of the companies expect stronger results. This is a slight increase from 2016. In the short sea and deep sea segments, a larger percentage of companies anticipate improved results than those who do not.

The number of ships and mobile rigs in layup has grown steadily since the autumn of 2014. As of February 2017, 158 ships and 25 mobile offshore units belonging to members of the Norwegian Shipowners' Association were in layup. This represents an increase of 57 ships and nine mobile offshore units compared with the number of layups in February 2016.

The situation is most challenging for the offshore service fleet and the offshore contractors. Our members have a fleet of approximately 550 offshore service vessels, of which 150 are currently in layup. This is the equivalent of more than every fourth vessel. Among offshore contractors, approximately 45 per cent of our members' mobile offshore unit fleet is presently in layup. If Norwegian Shipowners' Association members are correct in their predictions, there will be no significant change in the layup situation in 2017. This means that the challenging market situation will continue through 2017.

2015 was a year of major personnel reductions in shipowning companies, with 7300 employees being either laid off or terminated. According to the prognosis presented in the Norwegian Shipowners' Association's Maritime Outlook Report for 2016, staff reductions were expected to taper off during 2016. The total number of anticipated layoffs and terminations was in the range of 4000-4500. There was a significant deviation from the prognosis, as member companies had to reduce staff by approximately 8300 employees. Of these, 15 per cent were laid off, and 85 per cent terminated. The staff cuts were divided relatively evenly between seafarers, mobile rig crew and staff, and onshore employees. The largest staff reductions in 2016 were in the offshore contractor and offshore service companies. In 2016, there were also nearly 1200 new hires. Deep sea and short sea companies had a net increase in employees in 2016.

There are significant discrepancies in shipowners' expectations for 2017: offshore service shipowners and offshore contractors are far more pessimistic than short sea and deep sea shipowners. Our members operating in the offshore market are in a segment strongly impacted by the low oil prices, low activity levels, cost cutting, tough competition, mergers and acquisitions. The demanding market situation in the offshore segments is clearly reflected in this year's member survey.

Norway is a world leader in the ocean industries – on, in and under the sea. It is important that we continue to build on our maritime competence, and this requires that the government strengthen strategic investments in the ocean industries. The Norwegian Shipowners' Association believes that the government's maritime strategy and the policies now being pursued create a solid foundation for further development of the Norwegian maritime cluster. In this context, we want to emphasise that the framework conditions outlined in Chapter 4, *Maritime Competitiveness*, are essential for ensuring Norway's position as a leader in maritime innovation.

PHOTO: NTB SCANPIX

1 New trade winds

Where is the world heading? This question is haunting many at the start of 2017. From a bird's eye perspective, the road ahead runs through uncharted territory. To help understand the new trade winds, we have invited three distinguished experts from the U.S., Europe and China to zoom in on their respective regions and provide some guidance on what we can expect in the next few years.

All contributors to this chapter have in common that they identify significant political risks. However, the main take away is that they are all cautiously optimistic when it comes to possibilities for pragmatic cooperation across borders. In Europe, notwithstanding the fear that populist political forces may come to dominate the scene, economic growth is slowly returning, and last year the Eurozone created as many new jobs as the United States. *Martin Sandbu* of the Financial Times, argues that although the short term economic outlook for Europe is encouraging, significant political risk prevails, most notably the outcome of the Brexit-negotiations. For the first time in decades, barriers to trade are now being erected rather than dismantled within Europe.

The known unknown is the U.S. The signal from President Trump is clear: America's principle commitment to free trade is history. But how will this play out in practice? In his essay, *Edward Alden*, senior fellow at Council on Foreign Relations, argues that President Trump's trade agenda could be deeply unsettling for U.S.' trading partners and foreign companies. However, there are ways for Congress, trading partners and companies to restrain this development, Alden argues in "A Protectionist in the White House; U.S. trade policy under Trump".

As the U.S. retreats as the champion of global free trade, *Hans Olav Lindal*, Chairman of the Board and co-owner of Viken Shipping AS and president of the Norwegian Shipowners' Association, fears that bilateral trade agreements could fuel an even greater backlash against trade as local agreements are often strongly prejudiced in favour of the stronger party.

Can other countries replace U.S. global leadership? Zooming in on China, it is clear that despite the country's stated commitment to globalisation, the country is not prepared to step up to the role as "global guardian" says *Dr. Yang Jian* of Shanghai Institutes for International Studies. Instead, he thinks that China will make its mark internationally in specific areas, such as climate change and the One Belt, One Road-initiative.

Providing comfort to those who might think that the world of 2017 is about to descend into a state of disorder, Dr. Yang is of the opinion that the Sino-U.S. collaboration will be driven by pragmatism and a shared responsibility for growth and stability. That approach will hopefully also extend to the relationship between China and Norway. The normalisation of relations paves the way for deeper and extended collaboration between Chinese and Norwegian companies.

The world today is characterised by more uncertain power relationships than in a long time. The "golden era" of globalisation may be over. At the same time our contributors all convey the message that there is an opportunity for both business and politicians to steer the direction towards pragmatism and cooperation. Reflecting the views of *Kristian Siem*, Chairman of Siem Industries and Subsea 7 S.A., the fundamental drivers of our economies and societies give reason for cautious optimism.

A Protectionist in the White House; U.S. trade policy under Trump


PHOTO: NTB SCANPIX

By Edward Alden

The inaugural speeches of presidents are historically the most optimistic of their terms, filled with hope and lofty ambitions before the grinding difficulties of managing the world's largest economy and biggest military begin to weigh. Donald Trump's speech this year was far more in keeping with the gloomy weather. Despite seven years of growth that had seen some 15 million jobs created in the United States since the low point of the recession in 2010, he railed against an "American carnage" that had left "rusted-out factories scattered like tombstones across the landscape of our nation." Rather than praising the strength of America's economic and military alliances, he said that "for many decades we've enriched foreign industry at the expense of American industry, and subsidized the armies of other countries."

On trade with the world, he left no doubt that he believed the United States had been the loser. "One by one," he said "the factories shuttered and left our shores, with not even a thought about the millions upon millions of American workers left behind. The wealth of our middle class has been ripped from their homes and then redistributed across the entire world." And he closed with a statement that few thought they would ever hear from the president of the United States, a country that has long championed an open global trading system. "We must protect our borders from the ravages of other countries making our products, stealing our companies, and destroying our jobs," he said. "Protection will lead to great prosperity and strength."

Turning back the clock

Donald Trump is the first avowed protectionist to occupy the Oval Office since Republican Herbert Hoover nearly a century ago. He ran for president promising to rip up trade agreements and bring manufacturing jobs back home, and won the election in the so-called Rust Belt states like Ohio, Michigan, and Pennsylvania that have been hit hardest by low-cost competition from countries like China and Mexico. While he will be constrained by the Congress, by American business interests, and by the rules of global trade that were created over many decades under U.S. leadership, the Trump administration marks the end of America's principled commitment to freer trade. For the next four years at least, the United States is going to ask a different question on trade: What's in it for us?

American history books still teach that Hoover's support for the 1930 Smoot-Hawley tariff legislation, which raised tariffs to protect American farmers and American industry, was one of the economic calamities of the 20th century. It led other countries to respond in kind, deepening the Great Depression of the 1930s. At the end of World War II, determined not to repeat the error, the United States became the leader in reducing barriers to global trade. With close cooperation from Europe in particular, the United States pursued seven rounds of negotiations under what was known as the General Agreement on Tariffs and Trade, which brought down average tariffs from roughly 22 per cent in 1947 to less than 3 percent today in the advanced economies. More recently even big developing countries like China and India have cut their average tariffs to the single digits.

When it became frustrated with the lack of progress in global negotiations, the United States pursued both bilateral and regional free trade agreements, linking with Canada and Mexico through the North American Free Trade Agreement (NAFTA) and doing a series of one-off agreements with nearly two dozen countries, including Korea, Chile, Singapore, and Australia. Again, other countries have followed – the European Union has more bilateral trade agreements than the United States; Mexico has more than any other country. The result – along with technological changes like the growth in container shipping and the falling cost of communications – was an explosion in global trade growth that has only recently begun to slow.

President Trump is now going to take the United States, and the world, in a very different direction. His first act after taking office was to pull out of the Trans-Pacific Partnership (TPP), a trade pact that would have freed up trade among the United States, Japan and 10 other Pacific Rim nations. It had been negotiated over nearly a decade but had yet to be ratified by the U.S. Congress, making it easy for Trump to pull the plug. A similar deal between the United States and Europe – known as the Trans-Atlantic Trade and Investment Partnerhsip (TTIP) seems unlikely to survive as well.

If his White House advisors can be believed, more is coming – using tariff threats to renegotiate NAFTA and other trade deals, enacting broader "buy America" policies, using tax and trade policies to promote U.S. manufacturing at the expense of foreign manufacturing, and pressuring trading partners on currency values. Depending on how the rest of the world reacts, the results could range from a modest stifling of trade growth to a much sharper slowdown as new restrictions are enacted.

How far and how fast?

There are two big questions for companies – and for America's trading partners – trying to operate in this unpredictable environment. The first is what are the means for restraining the Trump agenda, and how strong will they be? He will run into significant resistance – from U.S. businesses, from some in Congress, from state governors, and from U.S. trade partners. Trade is constitutionally the responsibility of the U.S. Congress, and while it has handed much of that power over to the president, Trump will not have a free hand. Many of the Republican leaders in Congress remain free-trade supporters, and will act as a brake on the president. Some of Trump's more level-headed advisors – including Treasury Secretary Steve Mnuchin and National Economic Council director Gary Cohn – could also help to rein him in. But the President's powers over trade – including slapping new tariffs on imports – are enormous if he chooses to use them.

A second question is whether Trump will pursue his agenda with any sort of consistency. He often appears driven by ego rather than by any clear

view of U.S. interests. Japan, for example, has long been a target of Trump's ire over its large trade surplus with the United States, but Japanese Prime Minister Shinzo Abe seems to have charmed the president with his early, flattering outreaches. That may insulate Japan from the administration's bullying over trade. Given the importance of personal relationships to the new president, predicting the course of U.S. action by simply assessing America's economic interests will be harder than it has been under recent presidents.

What is clear, however, is that Trump's trade agenda will be markedly different from any U.S. president in the post-World War II era. By pulling out of the TPP trade agreement, he became the first president to back out of a negotiated trade deal in nearly 70 years. He is the first president to favor bilateral trade agreements over regional and multilateral agreements. Previous presidents, both Republican and Democrat, have favored broader multilateral deals, and pursued bilateral deals only as a fallback option. He is the first president to flirt openly with breaking U.S. trade commitments, by threatening to import tariffs that would violate U.S. commitments made in the World Trade Organization (WTO). He has talked variously about a 45 percent tax on Chinese imports, a 20 percent tax on Mexican imports, as well as targeted measures to punish companies that move factories from the United States. Previous presidents have restricted imports at times, but each has tried to do so within the framework of agreed trade rules.

First steps

Mexico appears to be the president's first target. He wants a renegotiation of NAFTA, which he has called "the worst trade deal in history." While his specific demands are still forming, Trump's goal is to encourage companies to invest more in the United States, and to stop using Mexico, where wages are much lower, as an export platform for the United States. He has drawn a sharp distinction between the U.S. trade relationship with Canada – which he has said needs only "tweaking" – and the relationship with Mexico, which he called "extremely unfair."

Trump sees the pervasive U.S. trade deficit with the rest of the world – which ran just over $500 billion in 2016 – as a measure of how much the United States has been losing from trade. He and his advisors have been especially critical of countries like Mexico, Germany, Japan and Korea that run large bilateral trade surpluses with the United States. The biggest offender by that measure, however, is China, which ran a nearly $350 billion surplus with the U.S. in 2016.

Trump appears to be stepping carefully with China, however. During the campaign, he had promised to target China as a currency manipulator on "day one" of his presidency. He did not do so, however, and is now considering less confrontational options. During the transition, he had suggested the United States might reconsider its long-standing recognition of the "one China" policy that acknowledges Taiwan as an integral part of China unless China was willing to alter its behavior on trade. But in his first phone call as president with China's President Xi Jinping, Trump backed down and agreed to continue supporting the one China policy. Trade with China is certain to be a source of friction over the next year, but the early signs are that the new administration will act cautiously.

Pushing back

China's early success at pushing back on the United States suggests that other countries are far from powerless as the Trump administration pursues its tougher line on trade. Mexico is the country most dependent on the U.S. market, sending roughly 80 percent of its exports north, but it is not without weapons. Mexico has warned that any new tariffs by the United States would be met by Mexican retaliation, such as blocking the $2.5 billion in corn that it buys from American farmers each year. That threat prompted Senator Charles Grassley of Iowa, to warn President Trump against any actions that might harm America's export-dependent farmers. The European Union and others have said they would aggressively use the dispute settlement provisions of the WTO if the new administration takes actions that violate global trade rules.

America's partners in the now-defunct TPP deal – including Australia, New Zealand, Singapore and others – have also said they would now pursue closer trade ties with China instead, and might even consider reviving the TPP without the United States. The European Union recently completed a new trade agreement with Canada, and is pursuing deals with Japan and India. While

Industry perspectives

PHOTO: NORWEGIAN SHIPOWNERS' ASSOCIATION

"I am concerned about increased protectionism, and the changes it can bring about in trade patterns," says Hans Olav Lindal. He notes that uncertainty surrounding the effects of these trends on business makes it extremely difficult to reach strategic decisions with confidence.

Lindal anticipates increased regionalisation of trade patterns in regions such as Asia. A growing amount of labour-intensive, low-cost industry production is moving from China to other countries in Asia, while China invests heavily in the infrastructure of these countries. This influences value chains, now trending towards regionalisation since both increased production and increased consumption are occurring in Asia. Transportation patterns will naturally also be altered as a result of this development.

Lindal believes that these developments will entail a shift towards local or regional trade agreements. One concern is that global agreements are largely based on principles of balanced distribution of benefits, while local agreements are often strongly prejudiced in favour of the stronger party: "free trade, but on our terms!" In such situations, smaller countries are more exposed, and it could result in counter reactions like protectionism or the threat of trade wars, Lindal fears.

Despite the shift of low-cost production to other countries in Asia, Lindal believes that commercial opportunities in China will increase. "As China moves up in the value chain, I believe their import and export patterns will change," he says.

Another important factor for Norwegian shipping is the recent rise of Chinese financial institutions as attractive providers of financing solutions to Western shipowners. "There is little doubt that the normalisation of the relationship between Norway and China will make it easier for Norwegian shipowners to access the Chinese financial market," he concludes.

Hans Olav Lindal is Chairman of the Board and co-owner of Viken Shipping AS. He is also president of the Norwegian Shipowners' Association.

Trump has talked about new bilateral trade agreements with Japan, and with a post-Brexit United Kingdom, he may face new pressure if the United States is excluded from a growing web of trading relationships.

What will companies do?

While other countries will try to resist pressure from the Trump administration, many U.S. companies see themselves as more vulnerable, and are likely to take steps to reduce their dependence on foreign markets and foreign investment.
As far back as May of 2016 Jeffrey Immelt, the chief executive of General Electric, had warned that his company would increasingly pursue "localization" strategies of manufacturing closer to final markets. He anticipated – before the Brexit vote and before Trump's election – that the current backlash against globalization was not a passing moment, but rather a new reality to which business had no choice but to respond. Since his election, Trump has successfully pressured several U.S. companies – including the carmaker Ford and the air conditioning company Carrier – to pull back from plans to open factories in Mexico. Other companies – including Intel and Korea's Samsung – have announced large investments in the United States to curry favor with the new president.

The U.S. Congress is also considering a sweeping overhaul of the corporatel tax code that would increase the cost of imports to the United States and reduce the cost of exports, a further effort to force companies to pull back from the global supply chains that leading firms from Apple to Boeing have embraced. Trump's White House trade advisor, Peter Navarro, went so far as to suggest in an interview with the Financial Times that companies should be unwinding and repatriating their supply chains. "We need to manufacture those components in a robust domestic supply chain that will spur job and wage growth," he said. Changes of this magnitude will not come easily to be sure – many U.S. companies are pushing back hard on the proposed tax changes, and will resist other measures that harm their global footprint. Such business opposition has in the past been enough to derail such ambitious tax reforms. But with Trump in the White House and powerful Republicans in Congress backing the tax proposals, the threats to business-as-usual are large.

What comes next?

The trade outlook for the next year, then, is one of enormous uncertainty. The United States has long been a strong and predictable advocate for liberal trade, and for more and better global trade rules. But the new administration is seeking a rollback that promises to be deeply unsettling for global trade prospects. If President Trump does less than he has threatened, and if he is constrained by the Congress, by business, and by America's trading partners, the damage may be modest. But the rest of the world should prepare for the worst, and have strategies in place to respond.

Edward Alden is a senior fellow at the Council on Foreign Relations, and author of the new book, "Failure to Adjust: How Americans Got left Behind in the Global Economy."

PHOTO: NTB SCANPIX

Chinese perspectives on international cooperation and globalisation

When Asian countries look at the state of affairs in the Western world, they worry at the extent of polarisation that has come into display with the UK's decision to leave the EU and the U.S. presidential elections, says Dr. Yang Jian of the Shanghai Institutes for International Studies. "In China, we worry about the future of Europe. We think of the EU as an extraordinary pioneering project. This integration process has inspired the work of regional cooperation agreements such as ASEAN in Asia and the African Union. We view developments in the EU as a precursor for global development, and if Europe now loses confidence in its own integration, it will send a negative signal that this kind of deep integration is bound to fail. In a more disinteginrated Europe, there will be a return to *realpolitik* where 'might makes right', a development that could, amongst other things, make Central European countries lose their sense of orientation between East and West."

Dr. Yang worries about a world dominated by nationalist and protectionist policies in the wake of the political earthquakes that have shattered the West in 2016. "With upcoming national elections in several European countries, I fear a domino effect resulting in more policies like 'UK first', 'France first', and so on."

With President Donald Trump in the U.S. signaling a more inward-looking policy focus for the U.S. in the years to come, many commentators have pointed to China as the new global superpower. The view that China will be the guardian of globalisation gained traction after President Xi Jinping's speech at the World Economic Forum in January 2017. Dr. Yang agrees, but stresses that there are important nuances to this view.

"Although China is now the world's second largest economy, it also remains the largest developing country. We must always strike a balance between national developments and our global responsibilities. I think it is important to recall what President Xi Jinping said in Davos. There, he underscored that China will never retreat from our position on globalisation. That does not mean that China is ready to step up as the lead provider of global public goods in the same way that the U.S. has been doing over the last decades. Our foreign minister Mr. Wang Yi has also highlighted this point recently. China has no intention to replace any country as a world leader. At this critical moment a strong collective leadership that consists of main economies is necessary. China still has numerous domestic issues to work on, including poverty alleviation, which means that China cannot replace U.S. leadership globally. China can and will contribute to regional and global public goods, but will not be in the lead."

In essence, this means that Chinese foreign policy should be understood as a vision of "united leadership". "China will not be the new global leader, rather, it is more important than ever that Europe and the U.S. jointly continue to take an active part in global politics," says Dr. Yang. "No country in the world can tackle the major international problem of our time alone."

The Sino-U.S. relationship has been under scrutiny since Trump won the U.S. Presidential election last November. "It is very difficult to predict how the bilateral relationship between China and the U.S. will evolve," says. Dr. Yang. "One might expect 'small earthquakes' between the two countries, but that might be fine as long as that hinders a large one. China and the U.S. have a shared responsibility for economic development and for regional stability. A good example of where our two nations already are working together is on the challenges on the Korean peninsula."

For Dr. Yang, climate change policy and the One Belt, One Road-project (OBOR) are examples of global public goods where China will make its mark. OBOR aims to restore the ancient silk road between Asia and Europe with roads, railways, oil and gas pipelines, and other infrastructure projects.

"The One Belt, One Road is an example of a regional public good, where China helps to build regional infrastructure in over 60 countries. It can be seen as China's 'Marshall plan', helping to boost the economy of the region in a time of sluggish global growth," says Dr. Yang.

The OBOR-initiative was launched over three years ago. "Thus far I think the "One Belt" part of the project, that is the land infrastructure, has progressed well. The establishment of the Asian Infrastructure Investment Bank is also a success factor in this. However, the maritime part has seen slower progress," says Dr. Yang, who believes that China needs to find the right partners to accelerate international maritime cooperation. These should not be restricted to the countries along the traditional maritime silk road. "I believe that in the maritime aspects of OBOR, there is potential for Norway and China to work together on comprehensive projects within the blue economy," says Dr. Yang. Much like in Norway, China has development of the ocean economy high on the agenda. "In the 13th five-year plan, maritime and marine policies, ocean-based pharmaceuticals, development of the maritime supply sector and shipping are topics of great importance to the leadership in Beijing."

This includes the Arctic and, in particular, the development of the Northern Sea Route. "This is an area where it would be natural to envisage closer cooperation between Norway, China and Russia," says Dr. Yang. "It could even become part of the OBOR-project."

Another area where China stands ready to play its part is climate policy. "When it comes to the climate issue and the Paris agreement, it is important that the whole world delivers. As we are creating more jobs and lifting more people out of poverty, we also increase the consumption of goods and generate more emissions. China needs to contribute its share, which means that we have to look at how we can change our production model and ways of consumption," says Dr. Yang, who also believes that China will increasingly contribute to scientific research on how to tackle the climate change as well as within the field of Arctic governance. "We should also contribute more with scientific research within these fields. For example, China has a plan to work with the Nordic countries to establish a few joint observatories in the Arctic."

At the intersection of climate policy and OBOR is another opportunity for cooperation between Norway and China. "The Chinese market for ecosystem protection services is huge," he concludes.

In the new world order, it is still the ocean that connects and enables cooperation between East and West, as it has throughout the centuries. With China and Norway's increasing focus on ocean issues, this should lay the foundation for even closer collaboration.

PHOTO: SIIS

Dr. Yang is Vice President at Shanghai Institutes for International Studies (SIIS). The SIIS is a think tank dedicated to informing government decision-making by conducting policy-oriented studies in economics, foreign policy, and international security related matters.

Economic prospects for Europe

By Martin Sandbu

Global trends

Since the middle of 2016, the world has moved very quickly from a pessimistic mood of "secular stagnation" to one expecting a "new reflation". Some of the stagnation trends - in particular stagnant international trade growth and big debt overhangs in rich and poor countries alike - subsist, but a cyclical upswing is clearly visible. That upswing, displayed in upgraded growth estimates and higher market interest rates, is however mixed with deep uncertainty about the medium-term future and the high risk of disruptions from political events - above all, the erratic policy-making of U.S. President Donald Trump and his administration. Europe is affected directly by these trends and uncertainties, but also faces a regional version of the same: a cyclical improvement underway since mid-2016 combined with the huge uncertainty of how Brexit will play out.

The short-term economic outlook for the European economy gives cause for optimism

Observers' and analysts' views of continental Europe's economic prospects are often coloured by the two monumental failures of the last decade: the eurozone sovereign debt crisis; and the double-dip recession in 2011-12, when other parts of the world continued their recovery from the global financial crisis. These experiences mean many find it hard to imagine that eurozone economies can ever achieve more than mediocre growth and assume the risk of a renewed crisis is never far away.

But it is a mistake to see the European economy structurally hampered by the euro. A stable – if belated – recovery is now in the works, and understanding the forces behind it gives reason to expect growth to continue or even slightly accelerate in the near term in the absence of policy change or damaging political events.

Much of the reason why the eurozone performed so poorly in the recovery was because of bad policy choices that could have been avoided, including: the failure to restructure debts early on and sanitise the banking system; intense fiscal consolidation in virtually every country at the same time; and a monetary tightening in 2011. Many of these policies have now been at least partially corrected, with fiscal and monetary policy being more stimulative since about 2014, and with most European bank balance sheets in better shape than before. The overall fiscal stance for the eurozone has been roughly neutral for three years, and the European Central Bank launched a substantial programme of quantitative easing in early 2015.

The signs are clear that these policies have stimulated the economy, and were reinforced by the positive effect on household incomes of the 2014-15 fall in oil prices which coincided with the turn to more stimulative policy. Eurozone credit has been growing steadily. GDP growth numbers have been reasonably constant and positive, and increasingly powered by domestic demand not just exports. Another encouraging sign is that employment has been rising steadily in almost

PHOTO: NTB SCANPIX

every European country; last year the eurozone created as many new jobs as the United States.

There are two big reasons to think the eurozone economy should continue to pick up speed. One is that these accommodating policies remain in place, and that policymakers increasingly show signs of understanding that they work, which should buttress political support for them. (The European Commission, for example, has started to push for a *more* stimulatory fiscal stance at the aggregate eurozone level.)

The other is that global economic circumstances are, for now, positive: oil prices are unlikely to return to historical highs; greater demand stimulus is expected in the U.S.; and measures of business and consumer confidence have been steadily increasing in much of the economically advanced world since last year. U.S. investor confidence seems to have been given a positive jolt from the election of Donald Trump, which could fuel a self-justifying virtuous cycle of business expansion.

For all these reasons, the economic dynamic by itself poses no obstacle to continuing or even improving the recent run rate of close to 0.5 per cent quarterly GDP growth on average since mid-2014. The European Commission's latest forecasts sees growth of 1.6 and 1.8 per cent in 2017 and 2018, respectively, exactly in line with the recent performance. If the cyclical recovery is allowed to gather steam, it may well do better than this forecast.

The UK economy is a special case. Growth held up robustly after the 23 June referendum last year vote for Britain to leave the EU, at 0.6 per cent quarterly pace in the second half of the 2016. Virtually no economist expected that; even many Leave campaigners admitted short-term economic turmoil might follow a Leave vote. Any outlook for 2017 must therefore take into account this surprising resilience.

The robustness relied on increased consumer borrowing after two years of rising real wages. However, the disruption from Brexit will eventually hit and income growth is set to slow abruptly again. It remains highly likely that the UK economy will decelerate substantially. But as 2016 demonstrated, timing such changes is very hard; and 2017 may well pass before the negative effects manifest themselves. When they do, forecasters may have to lower their predictions for the British economy again, and even the European Commission forecast of 1.5 per cent annual UK growth for 2017 and 1.2 per cent for 2018 could prove optimistic. Until then, however, the UK may well continue to grow along its current roughly 2 per cent annual rate.

Overall, then, unless European economies are thrown off course, we are likely to see a continuation of current cyclical dynamics, with a slight acceleration possible in continental Europe and a moderate slowdown to be expected in the UK. The uncertainties in this outlook for Europe's short-term economic prospects are largely all political, and potentially large. Apart from the global political situation, there are several home-grown risks.

The biggest, of course, is Brexit. The UK government belatedly clarified its objectives: it now seems most likely that the UK will indeed leave the single market and the EU customs union. On the one hand, this "hard Brexit" strategy provides some much-needed clarity as well as requiring a less complicated new EU-UK settlement. But the economic costs and political acrimony of a radical divorce means the negotiations could easily go awry in the two-year period the EU Treaties provide for. A failure to complete a deal, or the risk that a souring of relations contaminates other, non-economic collaboration between the UK and the rest of Europe, could have a big negative effect on economic sentiment and business confidence in the region.

A related uncertainty is that surrounding the rise of anti-system and anti-European political movements in continental Europe. Populist outsiders such as Marine Le Pen in France, Geert Wilders in the Netherlands, and similar parties in other countries were clearly encouraged by the vote for Brexit (and Donald Trump's election victory) and see this as their year. The chances of populists taking the reins of power in eurozone countries remain slim, partly due to electoral systems requiring broad coalition building. Should it happen in a eurozone country, however, the economic repercussions may be worse than the Brexit vote or the Trump victory, as it would immediately put the survival of the euro in radical doubt.

Any outlook for Europe, therefore, should respect Frank Knight's distinction between "risk" – which involves calculable probabilities – and largely unquantifiable "uncertainty". There are small "risks" surrounding a central economic projection that growth will pick up somewhat in continental Europe and slow somewhat in the UK, *if* big political disruptions do not happen. Whether they will happen is the big "uncertainty", which there is little point in trying quantify with precise probabilities. But if they do materialise, they may well shift Europe's entire economic trajectory far away from the path it is now on. This is a possibility better prepared for through multiple scenario planning than a probabilistic "confidence interval" around a single central projection.

Pay special attention to Europe's trade relationships

The world trading system is presently being put in doubt like it has never been before in the post-war era. The biggest disruption in Europe will be Brexit. The UK's choice of a "hard Brexit" strategy means that even if a deal on tariff-free trade in goods can be achieved, non-tariff barriers will re-emerge between Britain and the rest of Europe. Non-membership of the single market raises the prospect of less harmonised regulation as well as a greater bureaucratic burden of compliance and certification. Leaving the customs union entails some form of customs controls where none currently exist. These changes will make goods trade costlier and services trade much more difficult. Recent research suggests that even with a new free trade agreement replacing EU membership, UK trade with the EU could fall by 35 percent for goods and 61 percent for services. Limits on the freedom of movement of people may create additional problems for services trade. The rhetoric of a "global Britain" and the call for a "bold and ambitious" trade deal with the rest of Europe should not distract from the fact that barriers to trade are now being erected rather than dismantled within Europe for the first time in decades.

As for other European trade relationships, the Trump administration's views of trade suggests the EU-U.S. trade and investment deal known as TTIP (the Transatlantic Trade and Investment Partnership) is on ice for the indefinite future. As this had not been concluded, it represents a lost opportunity rather than harm to existing trade. But signals from the Trump administration suggests an unhappiness with Germany's trade surplus which means we should expect policy planning that targets existing EU exports.

In contrast with these protectionist trends, on other less noticed fronts the EU is pushing ahead with continuing trade liberalisation. CETA, the trade and investment treaty with Canada, was approved by the European Parliament only

Industry perspectives

PHOTO: SUBSEA 7

From his base in London, Kristian Siem has a view to a world buffeted by rapid change that is presenting new challenges to leadership: "Twenty years ago I believed in 'the end of history', and I would have put my money on the liberal world order. Now I observe with great concern how easy it is to manipulate large groups through shrewd use of technology. IS is an example of a group that has managed this. In other words, the fight for the correct world view is far from over," he says.

With Brexit looming, 2017 is destined to be a year of change for the old world order. "Brexit is a reaction to imbalance of power and lack of leadership," Siem states. Still he remains a believer in the future of the European integration project: "I am convinced that the EU will pass this test, but I would have liked to see Britain remain in the EU in order to influence reform from the inside."

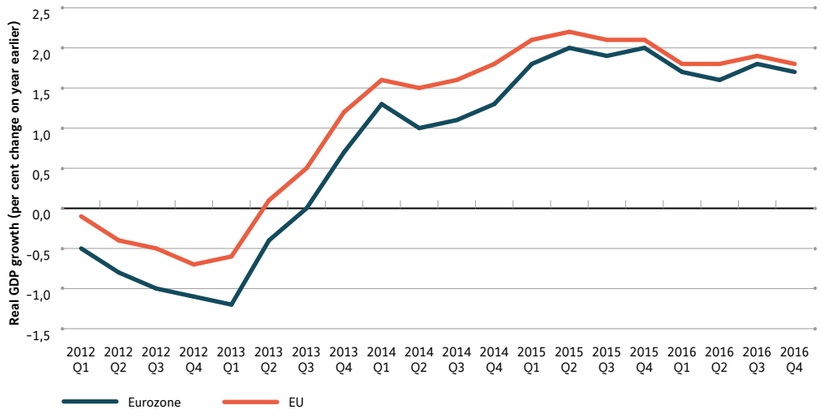
Trade policies have become a hot topic over the past years, with turbulence surrounding the major trade agreements TTIP and TPP. "Trump and Brexit are both challenging the established hegemony, but I am not worried that world trade will come to a halt. The question is rather what the framework for world trade will be. Personally I am more optimist than pessimist, and I doubt that President Trump opposes trade as such."

Kristian Siem's philosophy for navigating in an unpredictable world is to take a step back and analyse the fundamental drivers in the world economy: population growth, standard of living, and future market demands. "Judging by these drivers, the outlook for shipping is good. But the shift to renewable energy has become more important than we anticipated, and renewables are now one of our business areas." He finds it difficult to predict the next X-factor, but believes that the "return of the markets" will figure significantly in the short term: oil prices will rise in response to increased demand, while oil reserves continue to be depleted.

Changes in 2017 will not be limited to politics. Siem also envisages great change in store for the offshore industry. "We will see even more consolidation and vertical integration. This is necessary in order to achieve efficiency and cost levels more in line with lower oil prices, and it will make continued field development possible." He maintains that development of new fields is fully feasible, citing significantly lower cost levels today than before the oil price crash. At the same time, he believes that oil companies may have to slash dividends in favour of new field development. "Focus on operations in the short run is essential for success in the long run," Siem concludes.

Kristian Siem, Chairman of Siem Industries and Subsea 7 S.A.

Figure 1: Quarterly growth in Europe 2012–2016



SOURCE: EUROSTAT

months after the regional government of Belgian Wallonia held up the treaty's signature. Contrary to doomsday warnings that the deal was in lethal danger at the end of 2016, we can now expect a swift implementation of the trade elements of CETA (the more controversial investment provisions may still meet resistance), and with them the benefits of greater trade between two economies at comparable levels of development.

Much more important given the size of the market, yet curiously unremarked by the public, is the EU-Japan trade treaty, which is ticking along towards conclusion and signature much more smoothly than other trade relationships involving the EU. Both The EU-Japan negotiations may have been spurred on by president Trump's protectionist rhetoric, just like Europe has accelerated trade talks with others such as Mexico.

What does this mean for Norway?

Norway's economy is deeply intertwined with Europe's. That means it is likely to feel both the positive and negative repercussions of the European trends listed above, even though strong public finances provides shelter against any ill winds from the region. The continuing European recovery will contribute to growth in the Norwegian economy. Any damage from Brexit or other political uncertainty will influence it too. Britain's departure from the single market, in particular, automatically erects trade barriers between Norway and the UK. So the damage from Brexit for Norway comes from two sides: indirectly through a possible weakening of the EU27 and especially UK economies; and directly through new trade barriers with a big trading partner. For a highly open economy, these are big challenges.

That means Norway needs an agile countercyclical policy in the coming years to compensate for the effects of any slowdown elsewhere in Europe. But it also needs an active trade policy. The liberalisation agenda the EU continues to pursue is in Norway's national interest, but much depends on how Norwegian policymakers react to EU trade policy.

If the EU's trade integration with Canada and Japan proceeds according to plan, there is a risk that Norway could be "left behind" as deeper trading relationships are developed between these larger markets: greater market access to the rest of Europe may make Norway look marginally less attractive. Norway would therefore do well to redouble efforts to deepen trade relations with the EU's new partners. While these are far from the only markets that matter, Japan and Canada at the moment present particular windows of opportunity – and risk – because of EU trade policy moves.

As for Brexit, Norway is highly vulnerable to the way the process is unsettling established trade rules within Europe. Britain's departure from the European single market will also erect new trade barriers between it and Norway, which should also as a priority seek a free trade agreement with the UK to minimise these frictions. That will undoubtedly require co-ordination with the EU's own Brexit talks.

It is also crucial for Norway to protect the EEA agreement to safeguard its trade with the remaining EU, by far Norway's largest trading partner. Paradoxically, a "soft" Brexit would have carried a greater risk of unsettling the EEA, since an EEA-type solution for Britain might have led to changes to accommodate UK interests which Norway may not have shared. The UK decision to leave the single market altogether reduces this risk.

Politically, however, Brexit has encouraged Norwegian home-grown Euroscepticism. At a time of such international uncertainty, Norway can ill afford to lose its main anchor in the international trading system. It is therefore crucial in any domestic debate about the EEA to highlight not just the economic benefits single market membership brings, but the many ways in which Norway can and does freely pursue policies to protect its labour market standards. Fortunately, the EU is largely comfortable with the EEA and has little desire to unravel any further element of European integration when it already has it hands full with Brexit. Put simply, the EEA is Norway's to lose.

Martin Sandbu writes "Free Lunch", the Financial Times daily newsletter on global economic policy. He is also the author of the book "Europe's Orphan: The Future of the Euro and the Politics of Debt" published in 2015.

PHOTO: NTB SCANPIX

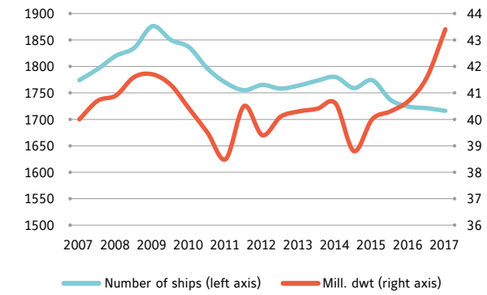
PHOTO: AWILCO AS

2 Norwegian shipping
– Status and trends for 2017

2.1 Growth in the Norwegian-controlled foreign-going fleet

The Norwegian maritime industry is global, with strong positions in markets around the world. Norway is one of the world's largest shipping nations, and one of only a few with a complete maritime cluster. The number of ships in the Norwegian-controlled foreign-going fleet has remained basically unchanged over the past year, and now stands at 1716 vessels. Despite this, deadweight tonnage has grown by more than 6 per cent. The Norwegian International Ship Register (NIS) alone had a net growth of more than 40 ships in 2016, with growth in deadweight tonnage of 9 per cent. Overall 82 newbuildings were delivered to the foreign-going fleet in 2016, with a large share of these going to NIS. In 2015, the number of newbuilds joining the foreign-going fleet was 63.

Figure 2: Development in the Norwegian-controlled foreign-going fleet 2007-2017



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION

The composition of the Norwegian-controlled foreign-going fleet shows that offshore service ships make up the largest segment, measured by number of ships. Over the past decade, the offshore fleet has seen significant growth in number of ships. The Norwegian-controlled offshore fleet is the world's most modern and the next largest after the USA. No other segment can match offshore growth in number of ships. Today, companies in this segment are experiencing difficult times and extremely demanding markets. Shipowners are consolidating and depreciating the market value of their fleets, and ships are being put up for sale. In February 2016, around 100 offshore vessels were in layup. A year later, that number is considerably higher.

About the statistics:

The Norwegian Shipowners' Association maintains statistics on the Norwegian-controlled foreign-going fleet. The parameters are as follows:

- Ships registered in the Norwegian Ordinary Ship Register (NOR) and engaged in foreign trade
- All ships registered in the Norwegian International Ship Register (NIS)
- Ships sailing under a foreign flag and in foreign trade, owned by Norwegian-controlled shipping companies, defined as having at least 50 per cent Norwegian ownership

The Norwegian Shipowners' Association uses a more limited definition of Norwegian-controlled ownership compared to other analysts.

PHOTO: AWILCO AS

Making choices: Norwegian flag, green solutions

During the last half of 2016, Awilco AS took delivery of four VLCC oil tankers, or Very Large Crude Carriers, all of which will sail under the Norwegian flag in NIS, the Norwegian International Ship Register. The 300,000 dwt ships were built at the Daewoo yard in South Korea. Each vessel can carry 2 million barrels of crude oil, more than Norway produces in a day.

The shipowner, the yard and the engine manufacturer have engaged in close cooperation to develop sound and environmentally friendly solutions. Through a series of large and small technological advances, significant emissions reductions have been achieved with only a relatively minor decrease in fuel consumption.

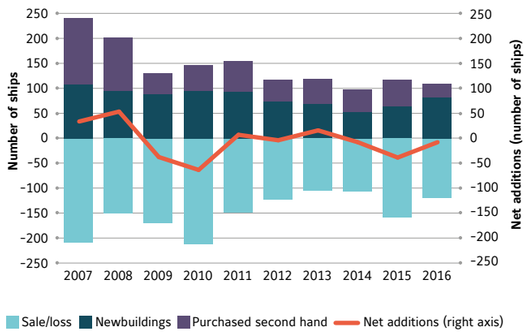
This entailed everything from increasing the propeller diameter to 10.6 metres, optimising bow bulb design for freight and ballast sailing, and maximising propulsion systems efficiency, to low-friction anti-fouling and use of LED lighting systems on board.

The focus has been on reducing energy consumption in order to achieve lower fuel consumption and reduced emissions of greenhouse gasses and harmful pollutants. The shipowner believes that lower consumption and reduced emissions will give them a competitive advantage in the international competition that characterises the shipping industry.

The more traditional branch of the foreign-going fleet consists of several segments where Norwegian shipowners are world leaders and control major market shares. These segments include auto transport, tankers, dry bulk, LNG, chemicals, container and general cargo. The Norwegian fleet of LNG tankers, shuttle tankers, auto carriers and other specialty vessels has also grown over the last ten years. During this same time period segments such as bulk carriers, passenger ships and ferries, chemical tankers and LPG ships have all seen decline, and number fewer vessels than in 2007.

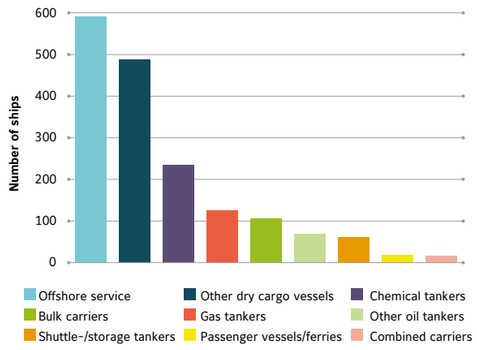
One decade ago, 51 per cent of the Norwegian-controlled fleet was sailing under the Norwegian flag, in either the Norwegian Ordinary Ship Register (NOR) or the Norwegian International Ship Register (NIS). This picture has somewhat changed, and entering 2017, the percentage of ships registered in Norway had fallen to 45 per cent. Seen in deadweight tonnes (dwt), the percentage of Norwegian-registered ships is somewhat higher, at 47 per cent.

Figure 3: Development in additions and removals - Norwegian-controlled foreign-going fleet 2007-2016



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION

Figure 4: Norwegian-controlled foreign-going fleet composition as of 1 January 2017



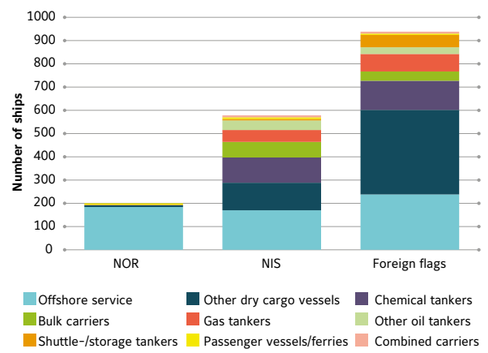
SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION

At the start of 2017 there were 578 ships registered in NIS, compared to 637 in 2007. This represents a decline of 59 ships, or 9 per cent, over a ten-year period. Looking at the past year, NIS shows an increase of more than 40 ships and an increase in deadweight tonnage of 9 per cent. The current growth in NIS is due largely to re-flagging from foreign registers, primarily of construction ships and short sea tonnage, and newbuild deliveries. This demonstrates that strengthening the competitiveness of NIS has been of high importance.

The number of ships in foreign trade in NOR has fallen over the last decade, from 259 to 200 ships. This represents a reduction of 59 ships, or 23 per cent. The number of ships in the Norwegian-controlled fleet sailing under foreign flags or registers has increased from 878 in 2007 to 938 at present. This represents an increase of 60 ships, or 7 per cent.

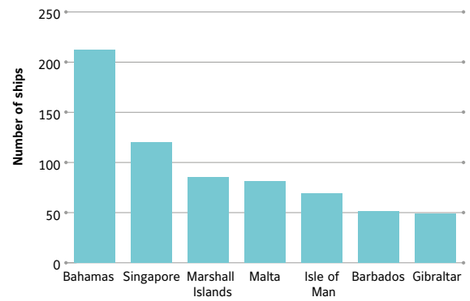
Choice of flag state is generally dictated by commercial interests. The Bahamas, Singapore, Marshall Islands and Malta continue to be the most popular flag states, as in previous years. Choice of flag is largely made based on the register's level of quality and service, accessibility, price, and not least individual regulations and practices.

Figure 5: Norwegian-controlled foreign-going fleet by flag and ship type as of 1 January 2017



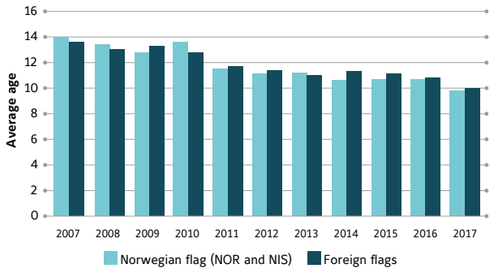
SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION

Figure 6: Norwegian-controlled foreign-going fleet. Largest foreign flags/country of registration as of 1 January 2017



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION

Figure 7: Development in average age of vessels in the Norwegian-controlled foreign-going fleet 2007-2017. Weighted by gt.



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION

The average age of the Norwegian foreign-going fleet has gone down by roughly four years since 2007, to an average age of 9.9 years at the beginning of 2017. Ships sailing under the Norwegian flag (NOR and NIS) have a lower average age than ships under foreign flags. The differences are not significant, indicating that both the Norwegian-registered and foreign-registered fleets are undergoing continuous renewal, both through deliveries of new ships and second hand sales, aided by sale of ships for recycling.

PHOTO: SEA CARGO

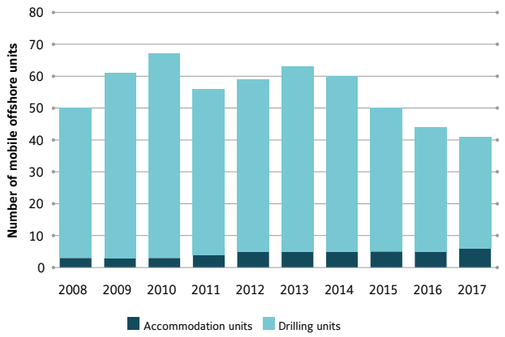
2.2 The Norwegian-controlled mobile offshore unit fleet

The Norwegian-controlled mobile offshore unit fleet has declined significantly over the past years. 85 per cent of Norwegian-controlled units are engaged in drilling activities, while the remaining 15 per cent trade in the accommodation segment (floatels and accommodation units).

The market for mobile offshore units, particularly on the Norwegian Continental Shelf (NCS) has been, and continues to be, extremely challenging. We are witnessing a long-term decline in investments on the NCS. Contracts for mobile offshore units have been cancelled and options for renewal of existing contracts are only rarely exercised. Few new contracts are being signed, and those that do come up are signed at considerably lower rates than previously.

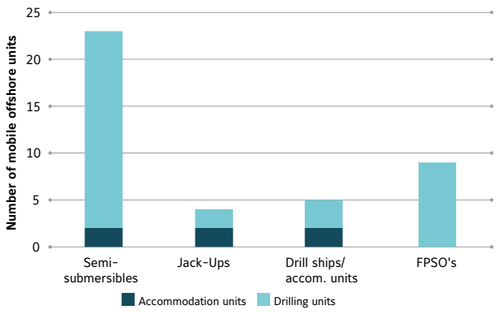
The NCS remains the biggest single market for Norwegian-controlled mobile offshore units. Over 30 per cent of mobile offshore units operate in the Norwegian Sector of the North Sea, while 10 per cent operate in the British Sector. A significant number of mobile offshore units are presently in layup.

Figure 8: Development in number of Norwegian-controlled mobile offshore units 2008-2017



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION

Figure 9: Number of Norwegian-controlled mobile offshore units by type as of 1 January 2017



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION

2.3 Orderbooks cut by half in just one year

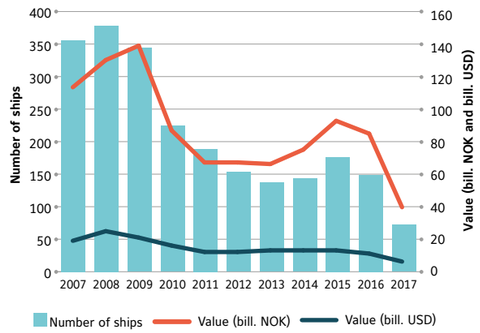
Norwegian international shipowners had a total of 72 vessels on order as of 1 January 2017. Compared to last year, this figure represents a decline of over 50 per cent seen in number of ships, and 45 per cent by value in NOK. New orders have virtually come to a standstill during the past years, with only a handful of newbuilding contracts being signed in 2016. Globally, the contracting activity in 2016 fell to its lowest level in over 30 years, both in terms of numerical and tonnage terms. This is to be seen in most vessel segments.

2008 is still the record year for Norwegian shipowners' newbuilding orders, with 378 ships ordered. The decline since 2008 is more than 80 per cent seen in number of ships. Of the 72 ships on order, there are 19 offshore service vessels, 16 chemical tankers, 12 gas tankers, and seven bulk freight ships. There are also some oil tankers, shuttle tankers, car carriers, combination ships, passenger ships and ships for other varied cargo. The total order value as of January 2017 is NOK 39 billion, or USD 4.5 billion. More than 70 per cent of ships currently on order are scheduled for delivery during 2017, with the remainder being delivered between 2018 and 2020.

The most important shipbuilding nations for Norwegian-controlled foreign-going companies are China (44 per cent) and South Korea (21 per cent), measured in number of ships. 13 per cent of the current orderbook is with Norwegian yards, or nine ships.

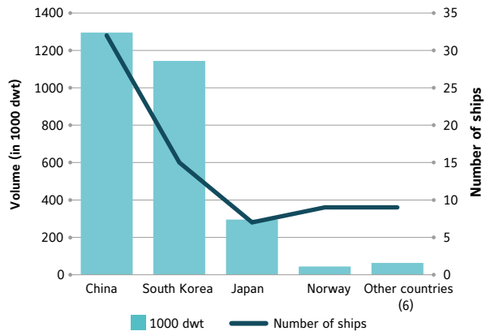
Orders from Norwegian-controlled foreign-going companies to Norwegian yards have stagnated, with only a few new orders in the past year. Long-term trends thus show a strong decline in orders to Norwegian yards. Nonetheless, Norwegian yards in general are experiencing a robust order flow in other segments, including orders from foreign shipowners. This is not reflected in the statistics presented here.

Figure 10: Development in Norwegian-controlled foreign-going orderbook 2007-2017



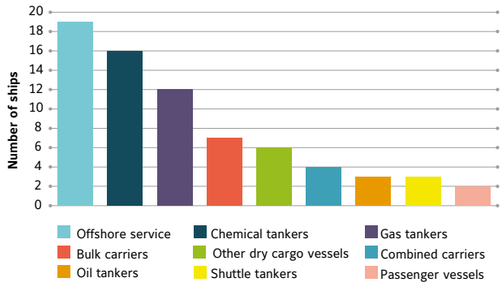
SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION

Figure 12: Norwegian-controlled foreign-going orderbook - by country of built as of 1 January 2017



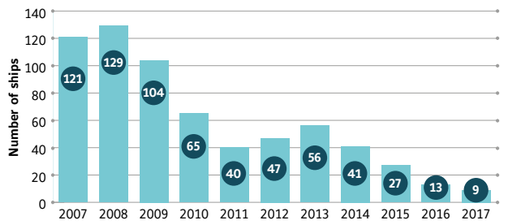
SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION

Figure 11: Norwegian-controlled foreign-going orderbook by type as of 1 January 2017



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION

Figure 13: Development of the orderbook for the Norwegian-controlled foreign-going fleet at Norwegian yards 2007-2017



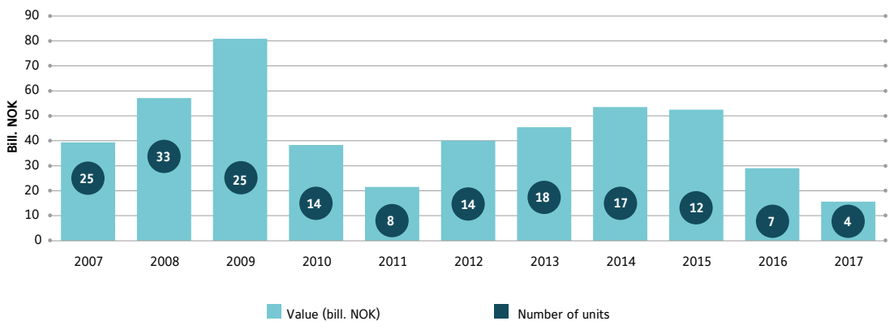
SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION

PHOTO: MAERSK DRILLING NORGE AS

2.4 Offshore mobile units on order

Norwegian offshore mobile unit companies had a total of four units on order at the start of 2017, with a value of NOK 15.6 billion, or USD 1.8 billion, roughly half from the previous year. The units are being built in Asia, divided between South Korea, China, and Japan. There are two drillships and two jackup units on order. Three of the rigs are scheduled for delivery in 2017, and one in 2018.

Figure 14: Development of orderbook – Norwegian-controlled mobile offshore units 2007-2017



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION

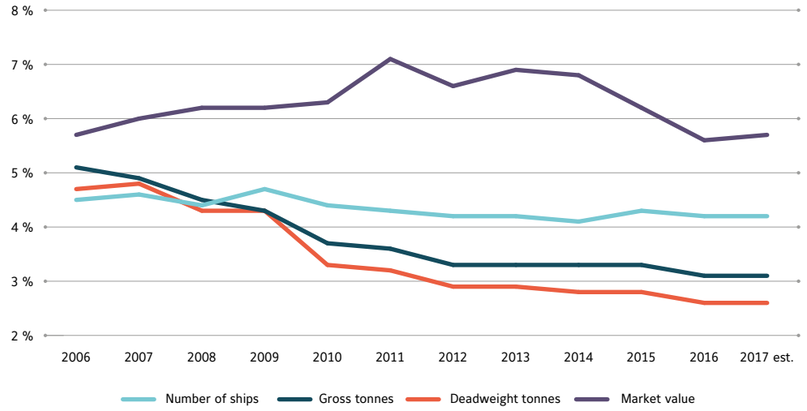
2.5 Market value of the Norwegian fleet

When assessing the international standing of a shipping nation, carrying capacity based on deadweight gross tonnage is the most common standard of measure. For many years, Norway ranked third in total tonnage, behind Greece and Japan. But carrying capacity alone cannot provide a representative picture of the shipping industry's international position and value creation. There are several reasons for this, the most significant being that the size of a ship's cargo conveys only limited information on its makeup and value. The Norwegian fleet counts a large number of advanced and high-value vessels not necessarily designed to maximise carrying capacity, but rather to perform complex operations.

The Norwegian Shipowners' Association has commissioned the business analysis firm Menon Economics to estimate the value of the global fleet through an annual evaluation of building cost within the various industry segments, adjusted for fleet age and size. They have also included an estimate for 2017, using global fleet size in number of ships and tonnage from 2016, and values from January 2017. This method was used as comparable data on the size of the world fleet for 2017 was not available at the time of the analysis.

The value of the global fleet has increased from USD 655 billion in 2006, to USD 914 billion in 2016. The estimated value of the global fleet in 2017 is USD 848 billion, a decrease of 7 per cent. The Norwegian fleet was valued at USD 51 billion in 2016, and the 2017 estimate is USD 48 billion. Measured by value, the Norwegian fleet makes up nearly 6 per cent of the global fleet.

Figure 15: Development in the Norwegian shares of the world's merchant fleet by different key indicators



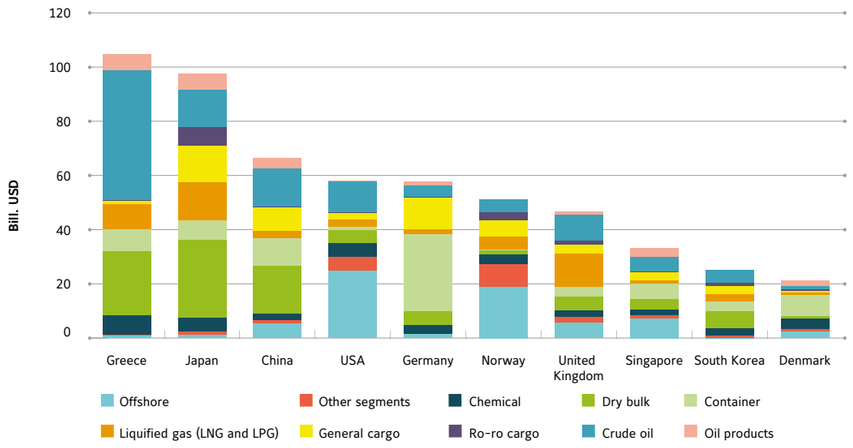
SOURCE: IHS/MENON ECONOMICS

PHOTO: WILH. WILHELMSEN ASA

The Norwegian fleet ranked sixth among shipowning nations in 2016, measured by value. This is the same position as in 2015. Greece, Japan, China, the USA and Germany are ranked ahead of Norway, with the UK, Singapore, South Korea and Denmark holding the next four spots. The ten largest nations measured by value are unchanged from the previous year, with only some changes in the order. As in 2015, the offshore segment has the highest value in the Norwegian fleet. Only the USA has an offshore fleet with a higher value than Norway.

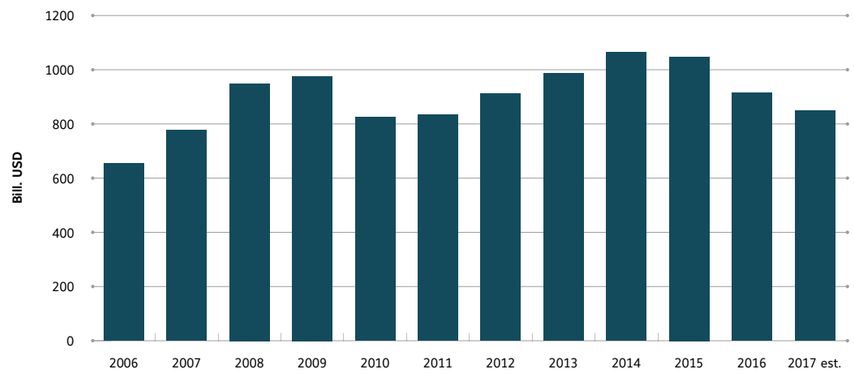
The 2017 estimate shows a value of USD 48 billion for the Norwegian fleet. This is a decrease of 6 per cent from 2016. Viewed separately, the offshore segment has seen the largest decrease in value from 2016 to 2017, at 5.5 per cent. Comparing estimates for 2017 with figures from 2015, the Norwegian fleet has decreased in value by 25 per cent, and the offshore segment alone by fully 32 per cent.

Figure 16: Top 10 merchant fleets of the world by market value by segments as of 2016



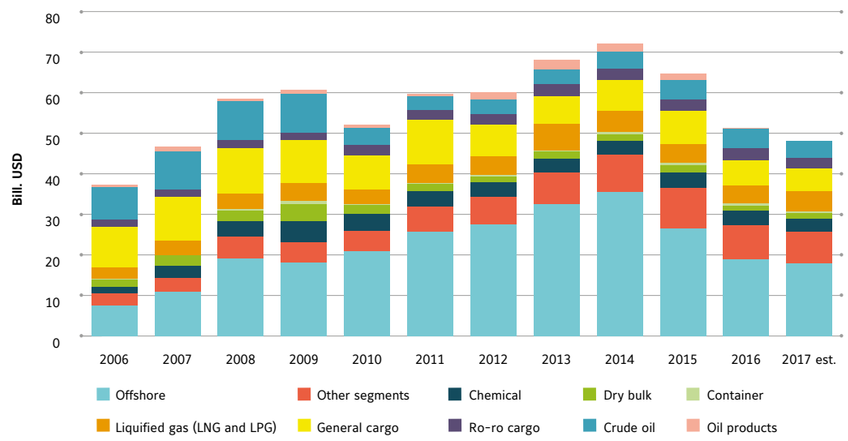
SOURCE: IHS/MENON ECONOMICS

Figure 17: Development in market value of total world fleet



SOURCE: IHS/MENON ECONOMICS

Figure 18: Development in the Norwegian fleet market value by segments



SOURCE: IHS/MENON ECONOMICS

PHOTO: SONDRE SOLVANG, ISLAND OFFSHORE

3 Maritime outlook 2017

In this year's Maritime Outlook Report, shipowners anticipate a decline in turnover and profitability for 2017. Our members expect a reduction in turnover of 10 per cent over the course of 2017. Around 50 per cent of shipowners expect weaker profitability in 2017 compared to 2016. No great change is anticipated in the number of ships and mobile rigs in layup for 2017, and the total number of employees is expected to remain stable. There are significant discrepancies in shipowners' expectations for 2017: offshore service shipowners and offshore contractors are far more pessimistic than short sea and deep sea shipowners. Our members operating in the offshore segments are strongly impacted by the low oil price, low activity levels, cost cutting, tough competition, mergers and acquisitions. The demanding market situation in offshore is clearly reflected in this year's member survey.

3.1 Dramatic reduction in turnover for shipowners

Norwegian shipowners experienced five consecutive years of increasing revenues from 2010 to 2015. This trend was dramatically reversed from 2015 to 2016, with a fall in turnover of 16 per cent. If the current prognoses are correct, this downward trend will continue in 2017, though perhaps with less force than in 2016.

About the member survey:

Maritime outlook 2017 is based on a survey of Norwegian Shipowners' Association members, statistics from our own databases, and value creation analyses from Menon Economics. In the survey, our members, Norwegian international shipping companies, were asked to provide key figures on turnover and operating results, employment, market developments, access to capital, growth markets, and global trends. The member survey was carried out between 23 January and 7 February 2017. A total of 99 shipowners responded to the survey, and their responses are incorporated into figures presented in this year's Maritime Outlook Report. This gives a response rate of 72 per cent. A more detailed description of the data basis and methodology is found at the end of this report. This year marks the fifth edition of the Maritime Outlook Report, first released in 2013.

FOUR SHIPPING SEGMENTS ARE REVIEWED IN THE 2017 MARITIME OUTLOOK REPORT:

- **Deep sea shipping** – tankers, dry bulk, LNG, chemical, containers, cargo and car carriers in intercontinental trade
- **Short sea shipping** – the same segments as for deep sea, conducting regional freight trade in Europe, and including passenger ships trafficking European routes
- **Offshore service** – platform supply vessels, anchor handling vessels, construction vessels, seismic and other offshore-related specialised vessels, and subsea support vessels
- **Offshore contractors** – mobile rigs, drill ships, lodging, and floating production, storage and offloading units (FPSO)

“Shipowners expect a decline in turnover in 2017 of 10 per cent.”

“Deep sea is the only segment expecting increased turnover in 2017.”

Norwegian international shipping companies had a collective turnover in 2015 of NOK 279 billion, an increase of 5 per cent from the previous year. Estimates from this year’s member survey show that their collective turnover fell by 16 per cent in 2016, to NOK 234 billion.

Turnover figures for all shipowners in the member survey are calculated in Norwegian kroner. Fluctuations in exchange rates may therefore influence the figures for collective turnover.

Shipowners’ expectations last year, as presented in the Maritime Outlook Report for 2016, indicated an anticipated reduction in turnover of 3 per cent. In fact, turnover fell by 16 per cent in 2016. The deviation of 13 per cent is due to weaker results in all segments. The deviation is most significant among offshore contractors, where decline was anticipated at 4.6 per cent, while the estimated decline now shows us a daunting 28 per cent.

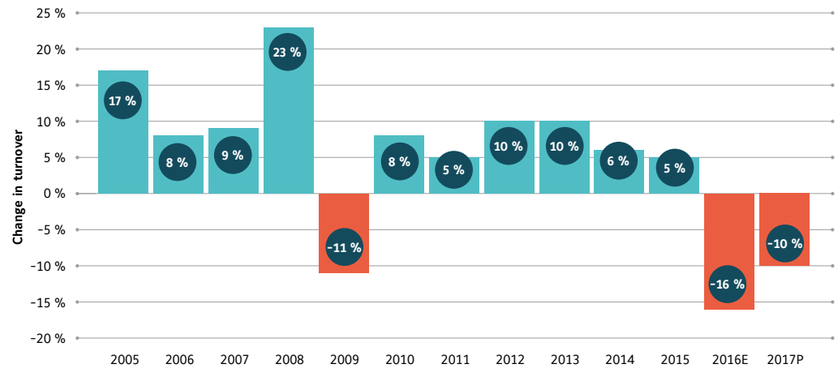
Shipowners expect a decline in turnover in 2017 of 10 per cent. If this prognosis is correct, the collective turnover for shipowners in 2017 will be NOK 210 billion, down from NOK 279 in 2015.

Expectations for the transport segments – growth in deep sea, slight drop in short sea

In 2004, deep sea shipowners had more than four times the collective turnover of offshore service shipowners. Up until 2011, deep sea constituted the largest shipping segment in Norway, measured by turnover. At the same time, offshore service shipowners were experiencing significantly stronger growth, and by 2012, they had become the largest shipping segment in Norway. The steep drop in oil prices and the resulting reduction of exploration and development activity among oil companies has led to a dramatic decline in the revenues of offshore service companies.

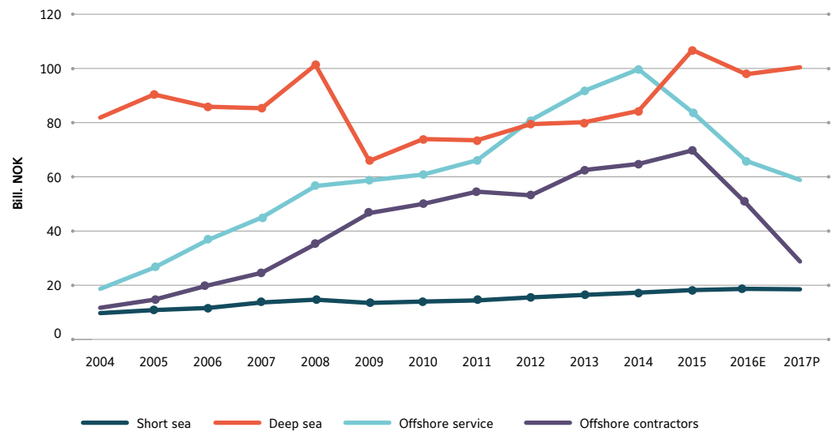
Deep sea is the only segment expecting increased turnover in 2017 . Deep sea turnover is expected to increase by 3 per cent in 2017, to NOK 100 billion. By 2015, deep sea had regained its status as the largest segment in Norwegian international shipping, with NOK 107 billion in turnover in 2015, and NOK 98 billion in 2016. Though deep sea has not yet returned to the record turnover level of 2008, there has been relatively steady growth since the financial crisis, with the exception of 2016, where there was a drop of 8 per cent.

Figure 19: Percentage change in Norwegian shipowners’ turnover from the previous year (including 2016 estimates and 2017 prognosis)



SOURCE: NORWEGIAN SHIPOWNERS’ ASSOCIATION / MENON ECONOMICS

Figure 20: Total turnover for Norwegian shipowning companies in the period 2004 – 2017 (including 2016 estimates and 2017 prognosis) – by segment



SOURCE: NORWEGIAN SHIPOWNERS’ ASSOCIATION / MENON ECONOMICS


PHOTO: FRED OLSEN WINDCARRIER

Short sea shipowners experienced a growth of 2.5 per cent in 2016, and anticipate a decline of 1 per cent in 2017. This would give them a collective turnover of just over NOK 18 billion in 2017. The short sea segment has seen stable growth over several years, except for 2009.

The combined revenue of short sea and deep sea segments in 2016 was NOK 117 billion. This marks the first time since 2008 that the traditional shipping segments have a larger turnover than the offshore service and offshore contractor segments combined.

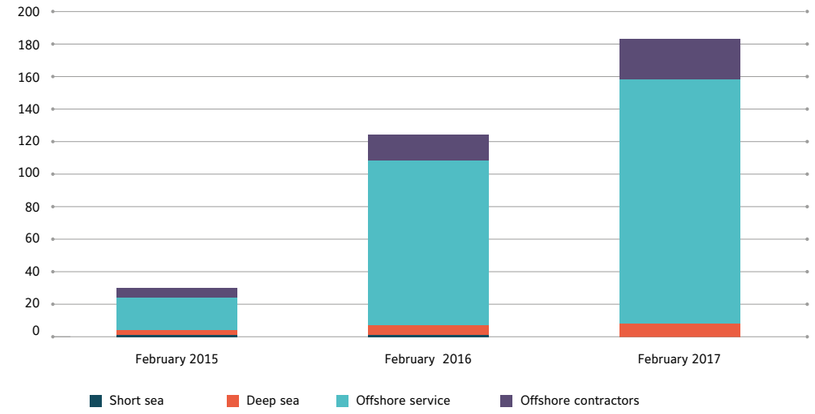
Offshore shipowners expect further reduced turnover

The estimated decline in offshore service shipping companies' income for 2016 was 21 per cent. Shipowners expect the decline to continue in 2017, predicting a further 11 per cent reduction of revenues.

If this prognosis for 2017 is correct, it would mean a decline in the income of offshore service shipping companies of 40 per cent since the peak year 2014. Income will then have fallen by more than NOK 40 billion in just three years, from NOK 100 billion in 2014, to NOK 59 billion in 2017.

The income of offshore contractors is estimated to have fallen by 28 per cent in 2016 compared with 2015, to NOK 50 billion. Prognoses for 2017 anticipate a decline of additional 43 per cent. This would mean a fall in combined turnover from NOK 70 billion in the peak year of 2015, to NOK 29 billion in 2017. Should these predictions prove correct, offshore contractor income will have been cut by more than half from 2015 to 2017.

Figure 21: Development in number of ships and mobile offshore units in layup from 2015 to 2017



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION / MENON ECONOMICS

158 ships and 25 mobile offshore units in layup – no major changes in 2017

The number of ships and mobile rigs in layup has grown steadily since the autumn of 2014. As of February 2017, 158 ships and 25 mobile offshore units belonging to members of the Norwegian Shipowners' Association were in layup. This represents an increase of 57 ships and nine mobile offshore units compared with the number of layups in February 2016.

The situation is most challenging for the offshore service fleet and the offshore contractors. Our members have a fleet of approximately 550 offshore service vessels, of which 150 are currently in layup. This is the equivalent of every fourth vessel. Members do not anticipate significant changes in the number of layups in 2017, indicating that the considerable over-capacity in the market is expected to continue through 2017.

As of February 2017, 25 mobile offshore units were in layup, an increase of 16 units compared with February 2016. This means that approximately 45 per cent of our members' mobile offshore unit fleet is presently in layup. There is no expectation of significant improvement in the layup situation for this segment in 2017.

If the Norwegian Shipowners' Association members are correct in predicting the layup situation, the challenging market situation will continue through 2017. At the same time, it is worth noting that no shipowners anticipate a major change in the number of ships or mobile offshore units in layup, in contrast to expectations from 2016. This notwithstanding, shipowning companies still expect a notably reduced turnover and profitability.

“If shipowners’ prognoses for 2017 are correct, revenues from the oil and gas sector will for the first time in many years make up less than half of Norwegian shipowners’ total income.”

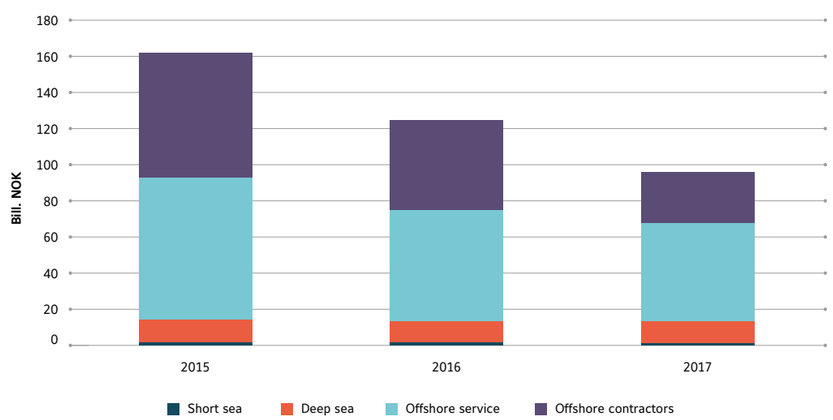
Anticipated reduction in shipowners’ petroleum-related income

Norwegian shipowners’ collective operating income from the oil and gas market is expected to fall by more than 40 per cent from 2015 to 2017. If decreases from 2014 are included, income has been cut by more than half since oil prices began to fall in 2014. In 2016, petroleum-related income was NOK 125 billion. If prognoses prove correct, petroleum-related income in 2017 will be around NOK 96 billion.

Expectations of decline are most prominent among offshore contractors for the period 2015 to 2017. They anticipate a reduction of 60 per cent in petroleum-related income for this period. Offshore service shipowners expect a 31 per cent reduction for the same period.

The Norwegian maritime industry has become steadily more offshore oriented since 2000, but this trend has now shifted dramatically. Menon Economics has previously demonstrated that income from the oil and gas sector made up three-quarters of the maritime industry’s total income. The share of shipowners’ income from oil and gas was at least as high, probably closer to 80 per cent. If shipowners’ prognoses for 2017 are correct, revenues from the oil and gas sector will for the first time in many years make up less than half of Norwegian shipowners’ total income.

Figure 22: Norwegian shipowners’ income from petroleum-related industry, by segment in the period 2015-2017



SOURCE: NORWEGIAN SHIPOWNERS’ ASSOCIATION / MENON ECONOMICS

PHOTO: WILHELMSEN SHIP MANAGEMENT

“This prognosis indicates that foreign markets have increased in relative importance for Norwegian shipowners.”

Expectations for foreign markets in 2017

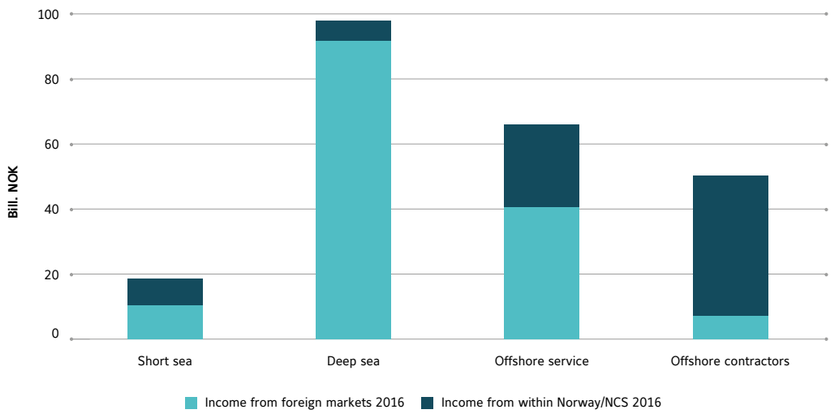
Foreign markets accounted for 64 per cent of Norwegian shipowners’ combined turnover in 2016, approximately NOK 148 billion. Revenue from foreign markets has fallen in recent years, and is expected to drop from NOK 170 to NOK 144 billion in the period from 2015 to 2017. The decline in foreign market income is less than for the Norwegian market. This prognosis indicates that foreign markets have increased in relative importance for Norwegian shipowners.

Shipowners’ income from the Norwegian market is expected to decline from NOK 108 to NOK 66 billion from 2015 to 2017. If this prognosis proves correct, the percentage of foreign revenue will increase from 61 to 68 per cent of total revenue in the same period.

There are significant differences between the segments regarding the importance of Norwegian and foreign markets for revenue. Deep sea companies gained 94 per cent of their income from foreign markets in 2016, while the respective figures for offshore service companies and offshore contractors are 60 and 14 per cent. For short sea companies, 56 per cent of their total income in 2016 came from foreign markets.

Deep sea is the segment with the largest share of its income from international markets, with estimated revenue for 2016 at NOK 92 billion.

Figure 23: Estimated 2016 turnover by segment, Norwegian and international markets



SOURCE: NORWEGIAN SHIPOWNERS’ ASSOCIATION / MENON ECONOMICS

PHOTO: UTKILEN

This is a reduction from 2015, when foreign income was at NOK 100 billion.

Whereas overall revenues for offshore service companies have fallen dramatically since 2014, the share gained from foreign markets has remained relatively stable. 2016 estimates for income from markets outside the NCS (Norwegian Continental Shelf) are at NOK 40 billion. For offshore contractors, the estimate is NOK 7 billion for income outside the NCS.

Short sea companies also have a majority of their income from markets outside of Norway. Estimates indicate that this segment will gain NOK 10 billion from foreign markets.

Petroleum-related turnover is calculated using the following method:

Petroleum-related turnover is determined for each individual company in the member survey and aggregated up. The companies have reported what percentage of their turnover in 2016 is generated by petroleum-related activity, i.e. deliveries to oil and gas companies and the offshore supplier industry. We have assumed that the percentage is consistent for 2015-2017 and multiplied turnover for these three years by the reported percentage of petroleum-related turnover.

Revenue from markets outside Norway is calculated using the following method:

Revenue from foreign markets is calculated for each individual company in the member survey and aggregated up. Companies have reported the percentage of 2016 revenue stemming from overseas activities, along with revenue figures. Using this method, revenue from the Norwegian market and the NCS can also be calculated. We have assumed that the percentage is consistent for 2015-2017 and multiplied turnover for these three years by the reported percentage of foreign income.

“Half of the shipowning companies surveyed expect weaker results in 2017 than in 2016.”

3.2 Shipowners expect weaker profitability in 2017

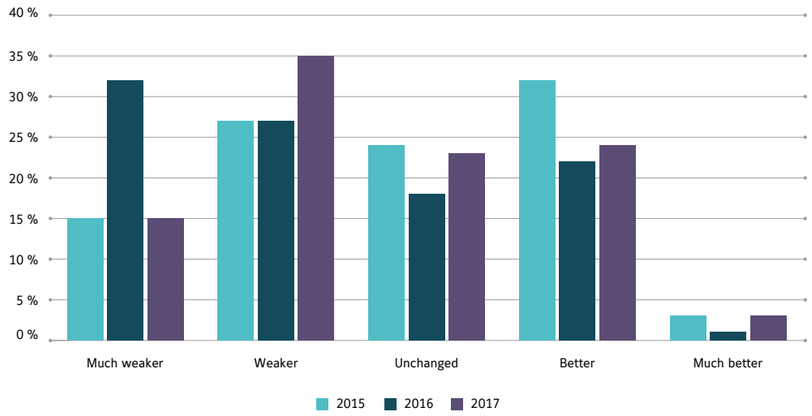
Expectations for profitability in 2017 are low. Half of the shipowning companies surveyed expect weaker results in 2017 than in 2016. 27 per cent of the companies expect stronger results. This is a slight increase from 2016. In the short sea and deep sea segments, a larger percentage of companies anticipate improved results than those who do not.

- 49 per cent expect *weaker* results (59 per cent in 2016)
- 23 per cent expect *no change* in results (18 per cent in 2016)
- 27 per cent expect *improved* results (23 per cent in 2016)

Seven out of ten offshore service companies and offshore contractors anticipate weaker profitability in 2017

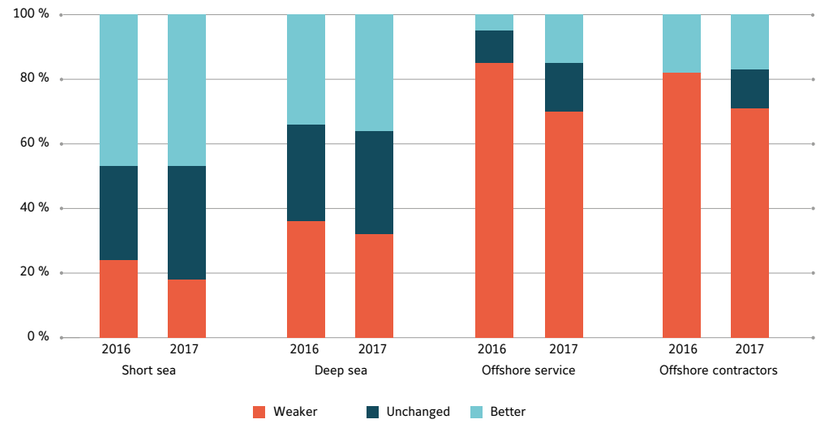
Despite 2016 being a historically challenging year for offshore service companies and offshore contractors, seven out of ten owners in these segments believe that 2017 will see a further decline in profitability. This is a slight improvement from 2016, when eigth out of ten expected weaker profitability. It is nonetheless a clear indication that the demanding situation currently facing the industry will continue.

Figure 24: Shipowners’ expectations for operating results compared to previous years



SOURCE: NORWEGIAN SHIPOWNERS’ ASSOCIATION / MENON ECONOMICS

Figure 25: Shipowners’ expectations for operating results in 2016 and 2017, by segment



SOURCE: NORWEGIAN SHIPOWNERS’ ASSOCIATION / MENON ECONOMICS


PHOTO: HAVILA SHIPPING

3.3 Staff cuts in 2016 considerably more drastic than anticipated

2015 was a year of major personnel reductions in shipowning companies, with 7300 employees being either laid off or terminated. According to the prognosis presented in the Norwegian Shipowners' Association Maritime Outlook Report for 2016, staff reductions were expected to taper off during 2016. The total number of anticipated layoffs and terminations was in the range of 4000-4500. There was a significant deviation from the prognosis, as member companies had to reduce staff by approximately 8300 employees in 2016. Of these, 15 per cent were laid off, and 85 per cent terminated. The staff cuts were divided relatively evenly between seafarers, mobile rig crew and staff, and onshore employees. The largest staff reductions in 2016 were within the offshore contractor and offshore service companies. In 2016, there were also nearly 1200 new hires. Deep sea and short sea companies had a net increase in employees in 2016.

No change in overall employment in 2017

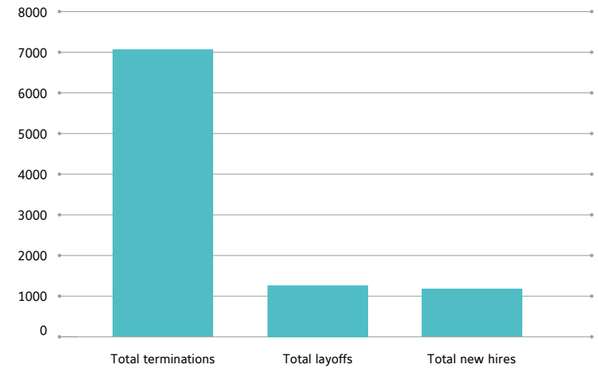
No change in overall employment numbers among member companies is anticipated for 2017, but there are notable differences between the various segments. Offshore service is the segment anticipating the biggest further reduction in employment, with net cuts expected to be 620 in 2017.

Conversely, offshore contractors anticipate a net of 270 new hires in 2017. One offshore mobile unit on or off contract may have a substantial impact on the total employment numbers. One offshore mobile unit typically employs 100 to 200 rig crew and staff, while one offshore service ship typically employs 30 to 40 seafarers. Deep sea and short sea shipowners anticipate a net of 300 and 50 new hires, respectively. Altogether, total employment among the shipowners is expected to remain unchanged in 2017.

No change in training positions in 2017

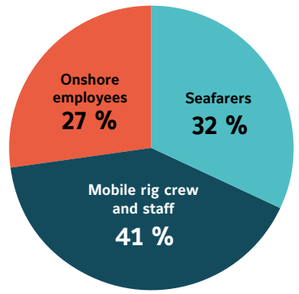
Six out of ten companies participating in the member survey currently maintain training positions, with a total of nearly 2100 positions. This is an increase from 1860 at the same time last year. The number of training positions is expected to remain unchanged during 2017. The number of training positions is expected to decrease by around 80 among offshore service companies. At the same time the other three segments plan to increase the number of training positions. Reductions will affect international training positions the most. Shipowners anticipate a small increase in the use of Norwegian and international cadets, and they expect to maintain the same number of Norwegian apprenticeships.

Figure 26: Number of employees laid off, terminated or hired in 2016



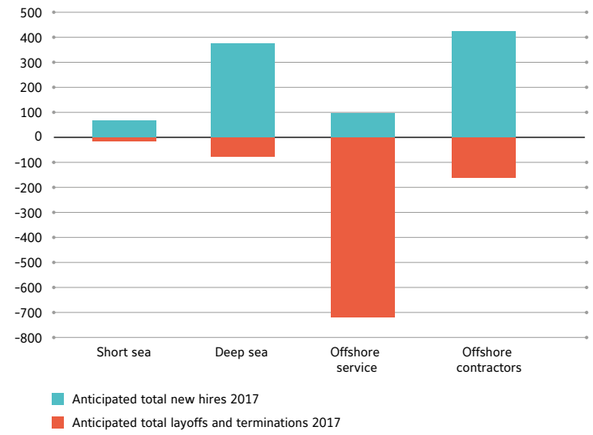
SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION / MENON ECONOMICS

Figure 27: Distribution of those laid off or terminated in 2016



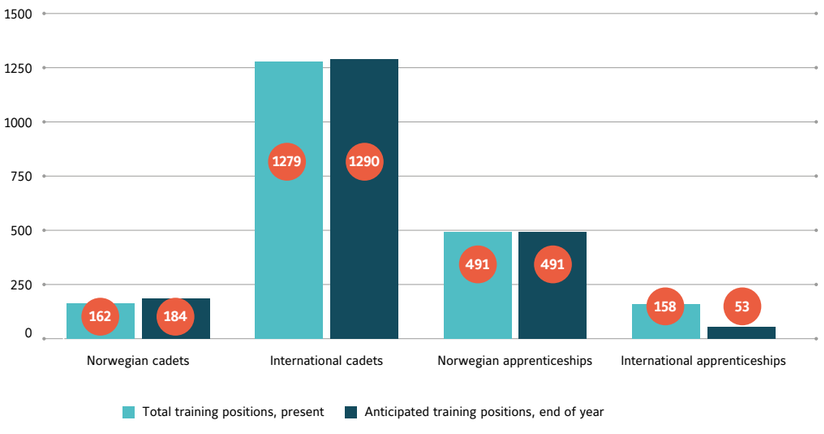
SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION / MENON ECONOMICS

Figure 28: Anticipated change in employment among Norwegian shipowners in 2017 by segment



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION / MENON ECONOMICS

Figure 29: Shipowners' expectations for training positions in 2017



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION / MENON ECONOMICS

"Five out of ten shipowning companies surveyed view access to capital as tight or very tight in the present market."

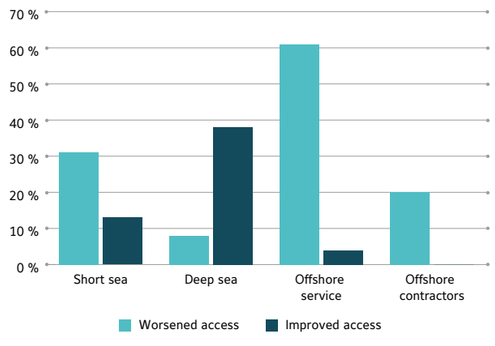
3.4 Shipowners expect continued tight access to capital

Shipowners' access to capital has become steadily more restricted since the oil price began to fall in 2014. Five out of ten shipowning companies surveyed view access to capital as tight or very tight in the present market. This is basically unchanged from 2016, with a slightly higher percentage of companies experiencing access to capital as good.

Looking at the individual shipping segments, there are only small changes from 2016 in the perception of the capital market. The exception is in the offshore contractor segment, where a higher percentage experience access to capital as tight.

For offshore service companies, the situation is critical. Eight out of ten companies experience access to capital as tight, an even higher number than last year.

Figure 30: Shipowners' expectations for capital access in 2017 – by segment



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION / MENON ECONOMICS

Deep sea companies are the least affected by tight capital markets, but also in this segment two out of five experience access to capital as tight. Among short sea shipowners, just over half perceive access to capital as tight.

Offshore service companies the most pessimistic regarding access to capital

Offshore service companies foresee no improvement in access to capital in 2017. Six out of ten expect that access will worsen during 2017, with only a few anticipating a minor improvement.

Among short sea companies, the majority expect worsened access to capital in 2017.

Optimism is greater among deep sea companies. Four out of ten expect access to capital to improve in 2017, a reversal compared to last year. At this time last year, only a few companies in this segment anticipated improved access to capital. This year one third of deep sea shipowners anticipate that access to capital will improve. Only 8 per cent of deep sea shipowners foresee worsened capital availability in 2017.

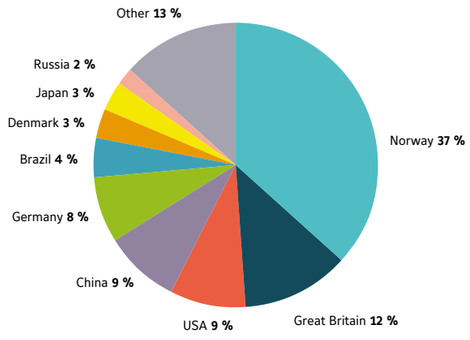
The situation is different in the offshore contractor segment. No companies in this segment expect access to capital to improve, while two out of ten anticipate worsened capital access. The remaining 80 per cent expect capital access to remain unchanged through 2017.

PHOTO: HAGLAND

Shipowners' geographical markets

Shipowners were asked to rank the three most important geographical markets "of particular interest for the future development of your company's business".

Figure 31: The ten most important markets for shipowners

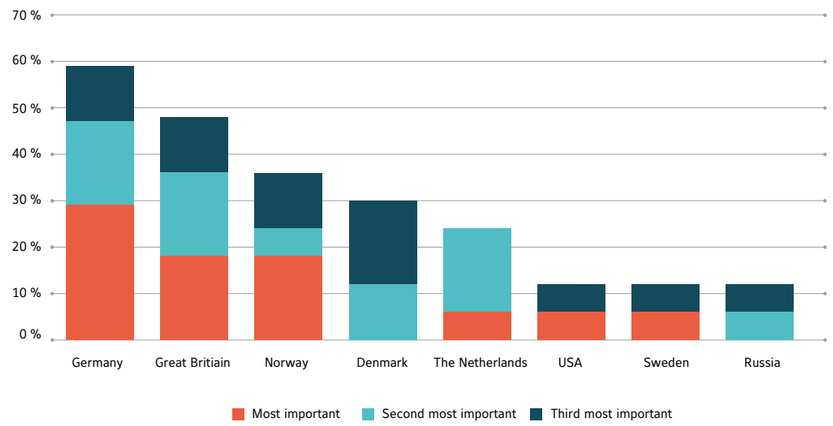


SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION / MENON ECONOMICS

3.5 Shipowners' geographical markets

Norway, including the NCS, is currently the single most important market for Norwegian shipowners. This is especially true for offshore service companies and offshore contractors, whose most important markets are Norway and Great Britain. However, international markets in total are more important than the home market for the Norwegian shipowners. For deep sea and short sea companies, international markets are the most important. Short sea companies count Germany as their most important market, followed by Great Britain. For deep sea companies, China and the USA are by far the most important markets.

Figure 32: The most important markets for short sea companies



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION / MENON ECONOMICS

Germany the most important for short sea companies

For companies operating in the short sea segment, Germany and Great Britain are the most important markets. Two-thirds name Germany as their most important market, while around half say that Great Britain is their main market. Norway and the Netherlands are also mentioned as important markets for the short sea segment. This indicates that the geographical focus for short sea shipowners is primarily in the North Sea and Skagerrak, but also in the Baltic.

China and the USA most important for deep sea companies

Deep sea companies name China and the USA as by far their two most important markets, followed by Norway, Japan, Brazil, and South Korea. All the geographical and economic regions in the world are represented when deep sea shipowners are asked to name their most important markets. This is a clear illustration of the segment's international nature. It also illustrates the strong connection between the Norwegian-controlled fleet and the economies of the world's two economic superpowers, China and the USA.

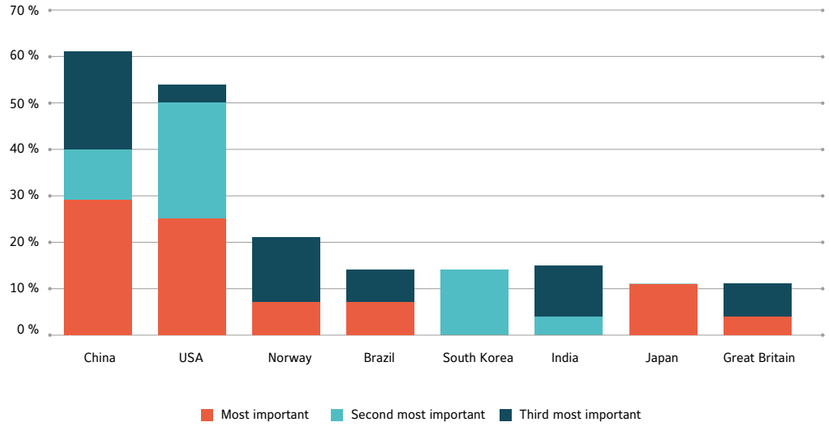
The Norwegian and British continental shelves most important for offshore service companies

Offshore service companies name Norway and Great Britain as their primary markets. Over half of offshore service companies name Norway as the most important market for their future development. Four out of five offshore companies name Norway or Great Britain as one of the three most important markets for their enterprise. The next most important markets are Brazil, the USA, West Africa, and Russia.

Norway the most important market for offshore contractors

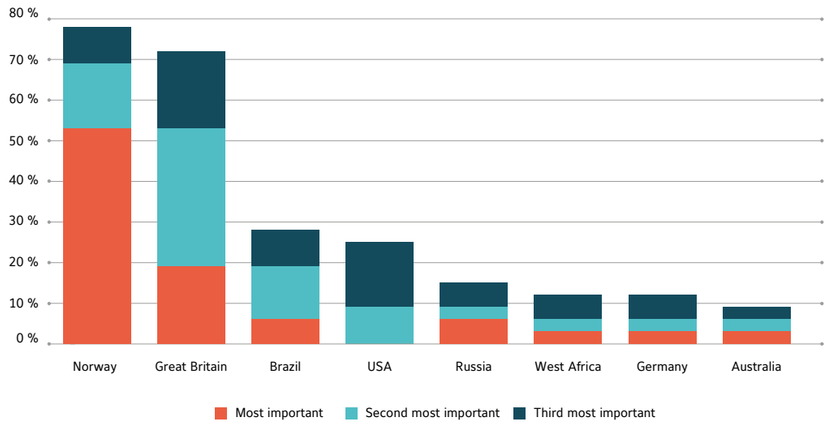
Offshore contractors name Norway as their most important market by far. 80 per cent of companies have Norway as their most important market, while Great Britain is named as one of the three most important markets for 87 per cent of offshore contractors. 70 per cent have Great Britain as their second-most important market after Norway.

Figure 33: The most important markets for deep sea companies



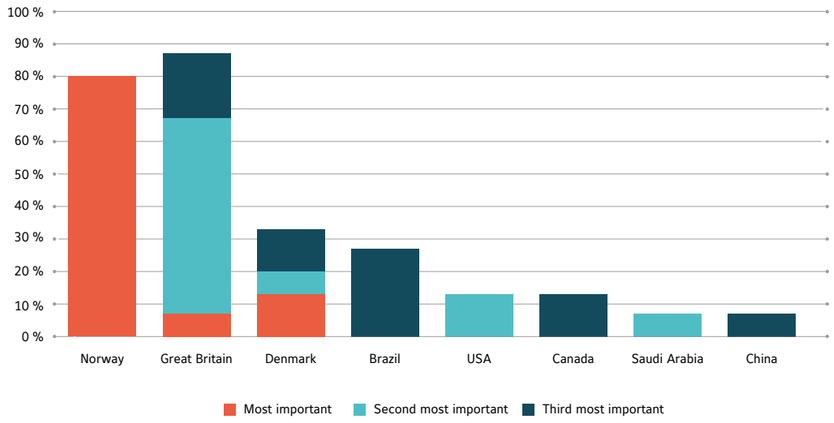
SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION / MENON ECONOMICS

Figure 34: The most important markets for offshore service companies



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION / MENON ECONOMICS

Figure 35: The most important markets for offshore contractors



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION / MENON ECONOMICS

Value creation statistics are gathered from the Maritime Forum Value Creation Report of 2017. These figures have been further refined by Menon Economics. The Maritime Forum Value Creation Report has been published annually for the last five years. The figures are from 2015.

The maritime industry – one of Norway's largest and most important

Norway is one of only a few countries with a complete maritime cluster, consisting of leading international shipping companies, shipyards, equipment manufacturers, classification societies, ship designers, brokers, and providers of insurance and financial services.

2015 was a difficult year for the maritime industry in Norway. Thousands of jobs were lost, and profitability was at a ten-year low. The Norwegian maritime industry had nearly NOK 175 billion in value creation in 2015, with 100,000 employees in Norway. This is a significant decrease from 2014, when the industry hit a record high of NOK 190 billion in value creation. The downturn is largely related to a significantly weakened offshore market, brought on by low oil prices and a drop in activity. Despite this, the maritime industry's substantial contribution to Norwegian value creation makes it one of Norway's largest and most important industries.

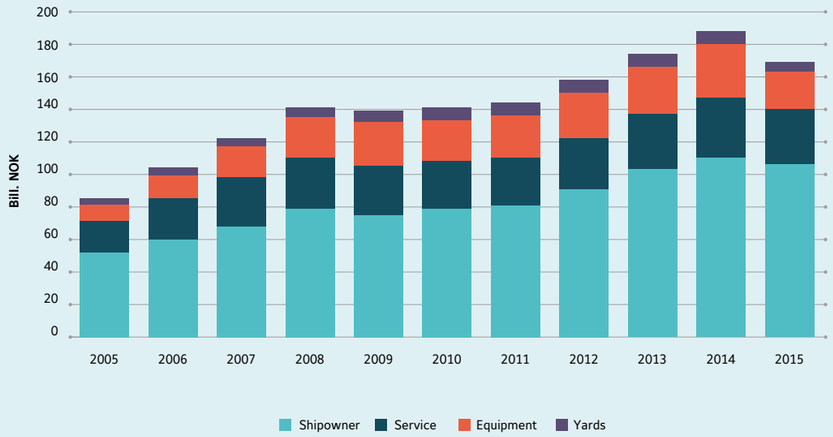
The maritime share of total Norwegian value creation is 11 per cent, excluding oil companies. This is a slight decrease from 2014, when the share was 12 per cent. The Norwegian maritime industry's strength lies in its capacity for continual innovation and renewal. This capacity for renewal will be a determining factor in the industry's ability to meet the formidable challenges in today's offshore markets.

A knowledge-based maritime industry

The Norwegian maritime industry has experienced strong growth in productivity. The industry manages to produce more, or better, without significantly increasing costs. One reason for this is that the maritime industry is becoming steadily more knowledge-based. There are several processes contributing to this development. Maritime companies, including shipowners, equipment manufacturers, yards and service providers, all play a central role in the development of highly advanced technologies for the oil and gas industry. Specialised vessels, positioning systems and control systems are just some of the areas of expertise where Norwegian companies command a leading position.

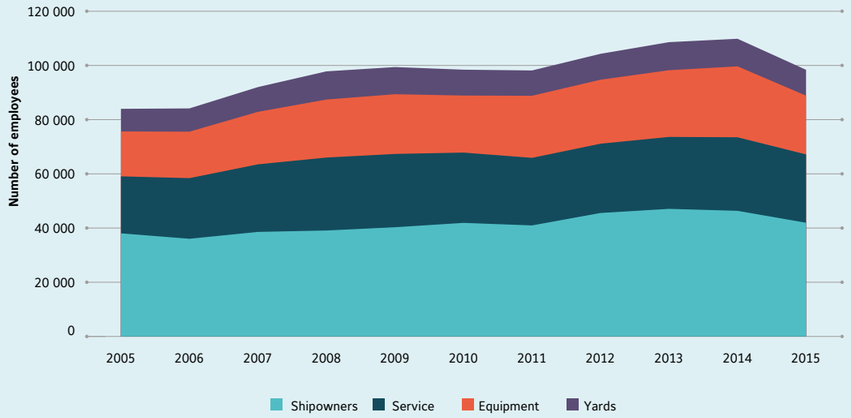
Shipping is increasingly integrated into a complex international network of logistics, requiring sophisticated databases, surveillance systems and means of communication. Norwegian companies like Wilh. Wilhelmsen, Kongsberg Maritime and DNV GL are key players in driving this development. Increasingly stringent requirements on safety and the environment are also stimulating continuous innovation and technological development in ship design, propulsion systems and ballast water treatment technologies, among other areas. Leaders in these fields include Ulstein Design, Eidesvik, and OceanSaver.

Figure 36: Value creation in the maritime industry 2005 to 2015 – by main groups (bill. NOK)



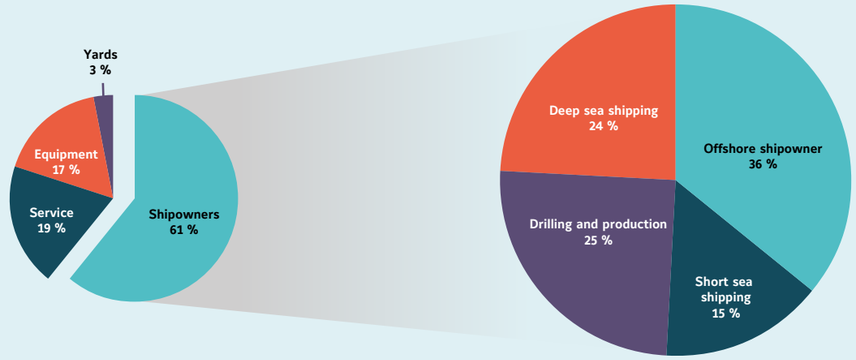
SOURCE: MARITIME FORUM / MENON ECONOMICS

Figure 37: Employment in the maritime industry in Norway 2005 to 2015 – by main groups



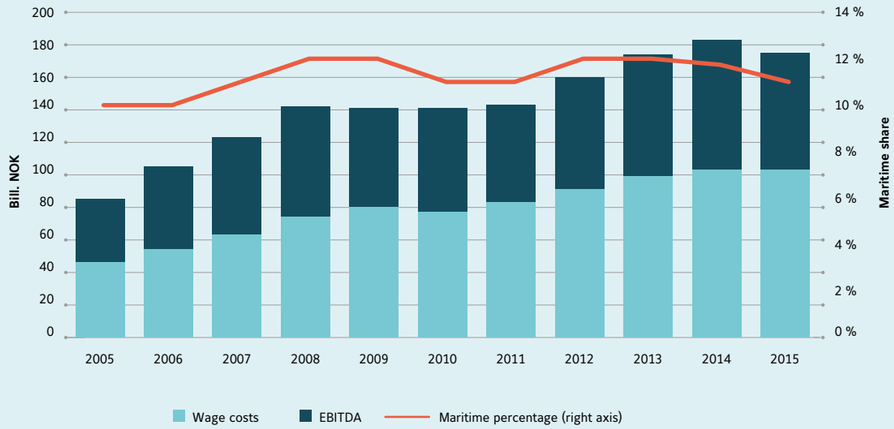
SOURCE: MARITIME FORUM / MENON ECONOMICS

Figure 38: Value creation by main groups and shipowning segment in 2015



SOURCE: MARITIME FORUM / MENON ECONOMICS

Figure 39: Maritime value creation and the industry's share of Norwegian value creation excluding petroleum companies - 2005 to 2015 (bill. NOK)



SOURCE: MARITIME FORUM / MENON ECONOMICS

Short sea

The short sea segment transports passengers and all types of freight along the coast of Norway, and to and from European ports. Seaborne transport is an important part of the transportation system, and 40 per cent of European domestic transport goes by ship. Short sea shipping is critical for both commercial shipping needs and the competitiveness of Norwegian industry.

Members of the Norwegian Shipowners' Association control around 150 short sea ships. The industry contributes to efficient logistical and transportation solutions. A single short sea ship can take the volume of several hundred trucks off the road.

Arriva Shipping AS owns and operates bulk and general cargo ships trafficking in Northern Europe. The company has since 1993 transported concrete elements used in construction of road and railway tunnels in Norway. One concrete element can weigh between 5 and 7.5 tonnes, and a single ship can carry on average 450 such concrete elements. By comparison, a single truck can carry only four elements at a time. If these elements were to be transported by truck from Haugesund on the west coast to southeast Norway, it would mean 110 trucks – per shipload – on Norwegian roads, rolling over the mountains and through the villages.

Color Line AS is building the world's largest hybrid ferry, scheduled to start service on the Sandefjord-Strømstad route during the summer of 2019. The ferry, to be built by Ulstein Group, will be a plug-in hybrid charged using a power cable transmitting green energy from a land-based generator, or on board by the vessel's own generators. The ferry will measure 160 metres in length, with a passenger capacity of 2000, and room for approximately 500 cars. The ship will operate on pure battery power in and out of Sandefjord, thereby eliminating harmful emissions in the area, including nitrogen and sulphur pollutants.

Deep sea

The deep sea fleet consists of several segments where Norwegian shipowners are world leaders and control significant market shares. These segments include car carriers, tankers, dry bulk, LNG, chemical, container and general cargo, among others.

Members of the Norwegian Shipowners' Association control more than 550 ships in the deep sea segment. The ships make nearly 30,000 port calls around the world each year. The companies maintain many offices abroad, giving Norwegian shipowners a strong presence on all continents.

Westfal-Larsen took delivery in 2016 of the world's first ocean-going methanol- fuelled ship. "Lindanger" was built in South Korea and flagged to NIS, and is the first in a series of similar ships to be chartered on long-term contracts to the Canadian company Waterfront Shipping. Methanol contains no SOx and contributes to a major reduction in NOx and particulate emissions.

Odfjell SE is building the world's largest chemical tankers with stainless steel cargo tanks. The company's four chemical tankers will be built at two yards in China. The ships are sized at 49,000 deadweight tonnes, with a capacity of 54,600 cubic metres. This makes them the largest chemical tankers in the world with stainless steel cargo tanks. The first ship is scheduled for delivery in the summer of 2019. These will be the most cost-efficient stainless steel chemical tankers ever built, designed with environmental efficiency in mind.

Offshore

Norway is one of the world's largest maritime offshore nations. Members of the Norwegian Shipowners' Association control more than 50 mobile offshore units, most of them drilling rigs, and the most advanced and modern offshore fleet in the world, consisting of 550 vessels. The fleet has grown considerably over the past ten years, but a large percentage of companies in this segment are now experiencing extremely challenging markets, resulting in many ships and rigs in layup.

The Norwegian maritime offshore value chain is complete. Shipowners participate in all phases of offshore petroleum activities, from the first seismic surveys and exploration, to production and decommissioning of spent fields. The Norwegian Continental Shelf is a highly important market for ensuring the international competitiveness of offshore shipping companies.

PHOTO: ISLAND OFFSHORE

Solstad Shipping AS took delivery of their newest ship, Normand Maximus in 2016. This is the largest vessel ever built by Vard. The ship measures 178 metres in length, 33 metres in breadth, and has a working deck of more than 2500 square metres. The construction ship is equipped with a pipe-laying system of 550 tonnes, allowing it to do pipe-laying under demanding conditions and in very deep water.

Østensjø Rederi AS is building two specialised vessels (SOV) for offshore wind, to be delivered in 2017 and 2018. Being based in Grimsby, the vessels will operate off the east coast of England. The ships have been commissioned to serve on a transport contract entered with Dong Energy in 2015. In response to the drop in activity in the petroleum sector, Østensjø Rederi has been seeking new business areas for their vessels, crew and offshore competence. Offshore wind is an attractive alternative to traditional offshore markets.

PHOTO: SOLVANG ASA

4 Maritime competitiveness

4.1 Blue growth – green transition

Norway – a world leading maritime nation

The Norwegian maritime cluster is a global leader, employing 100,000 people and with annual value creation of NOK 175 billion.

The Norwegian maritime industry has created a world-leading, knowledge-based cluster characterized by a unique ability to innovate and create value. At the same time, the industry can never assume that its innovative capacity cannot be copied by international competitors. In order to maintain our leading global position, the Norwegian maritime cluster must continue to excel in the areas of competence, innovation, and adaptability.

Demanding markets

Today's markets present major challenges for many in the maritime industry. Lower activity is giving rise to concern that key links in our national maritime value chain will be weakened by a loss of competence and capacity, thus depleting the ability of the Norwegian maritime community to grow and innovate.

When facing such demanding markets, it is more important than ever to maintain predictable and competitive maritime policies. Focusing on blue growth and the development of a sustainable ocean-based economy will enable the creation of new jobs and new opportunities, and allow Norway to continue to translate maritime knowledge and our close relationship to the sea into technological development and innovation.

Sustainable blue growth

In a world that will grow by two billion people by 2050, we must find new solutions that contribute to environmentally friendly and sustainable global growth. The oceans contain enormous potential for providing energy efficient transportation, production of food, and extraction of metals, minerals, and energy.

Seaborne transport is the most energy efficient and climate-friendly form of transportation, and about 90 per cent of world trade is transported by ships. If these maritime opportunities are to become the foundation for value creation and new jobs, we must continue to build on what we have accomplished, and what we are good at. With our unique maritime knowledge, and our particular ability and willingness to adapt and invest, Norway has every opportunity to take a leading role in the development of the blue economy.

The possibilities are formidable. 70 per cent of the earth is covered by ocean, 80 per cent is deeper than 3000 metres, and 90 per cent is unexplored. The Norwegian Shipowners' Association is convinced that the ocean will be central in resolving one of the biggest challenge facing the world today: securing sustainable growth to a growing global population.


PHOTO: NFD/REGJERINGEN

More ships flagging home

After several years of decline in the Norwegian International Ship Register (NIS) the tide has turned. More than 100 ships switched flags to NIS during 2016, raising the number of ships in the NIS fleet to around 580. With 57 cancellations, the net increase since 2015 stands at 47.

According to the Norwegian Maritime Authority, 35 of the ships were flagged to NIS in response to changes in trade area limitations implemented on 1 March 2016. Among other changes, construction ships operating on the Norwegian Continental Shelf can now be registered in NIS.

Solstad Shipping flagged home 11 ships in 2016, the first of which was *Normand Vision*. The ship was launched in 2014, with Minister of Trade Monica Mæland as benefactor. The re-flagging was celebrated in March of 2016, with the Minister of Trade and Director Olav Akselsen of the Norwegian Maritime Authority presiding over the ceremonies.

4.2 Active maritime policies work

Shipping is a global industry

The Norwegian maritime industry is international, and thus highly exposed to competition. This makes it vulnerable to changes in terms and conditions, national as well as international.

Acknowledging the international nature of shipping is important for formulating competitive maritime policies. To maintain a leading maritime position internationally, it is also important to have a good three-party cooperation between the maritime business community, unions, and the authorities. History has shown that both good and bad maritime policies generate immediate effects.

Maintain a competitive tonnage tax regime

A competitive Norwegian tonnage tax regime is critical to keep Norway attractive as a host country for shipowners and other maritime activities. The regime's competitiveness must continuously be maintained in order for shipowners to find it attractive to invest in and from Norway.

Strengthen the position of the Norwegian flag

A significant number of ships sailing under the Norwegian flag is an important prerequisite to Norway's continued ability to influence international shipping policies and laws. Norwegian ships have also proven to be an important arena for developing Norwegian maritime competence.

Strengthening the Norwegian flag is in particular dependent on two factors: a competitive tax refund scheme for Norwegian seafarers within all segments of NOR and NIS, and a high level of service and quality in the Norwegian Maritime Authority.

Strengthen the tax refund scheme for seafarers

A competitive tax refund scheme is critical to ensure that Norwegian seafarers are recruited to Norwegian-registered ships. The purpose of the tax refund scheme is to ensure the competitiveness of Norwegian seafarers internationally. In order to secure Norwegian maritime competence, it is essential for the tax refund scheme to be internationally competitive. This is unfortunately not the case today.

> "Norwegian ships have proven to be an important arena for developing Norwegian maritime competence."

Good access to capital is important

Shipowning and investing in new ships, new technology or other innovations is extremely capital intensive. Access to capital is critical for growth and development in the maritime sector. Over the past year in particular, banks and financial institutions have tightened lending, resulting in considerably restricted access to capital, while the cost of available capital has risen.

Strong export finance solutions from The Norwegian Export Credit Finance Agency (GIEK) and Export Credit Norway are essential for competitiveness and employment in the maritime industry. A well-functioning export finance system that ensures access to financing of highly capital-intensive investments is of great importance.

Measures to strengthen the maritime competitiveness:

- Ensure an internationally competitive and predictable Norwegian tonnage tax regime
- Strengthen the tax refund scheme for Norwegian seafarers on ships in NOR and NIS
- Revise the refund level in NIS to a competitive level
- Ensure a competitive Norwegian flag (NOR and NIS)
- Ensure competitive export finance systems through Export Finance Norway and GIEK

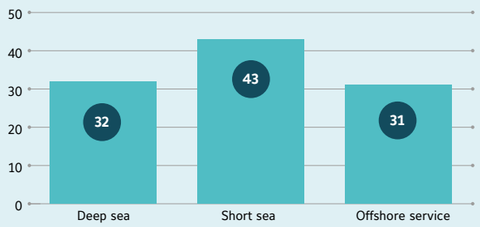
Significant potential for flagging more ships home

Shipping is largely regulated by international conventions. International operation demands equal terms for all players, regardless of flag state. A competitive Norwegian International Ship Register (NIS) must be based on international rules of law without Norwegian-specific interpretations. NIS must of course maintain its position as a register of quality, and not engage in competition with opportunistic flag states.

In order for them to commit to a quality register, shipowners must be confident that their flag of choice has ratified the principle international conventions, and has an administration with the competence, ability and resources to ensure the enforcement of rules. These qualities are determinate for a shipowner's choice of register. Other determinate factors also include commercial considerations such as fees and quality of service.

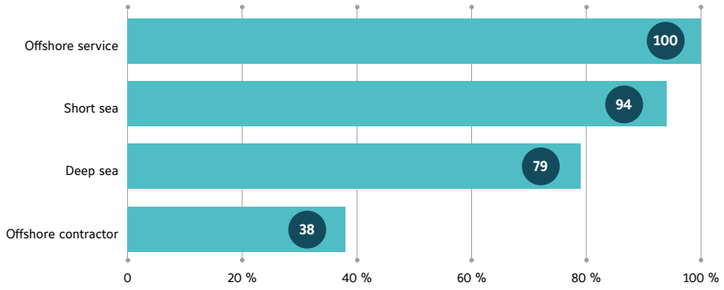
In this year's Outlook Report, members of the Norwegian Shipowners' Association number the re-flagging potential at 106 vessels, distributed between the deep sea, short sea and offshore service.

Figure 40: Potential for new ships in Norwegian Shipping registry



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION / MENON ECONOMICS

Figure 41: Percentage of shipowners that believe repealing the wealth tax would be sufficient to ensure competitive framework conditions for Norwegian private ownership



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION / MENON ECONOMICS

4.3 Good ownership policy is good for the industry

In Norwegian hands

In Norwegian business in general, and especially in Norwegian shipowning, there is a high degree of private ownership. Competitive terms and conditions for Norwegian private ownership are therefore essential to the continued development of maritime value creation in Norway.

The capital alone is not enought to realize an innovative and competitively Norwegian industry. Competent ownership – the ability to channel capital into the right projects and develop these to growing, competitive workplaces and businesses – is an important factor. Norwegian private owners are typically long-term in their commitments, and therefore willing to make an extra contribution in difficult times. Many private owners also make significant contributions to local communities, including promoting business development by investing in new companies. Local ownership is particularly effective due to the close relationships between owners and employees, and to the community in general.

Working capital

The Norwegian wealth tax discriminates Norwegian private owners, while favouring foreign and public ownership. The wealth tax is also regularly imposed on ownership (stock, shares, etc.) regardless of profitability or liquidity. This makes companies especially vulnerable in times of economic downturn if they need to pay dividends to allow the private owner to pay the tax. The wealth tax also weakens incentive to revitalize a business, as taxable values for older, depreciated assets are significantly lower than for new assets. This in turn harms productivity, and hampers innovation. The most important measure to strengthen access to competent and long-term capital and increase growth opportunities in Norway is to remove the wealth tax on working capital.

Norwegian rules governing residency tax

Norwegian tax residency rules present significant challenges to international owners with shipping interests in Norway. This applies in particular to the duration of allowed stays in Norway, limited under current law to 90 days per year over a three-year period if the owner is to avoid taxpayer status. This is generally viewed as too short a period for an owner to conduct business in an active and responsible manner. This applies in particular to companies emphasizing active owner participation in business affairs. Norway's tax residency rules are also out of synch with those of our neighbours. The rest of the Nordic countries operate with a time limit of six months on average. The current limitation strongly compromises Norway's attractiveness as a location for investment of foreign capital. Tax residency rules must therefore be harmonised with Nordic norms.

Measures to strengthen Norwegian private ownership:

- Introduce exemption from the wealth tax for working capital
- Harmonise Norwegian rules for tax residency with our Nordic neighbours

PHOTO: ARRIVA SHIPPING AS

4.4 Short sea shipping – the bridge to Europe

The seaway is the green way

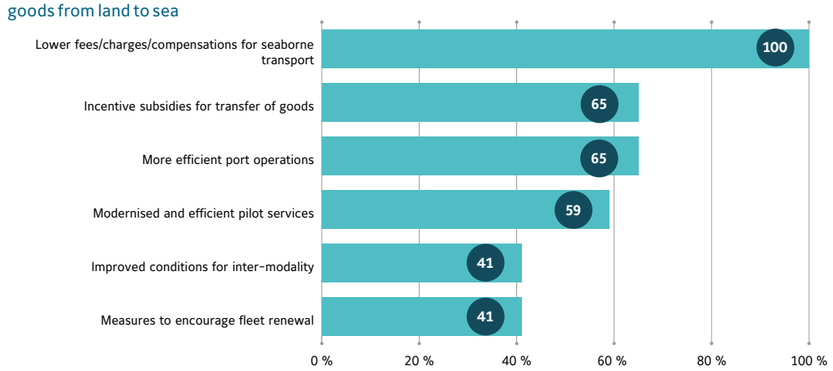
A single ship can carry the cargo volume of hundreds of trucks, with only a fraction of the harmful CO_2 emissions. Analysis shows a potential for transferring 5-7 million tonnes of cargo from land to sea. If the potential for transferring goods is utilised fully, 300,000 trucks can be taken off the road and their cargoes moved by sea. This would contribute to a reduction in the climate footprint of 300,000 tonnes of CO_2 annually, and reduce costs to society by NOK 1.3 billion.

In order to succeed, the competitiveness of sea transport must be strengthened, bringing it in line with other forms of transportation. This involves establishing a far more comprehensive, strategic and systematic approach to marine transport infrastructure than today. Development of major intermodal harbours will be a critical success factor in connecting national logistics in a more environmentally friendly, seamless infrastructure that includes sea, road and rail. The role of sea transport will be considerably larger in this type of system than it is today.

Ambitious goals

Europe is Norway's closest and most important trade market. The EU is working actively to move goods from land to sea. Land transport capacity is overextended in the EU, and work is underway to move more goods by sea, either by short sea shipping or through the canals. High-level EU transport policies are aimed at exploiting the full potential of short sea shipping, and achieving a European sea transport region without barriers. It is important for Norway to have equally ambitious goals. It was therefore welcome news when the Norwegian parliament in 2016 declared that 30 per cent of cargo transported long distances by truck should be moved by sea within 2030, and 50 per cent by 2050.

Figure 42: Percentage of shipowners naming the following framework conditions as important for transferring more goods from land to sea



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION / MENON ECONOMICS

The need to strengthen the competitiveness of short sea shipping

A united Parliament and successive governments have for years had the ambition to transfer freight from land to sea. To achieve this there must be a targeted focus on maritime transport.

Positive measures to strengthen short sea transport have been implemented over the past years. Simplifying and reducing fees, opening pilot transport services for competition, and increased use of Pilot Exemption Certificates have been important contributions towards improving the competitiveness of maritime transport.

In 2017, an incentive scheme for transferring goods from land to sea will be introduced. This should contribute to strengthening the competitiveness of sea transport, provided the scheme is sensibly applied. In addition, targeted measures like condemnation incentives and financing of innovation can make important contributions to short sea fleet renewal, provided the measures are applied effectively.

These measures will nonetheless not be enough to meet the Parliament's ambitious freight transfer goals. Improved framework conditions for shipping are also needed. The regime relating to fees and charges must be reduced and simplified. Ports must be made more efficient through regionalisation and specialisation, among other measures. It is essential that infrastructure, both on the coast and in and around ports, are significantly improved. More comprehensive transport policies addressing all transportation modes are needed, and seaborne transport must be given higher priority in the National Transportation Plan.

Considering the multi-partisan consensus on strengthening maritime transport, and ambitious official goals for freight transfer, it remains a paradox that sea transport infrastructure and emergency preparedness is almost fully financed by the industry, while road infrastructure is largely government financed or funded by motorists.

A more modern and efficient pilot service

The ability to monitor the coast has been considerably improved by developments in technology. In addition, the Pilot Exemption Certificate system has been improved. For these reasons, we believe that it is time for a change in the scope and structure of the Pilot Service and Vessel Traffic Service. Vessel traffic services can be consolidated and pilotage streamlined, among other measures.

Measures to strengthen short sea shipping's competitiveness:

- Simplify and improve the regime of fees and charges for seaborne transport
- Modernise and improve Pilot Service and Vessel Traffic Service
- Make ports more efficient hubs for freight transport
- Maintain and improve fairways and infrastructure serving ports
- Strengthen innovation programs for development and installation of climate and environmental technology

4.5 Competitiveness on the Norwegian Continental Shelf (NCS)

Demanding times

The low price of oil, low economic growth, and a reduction in oil and gas activities in Norway and internationally has hit the entire maritime value chain hard. Offshore shipowners in particular have experienced a dramatic decline in activity. Companies are doing everything they can to survive in this historically tight market. The consequences of reduced activity and an excess of idle tonnage are lower day rates that force ships into layup, laid off or fired employees, delayed deliveries, and a drop in new orders. In addition, we are witnessing consolidation between shipping companies and owners.

Competitiveness at sea

The Norwegian Shipowners' Association, The Confederation of Norwegian Unions, The Norwegian Seafarers' Association, The Norwegian Maritime Officers' Association and The Norwegian Association of Marine Engineers have joined together in the initiative Competitiveness at sea. The goal is to contribute to an even stronger focus on productivity and efficiency in shipowning companies, to reduce cost levels, and to strengthen the competitiveness of Norwegian shipowners.

The most modern offshore fleet in the world

Norway is one of the world's largest maritime offshore nations. Members of the Norwegian Shipowner's Association control more than 50 mobile offshore units, most of them drilling rigs, and the most advanced and modern offshore fleet in the world, consisting of 550 vessels. The fleet has grown considerably over the past ten years, but a large percentage of shipowners in this segment are now experiencing extremely challenging markets, resulting in many ships and rigs in layup.

KonKraft
Konkurransekraft på norsk sokkel

Competitiveness – the NCS in transition

On 31 January 2017, the advisory board of KonKraft officially approved the start of the project "Competitiveness – the NCS in transition". The goal of the project is to secure value creation, employment, and the global competitiveness of the Norwegian oil and gas industry in a long-term perspective. The project's executive committee will deliver a set of recommendations by 1 January 2018.

KEY THEMES FOR THE COMMITTEE WILL BE:

- Ensure that cost reductions and measures lead to real and robust, long-term changes
- Secure activity levels sufficient to maintain and develop the Norwegian competence and supply cluster
- Make a high level of Norwegian content attractive in both business and socioeconomic perspectives
- Propose necessary improvements in framework conditions to the government
- Recommend measures from industry and government to realise socioeconomically profitable projects
- Recommend short-term measures if they can contribute to securing long-term value creation
- Oversee relevant sections of the action plan for "Roadmap for the NCS: Value creation and reduced greenhouse gas emissions on the NCS up to 2030 and 2050"
- Increase uptake of digital solutions, automation, and robotics
- Increase the degree of standardisation, simplification and industrialisation
- Improve cost efficiency in the oil and gas industry
- Strengthen cooperation between operators and suppliers through improved collaboration, efficient interfaces, re-use of concepts and experience transfer

EXECUTIVE COMMITTEE MEMBERS:

Walter Qvam, *Committee Chair*
Hans-Christian Gabrielsen, *Deputy Managing Director*, LO
Jakob Korsgaard, *CEO*, Maersk Drilling Norge
Monica Bjørkmann, *Vice President*, Subsea7
Jannicke Nilsson, *Senior Vice President*, Statoil
Alv Solheim, *Technical Director/ Deputy Managing Director*, Wintershall
Atle Tranøy, *corporate employee representative*, Aker ASA
Lill Heidi Bakkerud, *Managing Director*, Industri Energi Statoil
Jan Arve Haugan, *CEO*, Kværner
Linn Cecilie Moholt, *Managing Director*, Karsten Moholt
Ståle Tungesvik, *Project Manager*

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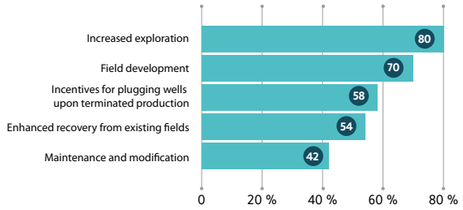
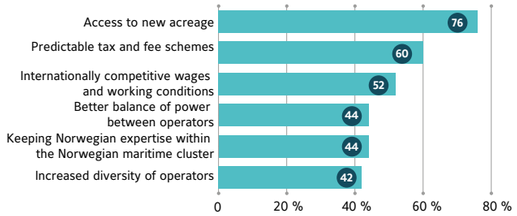
Figure 43: Percentage of shipowners naming the following measures as the most important for simulating activity on the NCS in the near future



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION / MENON ECONOMICS

Figure 44: Percentage of shipowners naming the following measures as the most important for ensuring an attractive NCS



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION / MENON ECONOMICS

USA gets first offshore wind park

Fred. Olsen Windcarriers installed five offshore wind turbines in the USA during the summer of 2016. The jack-up vessel *Brave Tern* transported the installations from Europe to the US, where they were installed near Block Island off the Rhode Island coast.

The five Alstom Halaide 6MW turbines were installed in 22 metres of water and produce 125,000 megawatts annually, enough to supply electricity to 17,000 American homes.

Using their specialised installation vessels, Fred. Olsen Windcarriers have installed the largest offshore wind turbines in the North Sea over the past years.

PHOTO: FREDOLSEN WINDCARRIER

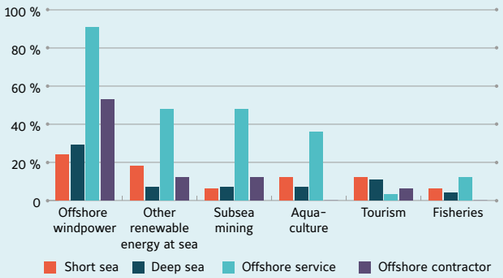
Investing in renewable energy sources: offshore wind

Wind energy production is a significant industry in Europe, with over 300,000 jobs and NOK 699 billion in annual turnover. Wind energy has significant potential for decarbonising energy production, improving energy security, and providing European companies with competitive advantages.

Offshore wind has significant potential within renewable energy production in many parts of the world. Europe is at present the global leader in offshore wind, and strong growth is anticipated in this sector, both in Europe and around the world, though Europe is still the most mature market. While offshore wind is still in its early stages in other parts of the world, the sector has more than 20 years of experience in Europe. There has been continuous growth since 2012 in the production of power from offshore wind. The Norwegian Shipowners' Association supports the Parliament's request that the government, in connection with the review of the Energy Act, propose a strategy that would promote the realisation of demonstration projects for floating offshore wind and other forms of ocean-based renewable energy technology. The strategy should also examine opportunities for the development of the Norwegian supplier industry within renewable energy production.

The Norwegian Shipowners' Association also sees the need for mapping out of opportunities for public financing of a pilot installation for floating offshore wind, and the establishment of standards for certification and verification of offshore wind.

Figure 45: Percentage of shipowners naming the following ocean industries as interesting for its activities in the future, by segments



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION / MENON ECONOMICS

Consistent and high levels of activity on the NCS

The Norwegian offshore maritime value chain is complete. Shipowners participate in all phases of the petroleum industry offshore, from the first seismic surveys and exploration activities, to production and decommissioning of installations. Active Norwegian petroleum policies are decisive in ensuring consistent and high levels of activity on the NCS. It is critical that petroleum policies reflect the long-term nature of the oil and gas industry. This in turn requires long-term and predictable framework conditions.

The oil and gas industry will be among Norway's largest and most important contributors to added value and employment well into the future. Norway has developed world-leading competence and capacity over the years. If this is to be maintained, sound exploitation of resources ensuring consistent and high levels of activity is required.

A bridge of activity

The oil and gas industry finds itself in a very difficult situation at present, with activity levels falling on the NCS. The markets are expected to remain challenging also in 2017. It is essential for the industry to maintain critical competencies and growth potential in order to be prepared when the upturn arrives. This can be achieved by implementing temporary, reversible and counter-cyclical measures for limited periods. These measures should have a motivating effect on the value chain and be coupled to exploration, field development, maintenance, and plugging of wells.

One such measure is the consensus in Kon-Kraft on reducing the depreciation period from six to three years, in order to make marginal fields more profitable. Shortening the depreciation period would contribute to more fields on the NCS being developed, thereby securing activity and jobs in the industry.

Health, safety, and the environment on the NCS

The Norwegian petroleum industry is known for its high level of performance on health, safety and the environment (HSE). This applies to all segments of the industry, not least mobile drilling units and vessels. Good HSE performance is a prerequisite for operating on the NCS, and represents a competitive advantage for the fleet elsewhere in the world. In demanding times for the industry, safety becomes an even more important concern. Prudent cost-effect evaluations of measures and changes in regulations are very important. The Norwegian Shipowners' Association believes it is fully feasible to simplify and streamline, while further improving safety performance on the NCS.

Norwegian law and Norwegian wages and working conditions on the NCS

The trade union Industri Energi has for years claimed lawless conditions on so-called multi-use ships on the Norwegian Continental Shelf (NCS), and they have proposed requirements that would include these ships in the Norwegian Working Environment Act. Seafarers' organisations have demanded Norwegian wages and working conditions for all ships performing support services on the NCS. These proposals would have industrial, legal, commercial and operative consequences.

The term "multi-use vessel" has no legal, commercial or operative definition beyond the fact that many vessels can obviously be used for multiple purposes. There is no doubt that such vessels are subject to comprehensive and detailed requirements under international law, class rules, industry standards, and customer demands. The Norwegian Petroleum Safety Authority performed a thorough evaluation of this situation last autumn, and concluded that the rules are "complex, but not unclear". Furthermore, there is no documentation indicating more accidents per million working hours on these vessels compared to rigs or fixed installations.

Common to all the proposals is that they will lead to market barriers and restrictions that weaken competition and drive costs, in direct conflict with other ongoing initiatives to bring down cost levels on the NCS. The competitiveness of the NCS and its attractiveness for international companies will be further weakened, with negative consequences for the entire domestic offshore industry.


PHOTO: SONDRE SOLVANG, ISLAND OFFSHORE

Statoil – from enabler to centre of power

For more than four decades the NCS has served as an incubator and a catalyst for developing one of the world's most advanced maritime offshore clusters, where nearly a quarter of a million people have their place of work. Diversity of players in close cooperation and intense competition has been the recipe for success in one of our most important and most innovative industrial clusters.

The emergence of a steadily more dominant Statoil over time has challenged this vital industrial dynamic, and the collapse of oil prices has strongly exacerbated this shift. Statoil now exploits its position in a way that threatens to weaken the supplier industry and collaboration in the value chain. In our opinion, the time has come to take new political measures. These measures should contain two key elements:

First, Statoil's share of activities on the NCS should be reduced, as the Conservatives, The Christian Democrats, the Left Party, and the Progress Party all called for in 2007. These parties proposed a reduction "for producing fields...for fields under development or in the late planning stages, as well as for exploration licences." Statoil controls 70-80 per cent of all production on the NCS, including State Direct Financial Interest (SDFI). It is worth noting that both the ESA and the European Commission in general recommend heightened observation when a company obtains a market share of 40 per cent or more.

Second, responsibility for the overseeing of Statoil should be removed from the Ministry of Petroleum and Energy (MPE), as the same ministry is also responsible for regulation of Statoil's resources. This mixing of roles represents a clear breach of OECD guidelines for the managing of state-owned companies. This unfortunate relationship is further exaggerated by the fact that the MPD is also responsible for awarding licences on the NCS.

Diversity among players on the NCS ensures innovation

Competition on the NCS is essential for promoting innovation and new technological solutions. Statoil controls 70-80 per cent of all production on the NCS, including State Direct Financial Interest (SDFI). In order to ensure increased competition and a healthier market balance, it is important to encourage diversity among players, and a higher number of strong operating companies on the NCS.

Measures to strengthen competitiveness on the NCS:

- Ensure a consistent and high level of activity on the NCS
- Encourage increased actor diversity and competition on the NCS
- Ensure stable and predictable taxes and fees
- Strengthen three-party cooperation
- Continue awarding pre-defined areas
- Maintain consistent activity levels through counter-cyclical measures
- Perform cost-benefit evaluations of measures and regulatory changes
- Strengthen proactive governmental contribution to lowering costs on the NCS
- Strengthen petroleum-related research and development

4.6 Green shipping

The winners of tomorrow

The Norwegian Shipowners' Association has a forward-leaning and ambitious 'zero-emissions vision' where the goal is for Norwegian shipping and offshore contracting activities to generate no environmentally harmful emissions or discharges to air or sea.

Tomorrow's winners in international markets must focus on energy efficiency and environmentally friendly solutions. The Norwegian-controlled fleet of ships and rigs is highly advanced and broadly diversified. The Norwegian maritime cluster leads the way in the development and implementation of technologies and concepts that contribute to lower emissions and an improved environment.

Green markets make green shipping

Environmentally friendly transport must be profitable. There must be some degree of certainty that markets desire and are willing to pay for costly environmental solutions for the shipping industry. Today the willingness to pay for 'green ships and services' is weak among buyers of transportation services, but getting stronger. Governments of every country, and companies with significant public ownership, have a responsibility to seek out and be willing to finance viable solutions for green shipping.

The power of maritime innovation

A number of pioneering concepts are under development as a result of the maritime cluster's unique capacity to innovate. Examples include the on-going development of gas-powered and energy efficient low emission engines, new hull and propeller designs, and development of hybrid solutions employing batteries, LNG, and fuel cells.

It is essential to work towards development of commercially relevant alternatives, in particular alternatives to heavy fuel oil. Use of alternative fuels and power sources such as LNG, biodiesel, batteries and various hybrid solutions should be made more attractive through solid and predictable framework conditions and financing of research and development. Investments in infrastructure will also be required.

Maritime environmental technology

Digitalisation is the foundation for innovative maritime technology that can provide new opportunities in both new and existing markets. Autonomy, automation and remote operation represent huge potential for reduced costs and safer operations, and can help make sea transport competitive in new segments.

The transportation sector produces one-third of Norwegian greenhouse gasses, and emissions are increasing. The growth in freight transport by road is contributing to this increase. In order to reduce greenhouse gas emissions from transportation, more freight must be transferred from land to sea,

“Tomorrow’s winners in international markets must focus on energy efficiency and environmentally friendly solutions.”

PHOTO: ROLLS ROYCE

The Green Coastal Shipping program

Green Coastal Shipping (GCS) is a collaborative project between the government and the private sector, with the goal of encouraging expanded use of environmentally friendly fuel solutions on ships. The purpose of the program is to give Norway a world-leading position in environmentally friendly and efficient shipping.

GCS differs from other programs and initiatives in the maritime sector in that it focuses primarily on expanding use of technological solutions. It is important that the entire value chain work together to arrive at robust solutions, and to identify and remove barriers. The program is thus intended to serve as a catalyst for green change.

In its current phase the program is focused on pilot studies in the following areas:

- Hydrogen-powered vessels
- A ferry powered by biofuel
- Autonomous zero emission ships
- Low emission fish transport

and every form of transportation must become more energy efficient, and more environmentally friendly.

Environmental agreements between governments and industry have proven to be a highly effective means of regulation, where industry commits to reaching an agreed-upon reduction in emissions by paying into an environmental fund that reimburses companies for expenses incurred in implementing measures to reduce emissions. Environmental agreements such as the Norwegian NOx fund and the SO_2 agreement for process industry are good examples of this. These agreements have received considerable positive attention outside of Norway.

The Norwegian Shipowner’s Association believes that an international CO_2 fund for international shipping should be established. An international CO_2 fund would help break down barriers that keep new environmentally friendly technologies from being taken into use. The Norwegian Shipowners’ Association also supports the establishment of a national CO_2 fund for those segments of industry presently subject to the CO_2 tax, but which would not be covered by an international CO_2 fund. A national CO_2 fund should be established along the same principles as the NOx fund.

Plastic in the oceans

Plastic in the oceans has been described as the world’s fastest growing environmental problem. According to the UN Environmental Program, more than eight million tonnes of plastic end up in the ocean each year. If this problem is not resolved soon, there will be more plastic than fish in the sea by 2015.

The Ocean Cleanup project claims to have arrived at a commercially viable system for cleaning up fully 70,000,000 kilos of plastic over a ten year period. 22 year-old Boyan Slat is heading up the initiative. He plans to launch 100 kilometres of floating barriers on the world’s oceans.

In Norway, Havila shipping has made their *PSV Havila Favour* available for the project ‘Clean Coast’ in Vanlyen. In addition, 17 vessels have over the past year delivered floating garbage through the project ‘Fishing for Litter’, under the direction of the Norwegian Environmental Agency. According to the Environmental agency, around 15 per cent of marine garbage washes ashore and remains on the beaches, while 15 per cent floats around in the sea. The remaining 70 per cent sinks to the bottom and ends up in the nets of the many fishing vessels plying coastal waters.

Debris is delivered at repositories in three harbours: Tromsø, Ålesund, and Egersund.

The Norwegian company Quantafuel has developed a catalytic converter that transforms plastic into synthetic fuel. They now plan to install the device on a supply ship and begin collecting plastic from the world’s oceans. The company has entered into cooperation with Norlense, a producer of boom systems used in oil spill containment and cleanup. They will now adapt the booms for collecting plastic.

International environmental and climate regulations

As one of Norway’s most internationally oriented businesses, the global marketplace and developments in global regulations are of great importance for the maritime industry. Market access enables extensive trade in goods and services across the world’s oceans, and international regulations are determinate in ensuring that this trade can take place as efficiently as possible. Common international regulations are especially important with regards to the environment, where environmental regulations often require major investments, but also within other areas such as damage and loss cover.

One particular challenge is that many countries neglect to ratify international conventions that have taken years to reach consensus on. It is high time that other nations follow Norway’s example and ratify the Hong Kong Convention establishing global regulations for ship recycling. The same applies for the HNS Convention regarding compensation for pollution damage from hazardous and noxious substances carried by ships.

The Norwegian Shipowners’ Association is of the opinion that ratification of international conventions is a prerequisite for preventing regionalisation of shipping regulations, for example in the EU. For this reason, we view it as highly positive that the IMO has initiated a binding process for implementing a system to regulate CO_2 emissions from shipping in keeping with the Paris Accords (COP21).

Measures to support green shipping:

- Strengthen support for the Environmental technology enterprises financing scheme
- Extend the NOx fund beyond 2017
- Establish an environmental agreement between government and industry to reduce CO_2 emissions
- Stimulate increased use of hybrid solutions and alternative fuels like LNG, biodiesel and batteries
- Strengthen the Norwegian Research Council’s user-defined innovation program


PHOTO: THOMAS KOHNLE, ODFJELL

Record number of cadet positions

Despite the challenging times facing much of the industry, 531 cadets were enlisted as of 23 February 2017, a new record.

Several companies are expected to hire more cadets before the cadet-year 2016 ends on 31 March 2017.

"We see the effects of the downturn in the offshore industry, but many shipowners are thinking long-term and hiring cadets if they can, also on this type of vessel," reports Tor Egil Fjelde, Maritme Forum's Coordinator of cadets.

4.7 Proactive policies for research, education and competence

Innovation and adaptability

If Norway is to maintain its leading role in the maritime industries, a proactive competence development policy is needed as part of a competitive maritime policy. Seafarers' practical knowledge is important for innovation. In order to maintain our leading, knowledge-based maritime cluster, we must invest in education, competence, research, and innovation, both at research institutions and in the industry as a whole.

The industry today finds itself in a situation requiring a high degree of innovation and adaptability. The fundamental, long-term requirements are to strengthen competitiveness through development and application of new technology, develop new solutions to take advantage of opportunities in the ocean space, and ensure that the industry takes a leading role in the transition to a green economy. This also means new demands on the ocean employee of tomorrow. The industry must attract, educate and cultivate the right people with the right competence.

Integrated practice and flexibility in education

There is a need for a flexible, scalable educational system, with more practical experience integrated into maritime educational programmes than today. Maritime education should encompass technical schools and universities, and transferring between them should be made as easy as possible. Traditionally, the two recruit in different ways, with graduates going on to fill different roles in the industry. It is also important for educational institutions to forge close ties with local businesses, and costly educational infrastructure must be consolidated wherever possible.

Strengthen maritime educational financing

It is a paradox that technical and maritime education in Norway does not fare better in the present financing scheme, neither at the technical, bachelor or master degree level. Increased funding for technical and maritime education is necessary to avoid further erosion in the fields of mathematics, technology, and scientific education and research.

Develop the ocean space

There is a need for investment in new and future-oriented infrastructure for research and development in the ocean space. It is therefore crucial that the Ocean Space Centre, a knowledge centre for future ocean space technology in Trondheim, will be fully realised. Many of the challenges facing the world today require a long-term commitment to research. Long-term and predictable research funding is therefore essential. Increased public funding to research in prioritised industries is a good investment.

Increased collaboration between academic institutions, and with the industry

Further development of the maritime industry is highly dependent on solid cooperation between education, research and industry, and between different disciplines. Change is most likely to occur in the interface between existing competence and knowledge from other fields. Access to complementary competence and knowledge centres is determinate for innovation and adaptation.

Collaboration and our ability to coordinate and extract synergies from work in different fields of competence, academic and commercial, is essential for maintaining and developing our position as a knowledge-based nation. MARKOM2020 has played an important role in coordinating between numerous academic institutions. Another significant contribution from the industry is the sponsoring of more than 20 professorships at Norwegian institutions of higher learning in the MarHub (Global Maritime Knowledge Hub) initiative. There is much untapped potential in further strengthening collaboration and development between academic institutions and the maritime industry, and MarHub will be given even higher priority starting in 2017.

MARITIM 21

Maritim21 is a comprehensive strategy for maritime research and innovation presented to the Minister of Trade and Industry Monica Mæland on 1 October 2016. The report emphasises the need for more investment to ensure that the Norwegian maritime industry is a technology leader in international competition.

The goal of Maritim21 is to stimulate the research, development and innovation that contribute to sustainable growth, value creation and enhanced competitiveness in the maritime industry, and realising the potential synergies between the ocean industries. Maritim21 has its foundation in both industry and institutions of higher education.

The report states that in order to reach its goal, investment in research, development and innovation must be increased, from both companies and the government. Of particular importance is to develop and activate new technologies that can give Norwegian companies a competitive advantage.

www.maritim21.no

Measures to strengthen policies for research, education and competence:

- Invest in new and future-oriented infrastructure for research
- Build the Ocean Space Centre
- Further strengthen MARKOM2020
- Stronger focus on MarHub (Global Maritime Knowledge Hub)
- Enhance support for ocean space research and technical research in maritime fields, offshore, and ocean farming through the research program MAROFF
- Increase the integration of practical experience in maritime education
- Ensure good integration of maritime educational institutions in local communities, and consolidate costly maritime educational infrastructure
- Secure financing for technological and maritime studies

PHOTO: HØEGH AUTOLINERS GROUP

4.8 Norwegian trade interests

Globalisation critical for welfare

Trade policy has become a central topic of public debate in many countries over the past years. The Norwegian Shipowners' Association observes with concern that scepticism towards well-regulated, open markets is growing. We hold the opinion that globalisation – that is, wide-spread buying and selling of goods and services across borders – is critical to national and international prosperity.

Increased trade also contributes to a more peaceful and stable world. For this reason, it is imperative that the growing scepticism towards trade agreements is met not by acquiescence, but rather by an ambition to forge trade policies that, to the highest extent possible, address the concerns which many harbour.

Protectionism and national interests

Increasing maritime protectionism and national regulations are cause for concern in many countries and markets, and represent a challenge to the global maritime industry. As a small nation with an open economy, it is essential to maintain Norway's primary and prioritised foreign policy interests: to prevent the weakening of international law and multilateral governance. Maintaining and strengthening the system of the multilateral trading system is in Norway's main trade interest.

At the same time, it is critical to understand the new reality in global trade policy. Norway must play a constructive role in multilateral fora, and actively engage in an increasing number of regional processes and regulations in order to protect Norwegian commercial interests. In a world marked by weakened confidence in international collaboration and the emergence of new power structures, it is important to ensure that regional economic integration supports the principles of open markets for international maritime transport. Protectionism and other trade-distortive measures must be resisted.

The EEA and Brexit

Brexit presents a formidable challenge to the EU and European cooperation. The Norwegian Shipowners' Association notes with concern that Brexit also impact negatively the domestic debate on Norway's relationship with the EU in general, and in particular the EEA agreement. The EEA guarantees Norwegian citizens and companies access to the European market on equal terms. It is difficult to overestimate the importance of this market access.

The EEA agreement is also important for the Norwegian shipping industry, especially for short sea shipping with more than 100 calls daily in European ports. Common rules for the free flow of services and people are a prerequisite for this system to work in practice. The UK is a vital market for Norwegian exports. The Norwegian Shipowners' Association therefore maintains that market access to the UK must be sustained at least at the present level once Brexit takes effect, and that strong and constructive regulatory cooperation between the Norwegian and British governments is maintained, in order to avoid technical barriers to trade.

Measures to promote Norwegian commercial interests:

- Norway must continue to support the World Trade Organization as the most important international trade policy arena
- Norway must continue to be a champion for global regulations and international law
- Norway must work quickly to establish trade agreements with emerging economies
- The EEA agreement must be protected
- An eventual trade agreement between Norway and the UK following Brexit must ensure equal or better market access than pre-Brexit, and also ensure close and strong cooperation between the Norwegian and British governments

PHOTO: SIMON MØKSTER SHIPPING AS

The first Polar Code-approved ship

Stril Polar was in November 2016 approved the first Norwegian vessel Polar Code-approved ship. With ice class and winterization already in place, DNV-GL facilitated the requirements regarding risk assessment of operations and equipment on board.

"Implementing the Polar Code for Stril Polar gives us the opportunity to operate in polar regions with assurances for the safety of ship, crew and the environment. A consequence of our successful cooperation with the NMA, DNV-GL and our insurance company is that we are motivated to certify other vessels in our fleet", says Anne Jorunn Møkster, CEO of Simon Møkster Shipping AS in a press release.

4.9 Sustainable development of commercial opportunities in the High North

The High North still highly attractive

In the Arctic, three continents converge. Here we find some of the largest concentrations of seafood, oil and gas, metal and mineral resources in the world, and here we see critical geostrategic interests intersect. At the same time, the trend in the form of serious melting of the polar ice cap is cause of concern.

As polar ice and permafrost continue to thaw, new trade and sea routes are opening up. There is great potential for job creation within industries like cruise and travel, communication, logistics and maritime services, energy production and mineral extraction. The High North is – and has been – the subject of attention from politics, academia, industry, and society.

Maritime experience and competence

For generations, Norwegian shipowners have honed their experience and expertise by performing demanding operations at sea, also in the High North. Ships have worked here for centuries, transporting goods and equipment, including natural resources, in and out of the area. In recent years, the emergence of offshore oil and gas activities has led to increased activity. Norway has a long and proud history as a polar nation.

Activities conducted in dark, icy conditions, and subject to unpredictable polar lows, expose crew and equipment to challenges that require specialised competence and experience. Employees at sea and on land in this region must possess a knowledge and understanding of polar conditions. Seen in this perspective, the Norwegian Shipowners' Association believes that development of commercial activities in the Arctic requires a gradual and responsible approach based on scientific, industrial and practical competence. Development of high quality, robust solutions that ensure the safety of human lives, the environment, and assets, are an absolute prerequisite, particularly in demanding and vulnerable environments like the Arctic.

Infrastructure and communication are key

In order to ensure sustainable development and value creation, safety, and acceptable risk to the environment, a well-functioning infrastructure and communication system must be established. This is also essential for job creation and stimulation of business development. There is a pressing need for comprehensive development of relevant infrastructure for navigation, communication, weather forecasting, monitoring of sea ice and icing conditions, emergency response, search and rescue, and maintenance and supply bases.

At present, satellite communication systems north of 72-75 degrees offer only limited performance and capacity. Operating in these demanding conditions is extremely challenging without sufficient satellite coverage.

Charts and weather forecasts critical for safety at sea

The geographical and climatic conditions in the High North, together with inadequate charts and limited access to communication systems, represent an ongoing challenge to safety at sea. Safe navigation in the Arctic depends on reliable nautical charts and ice data. These are vital elements in the infrastructure needed to protect lives, health, the environment, and assets. Today, mapping of the region is generally inadequate, while increased traffic, larger deep water and higher speed vessels are placing more stringent demands on charts.

Increased rescue capacity in the Norwegian High North

In efforts to enhance maritime preparedness, it is important to consider all aspects, in particular which resources can be mobilised if an accident should occur. The Search and Rescue in the High North project (SARiNOR) is in this respect one of the most important efforts undertaken in recent years in this field. The project's objective is to uncover potentials for improvement in the areas of search, rescue, survival in cold climates, communication and shared situational awareness, including joint operations in the Norwegian High North. The project has generated proposals for measures to improve performance over present levels, and has

PHOTO: ODFJELL SE

ARCTIC BUSINESS

The Arctic Business Council provides an exclusive, "for business, by business", international meeting place for high-level business executives with real influence, representing different industries operating, or with an interest in, the Arctic.

Cooperation and partnerships are the keys to success in the region. Working together, sharing knowledge, best practices and ideas. The Arctic Business Council provides a platform for launching, exploring and seeking support for ideas, initiatives and projects among peers both within and outside of their respective sectors.

In times of changing and challenging geopolitical landscapes, the Arctic Business Council can fill a non-political role in connecting stakeholders across political and geographical interests to promote dialogue, actions and collaboration on what is needed, and how it should be done.

The Arctic Business mission is to engage, educate and commit the business community to sustainable development of the Arctic.

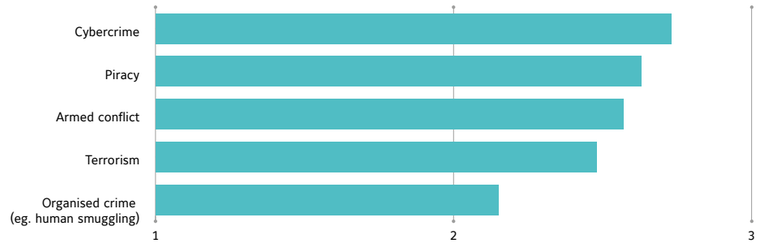
www.arctic-business.com

identified factors that delay response from when an accident occurs, to when those involved receive care. All key Norwegian organisations with search and rescue at sea as their area of responsibility have participated in the project. The Norwegian Shipowners' Association believes that the SARiNOR project is a vital contribution to the Norwegian government's work in ensuring sufficient preparedness for search and rescue in the High North. With the proper support and focus, we believe that this project can contribute to confirming Norway's position as a world leader in search and rescue in Arctic waters.

Measures to ensure sustainable development of opportunities in the High North:

- Dimension infrastructure in the High North for increased activity levels, especially in Longyearbyen
- Facilitate construction of land-based Automatic Identification System (AIS) base stations in order to enhance maritime traffic surveillance in the region
- Invest in satellite coverage for larger areas of the Arctic
- Expand maritime coastal radio coverage
- Ensure dependable and updated nautical charts and ice data
- Evaluate Longyearbyen's potential as a base for search and rescue and pollution response, and for maritime services
- Establish a weather radar station on Svalbard for daily collection of weather and ice information
- Follow up recommendations and findings from the Search and Rescue in the High North (SARiNOR) project

Figure 46: The shipowners' answers on the extent to which the following security threats are obstructing their company's operations. Scale of 1 to 5, where 1 = not at all and 5 = Very largely



SOURCE: NORWEGIAN SHIPOWNERS' ASSOCIATION / MENON ECONOMICS

4.10 Preparedness: maritime security

Threats against shipping

Norwegian shipping is a global industry impacted by various security and operational challenges. These challenges are partly due to geopolitical circumstances as well as criminal activity. In order to best counter these threats, the Norwegian Shipowners' Association has situational awareness and contingency planning as one of its top priorities.

Geopolitical security and regional conflicts expose the Norwegian fleet to daily challenges. Migrants, armed conflict, terrorism and hard crime go together to make up an unpredictable scenario that must be understood and acted on in order for global trade and value creation to be uninterrupted. Threats in cyber space, industrial espionage, sabotage and influence peddling can all have serious consequences for shipping.

The Norwegian Shipowners' Association, in close collaboration with the Norwegian Shipowners' Mutual War Risk Association, has established the capacity to detect, analyse, and warn of threats to the Norwegian fleet. Shipowners are taking active measures to avoid threats based on sound situational and threat awareness. The shipping industry has contributed to the establishment of international reporting centres as well as other collaborative measures, while military operations and aid efforts are conducted to mitigate difficult situations in conflict regions.

The need for foreign policy

The Norwegian Shipowners' Association has challenged the Norwegian government to develop a comprehensive foreign policy strategy employing all government agencies to protect Norwegian business interests abroad, including maritime security.

Foreign aid, defence, and bi- and multilateral dialog can all contribute to counter security threats through enhanced capacity, among other measures. In addition, it is important for Norway to pre-empt humanitarian crises such as those we have witnessed in the Mediterranean since 2014, but also to actively contribute search and rescue resources to keep the shipping industry, which is unsuited for such operations, from having to handle them on their own.

Critical contingency resource

Shipping is also a contingency resource for the Norwegian government, and the Norwegian Shipowners' Association acts as coordinator between the government and the industry. With its global presence, including more than 700 onshore offices in 150 countries, the Norwegian-controlled fleet makes up a formidable contingency resource. The fleet has consistently shown the willingness and ability to assist when possible in humanitarian crises. The continued development of NORTRASHIP is one example of shipping's support to the government. Through the revitalisation of 'Total Defence', an initiative to integrate military defence and civilian preparedness, NORTRASHIP is currently conducting a planning process to calibrate its contribution to the national requirement for logistical assistance in the event of an emergency.

Measures to strengthen preparedness in shipping:

- Develop a Norwegian strategy to support international maritime security
- Actively employ Norwegian aid resources in regions where maritime security is at risk
- Use military resources to strengthen capacity in selected regions
- Continue the development of NORTRASHIP

(Chapters 2-4, summary and foreword translated by Blue-C)

Data basis and methodology

Data sources used in this report are quoted in the text, tables and figures. Sources and methodology are described below. The Norwegian Shipowners' Association has worked in collaboration with Menon Economics on parts of the analysis.

Norwegian-controlled foreign-going fleet – definitions and parameters

The Norwegian Shipowners' Association maintains statistics on the Norwegian-controlled foreign-going fleet. The statistics are reviewed in detail in Chapter 2, Status and trends. The parameters for inclusion of ships in the Norwegian-controlled foreign-going fleet are based on the following principles:

- All ships registered in the Norwegian International Ship Register (NIS).
- Ships registered in the Norwegian Ordinary Ship Register (NOR), and engaged in foreign trade.
- Ships sailing under a foreign flag and owned by Norwegian-controlled shipping companies (stipulating 50% Norwegian ownership or higher) and engaged in foreign trade.

Member survey on framework conditions and the shipping companies' future prospects

The Norwegian Shipowners' Association conducted a survey of its members between 23 January and 7 February 2017. The members were sent an electronic questionnaire to survey their expectations of trends in economic KPIs, growth markets, access to capital and competence, and political framework conditions. The analysis carried out by Menon Economics includes 99 of 138 member companies, giving a response rate of 72 per cent. Companies participating in the survey are on average larger than those abstaining, meaning that the response rate expressed as a percentage of combined membership size is higher than 72 per cent. Additionally, the responders are seen as representative of Association members, both in terms of size and type of company. The material thus provides a sound basis for extrapolating from sample to population. Almost without exception, responses came from owners and senior management.

Valuation of the world's shipping fleet

Menon Economics has estimated the value of the world's merchant fleet from 2001 to the present, distributed among 14 segments, and all the world's countries. Selected segments are consolidated in this report. Value is calculated within designated vessel segments on the basis of newbuild costs, freight rates, age, number of ships, life expectancy, and gross and deadweight tonnage. Fleet size data is obtained primarily from IHS Fairplay, while valuation data is gleaned from a number of sources, including Clarkson Research, Platou Offshore (now Clarksons Platou AS), the UNCTAD Review of Maritime Transport, and Worldyards. In order to arrive at preliminary value estimates for 2017, volume statistics for 2016 are combined with pricing data for 2017. The most substantial change in calculation methods compared with previous years is the inclusion of freight rates. This gives the current market situation a higher weighting. Future prospects for the various markets are still reflected in the calculations through newbuild costs.

Calculation of shipping companies' turnover growth in 2016 and 2017

Menon Economics maintains its own accounts database with an overview of all Norwegian shipping companies' turnover in 2015.

The questionnaire asked the shipping companies to state their turnover from 2015, estimated turnover for 2016, and projected percentage of growth in turnover for 2017. Since Menon Economics does not have complete turnover figures for all shipping companies in 2016, these have been calculated as follows:

a) The shipping companies' self-reported turnover in 2015 is compared with audited turnover for the same year, to determine whether the self-reported turnover in the survey can be used as a basis for calculating the turnover of the total population of shipping companies in Norway.
b) Self-reported turnover in 2016 is adjusted for the share of total turnover in each of the four shipping company groups included in the data basis.
c) Forecasts for 2017 are calculated by multiplying the 2016 turnover for each member company by their own projected growth for 2017. The estimated turnover is then summed up for all of the four shipping company groups. Estimated turnover is also adjusted for the share of total turnover in each of the four shipping company groups included in the data basis.

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