WATSON FARLEY
&
WILLIAMS

THE SUSTAINABILITY IMPERATIVE

ESG – RESHAPING THE FUNDING AND GOVERNANCE OF SHIPPING

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FOREWORD

The maritime industry has, since WFW's inception, been core to what we do. We began formulating the idea for this report at the beginning of 2020, when the issue of sustainability had captured the attention of both trade and mainstream media.

Although many of the public discussions and advances within the industry had focused on this issue for the previous 24 months, it was becoming increasingly apparent that the pressure on the maritime industry to meet the sustainability target set by the International Maritime Organisation was increasing.

We therefore decided to focus on the single most important issue affecting the industry, one that will lead to a period of great change and mark the beginning of a new era for the sector.

This report pays particular attention to the question of how the industry will finance the decarbonisation needed to meet the IMO targets, while also examining the impact of environmental, social and governance (ESG) issues on future access to funding sources.

We would like to thank everyone who participated in the survey, in particular our interviewees, the TLC team and our colleagues who were involved in the preparation of the report. We very much hope you will enjoy it and find it worthy of your attention.

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EXECUTIVE SUMMARY

During the last decade, sustainability concerns have rocketed up the agenda of the shipping world.

And while the industry is still at the beginning of its journey towards sustainability, the impact of environmental, social and corporate governance (ESG) issues is already being felt, influencing financing decisions, fleet renewal and regulatory change.

Massive challenges remain. Decarbonisation of shipping is by far the most complex and pressing area. Most of the focus to date has been on the 'E' in ESG but the 'S' and 'G' elements also present growing challenges to the industry in areas such as transparency, diversity and crew welfare.

Some of these problems are down to simple organisational choices, but the environmental challenge – principally the reduction of CO_2 emissions – is too large for any one company, even any one set of stakeholders, to address.

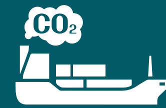
In addition, shipping faces structural upheaval. Longstanding pressures on smaller shipowners to consolidate may become difficult to ignore in the pursuit of a sustainable industry, while the privacy traditionally embraced by sections of the industry may come under pressure from demands for greater transparency from investors, lenders, regulators and customers.

This report examines the shipping world's views on sustainability and governance and what actions it is taking as a result. It also asks how these issues might affect the way the shipping sector finances itself and even the very structure of the industry.

KEY FINDINGS

Drawing on a series of in-depth interviews with shipowners, charterers and financial institutions, and a global survey of 545 executives and senior managers across those communities, our key findings are:

01



Reducing shipping's carbon footprint is the main and most immediate challenge. Trade tensions, COVID-19 and access to finance are also flagged, but respondents across all regions and stakeholder groups are most concerned about emissions.

02

There is a big divide in the importance that operators and financiers attach to sustainability. Almost a third of shipowners say that ESG criteria barely influence their investment decisions, whereas nearly 90% of financiers regard ESG as having some or even crucial importance.

03

Financing remains a sticking point. Despite a commitment to sustainability, traditional ship finance banks seem to have limited appetite to fund new clean-technology upgrades themselves or to accommodate their financing by others on ships financed by them.

04

Decarbonisation looks set to drive greater cooperation among industry participants. Almost two thirds of shipowners suggest they would form joint ventures to invest in innovation over the next five years and they lean towards teaming up with other industry participants rather than "outsiders".

05

The industry looks to governments to lead funding of clean technology and fuel research. Almost half of our respondents take this view, roughly four times more than those that prioritise other options such as private investment or a carbon levy.

06

Shipowners are wary of committing to many new green technologies. Over half do not contemplate using a non-hydrocarbon fuel in the next ten years and a similar number do not contemplate installing fuel efficiency hardware in the next five years.

INTRODUCTION

The increasing importance of environmental, social and corporate governance criteria marks a radical shift for commercial shipping, which for most of its history has operated out of the public eye and, in some cases, under opaque corporate structures.

"Transparency, responsibility, sustainability – these are words that haven't usually been associated with shipping – but going forward they are going to be lynchpins of sourcing finance," says Paul Taylor, Global Head of Shipping and Offshore for French bank Societe Generale CIB.

Although shipping is only in the foothills of its climb towards better sustainability and governance, some important early steps have been taken that will do much to shape the agenda over the next ten years and beyond.

In 2018 the UN's International Maritime Organisation set a high bar: to lower shipping's CO_2 intensity by 40% by 2030 and its greenhouse gas emissions by 50% by 2050, compared with a 2008 baseline. There is also the 2009 Hong Kong Convention, which, although not yet in force, already defines environmental and safety standards for the recycling of ships. Regionally and locally even stricter regimes, such as those in the EU, are coming into play.

Furthermore, many banks, predominantly Western, have signed up to the Poseidon Principles, which commit them to reporting on their loan portfolios in relation to the IMO's decarbonisation trajectories.

Adding to the momentum for ESG change is pressure from shipping's end users, many of whom have their own sustainability goals enshrined in corporate policy and are looking to decarbonise their supply chains.

Most recently, in October 2020, the launch of the Sea Cargo Charter set a new benchmark for responsible shipping, transparent climate reporting, and improved decision making in line with UN decarbonisation targets.

According to Charis Plakantonaki, Chief Strategy Officer at Star Bulk Carriers: "The shipping business is changing fundamentally. Inaction is no longer a viable or costless option."

Despite good intentions, however, the industry acknowledges the scale of the challenges before it. Asked about a range of ESG issues – from emissions to crew welfare and financial reporting – a significant majority of the sector executives in our survey thinks that most of the industry will fall short of successfully addressing any of them within the next five years.

> "Inaction is no longer a viable or costless option."
>
> **Charis Plakantonaki**
> Chief Strategy Officer,
> Star Bulk Carriers

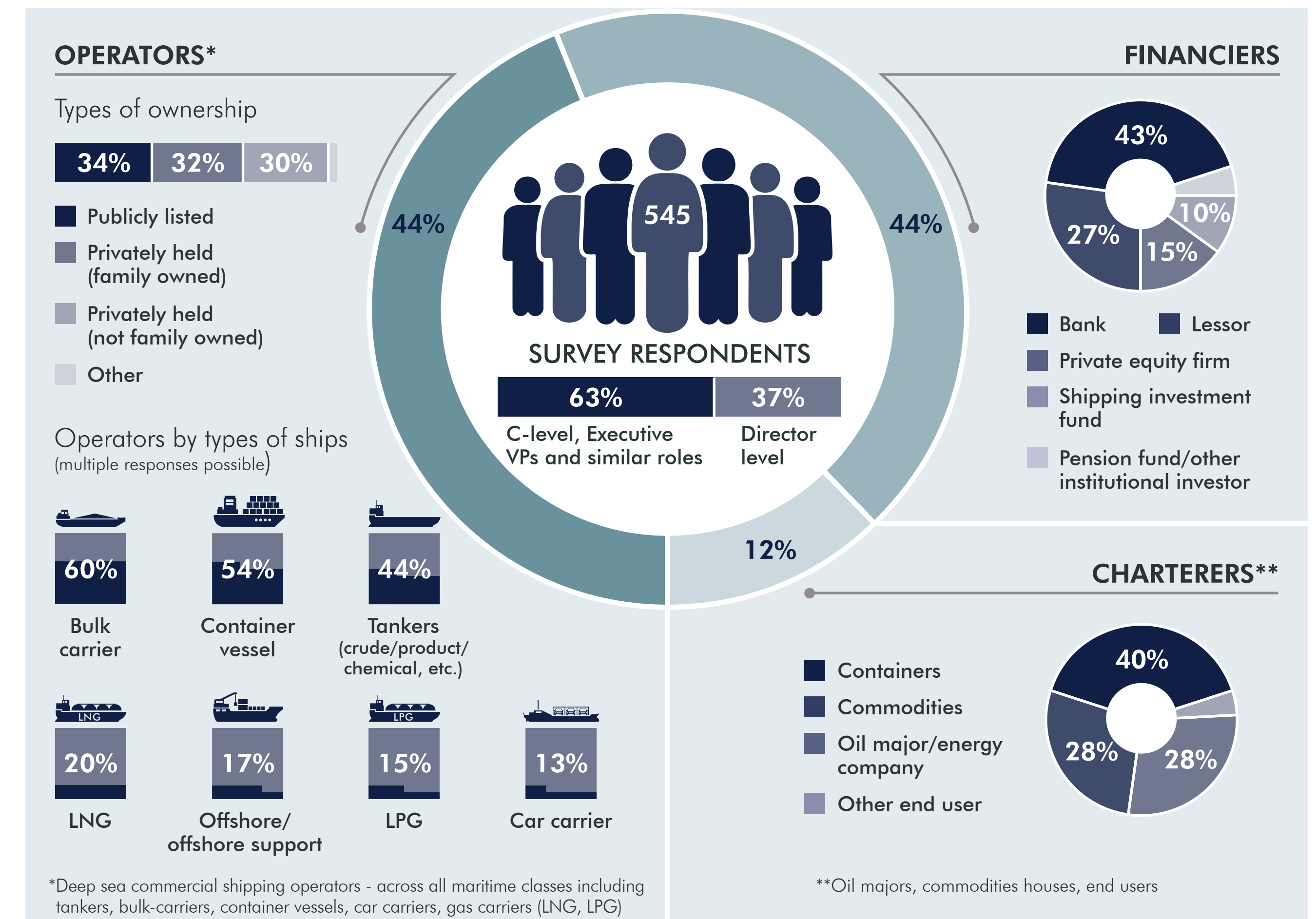
This report seeks to define the gap between ambitions and actions on ESG, between what various stakeholders want to achieve and what they are willing to risk and contribute. In particular, it examines the interplay between ship operators and finance, and how this is likely to change as ESG gains traction.

It is built around a survey of 545 decision-makers from shipping, with roughly two thirds from C-suite level and the rest from senior management. Banks, lessors and other sources of finance comprise 44% of respondents, while charterers account for 12%. Shipowners and operators form the remaining 44%, and are broadly representative of the industry, with tanker, bulk and container operators the biggest subset of this respondent group.

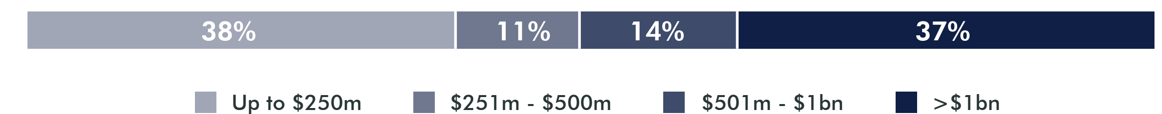
Almost half the respondents are from Europe, Middle East and Africa (EMEA), just over a third are from Asia Pacific and the rest from the Americas.

Further investigation was conducted via ten in-depth interviews with senior figures from shipowning companies, chartering companies, financial institutions and a leading IACS member classification society. These helped to draw out detail from the survey findings and, in many cases, to illuminate the next steps in shipping's voyage towards sustainability.

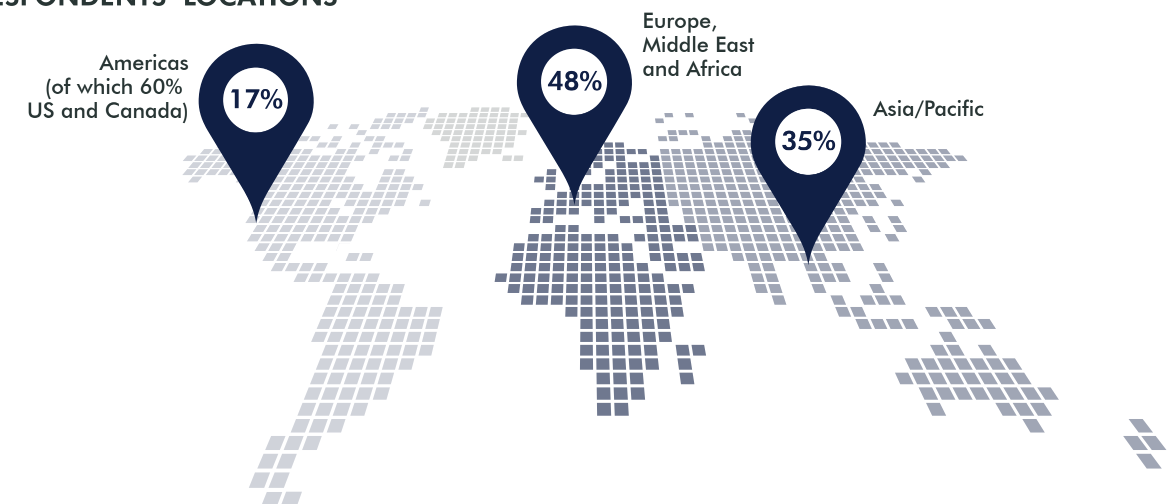
SURVEY DEMOGRAPHICS



COMPANY TURNOVER



RESPONDENTS' LOCATIONS



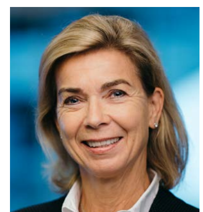
CHAPTER ONE

THE CHALLENGE

Although some shipping companies have formulated detailed ESG policies, much of the industry is still catching up in areas such as emissions, scrapping, diversity and financial reporting. Often improvements are happening because regulation demands it, but different sources of pressure are quickly emerging.

"Employees, investors and financial institutions are the stakeholder group that is seen as more and more influential when it comes to a company's ESG work," notes Kristin Holth, a board member of Maersk Drilling and former Global Head of Ocean Industries at DNB Bank.

Our survey of industry executives reflects this pressure. It shows that decarbonisation is viewed as the main challenge for shipping in the next five years, well ahead of some non-ESG factors such as political instability or the fallout from COVID-19.



"Employees, investors and financial institutions are the stakeholder group that is seen as more and more influential when it comes to a company's ESG work."

Kristin Holth
Board member, Maersk Drilling, GasLog

However, this is the broad view; regionally, certain priorities change. Notably, Asia-Pacific respondents are slightly more concerned by trade tensions than by emissions and North Americans are increasingly preoccupied with access to finance.

"The difference in viewpoint, whether that be across geography or between investor, shipowner and charterer, is interesting," comments Katharine Palmer, Global Sustainability Manager, Marine and Offshore at Lloyd's Register. "But overall the majority agree that reducing carbon emissions is the biggest challenge – this goes to show that in order to solve the challenge we need collective action from all stakeholders."

Within the ESG matrix itself, there is broad agreement among financiers and ship operators around the world that emissions are the main priority, although respondents from the Americas appear equally concerned by diversity targets.

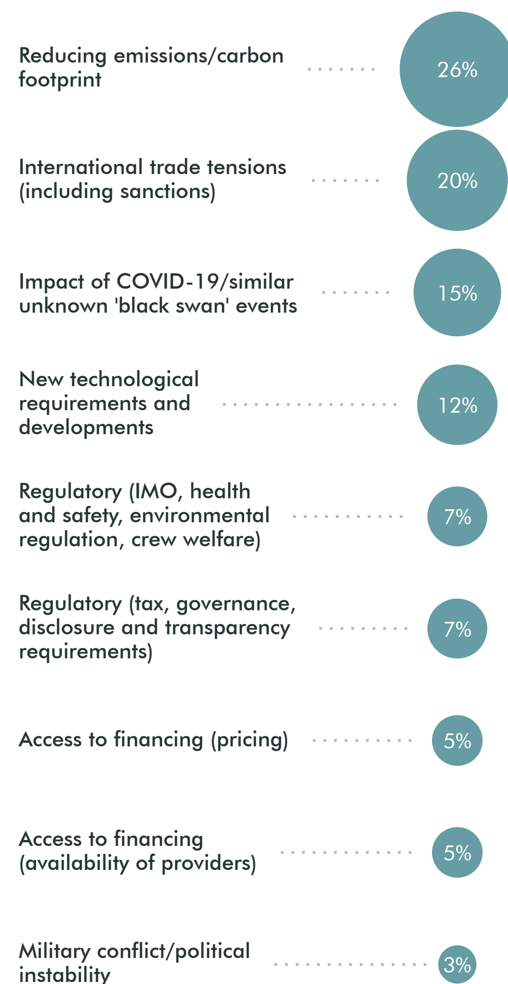
Beyond such broad agreement however, ESG continues to mean different things to different people. The IMO's recent main focus has been implementing emissions goals. In the maritime space there has not been as much focus on regulating governance and transparency. However, regulatory issues around health and safety (including crew welfare) and governance rank equally in our survey.

"Clearly a challenge for an asset manager is that even in general most investors have not defined ESG for themselves," says Tony Foster, Chief Executive of London-based Marine Capital, adding: "Shipping is even more difficult because you can't put a map on shipping and say: 'Here is a suitable ESG template.'"

This view is reflected in finance's approach to environmental compliance: fewer than one in ten lenders and investors from the Americas have formulated their own standards, versus one in three EMEA and Asian financiers.

Furthermore, a sizeable part of the industry still has little regard for ESG considerations, with 29% of shipowners who participated in the survey saying it barely influences their decision making, a view shared by one in three operators of bulk carriers, container vessels and car carriers.

FIGURE 1: In your view, what are the biggest challenges for the maritime industry in the next five years? (Rank top three; first rank shown)



Decarbonisation

Although environmental targets for shipping are far better understood than other ESG elements, there is not yet consensus on how to meet them.

The technological challenge is immense. Zero-carbon fuels already exist, but the production capacity, infrastructure and distribution network to supply and deploy them at scale and at the right cost is yet to be developed and rolled out.

Certain cleaner fuels emit less carbon dioxide but more of other undesirable gases. In other cases, the fuel itself is clean but its production is not, which simply shifts the carbon burden further down the value chain. For example, LNG may contain less CO_2 than fuel oil, but it emits methane – a more potent greenhouse gas than CO_2 – when used to propel ships and also in the production supply chain. Biofuel could have worse carbon credentials than fossil fuel, depending on the source of biomass.

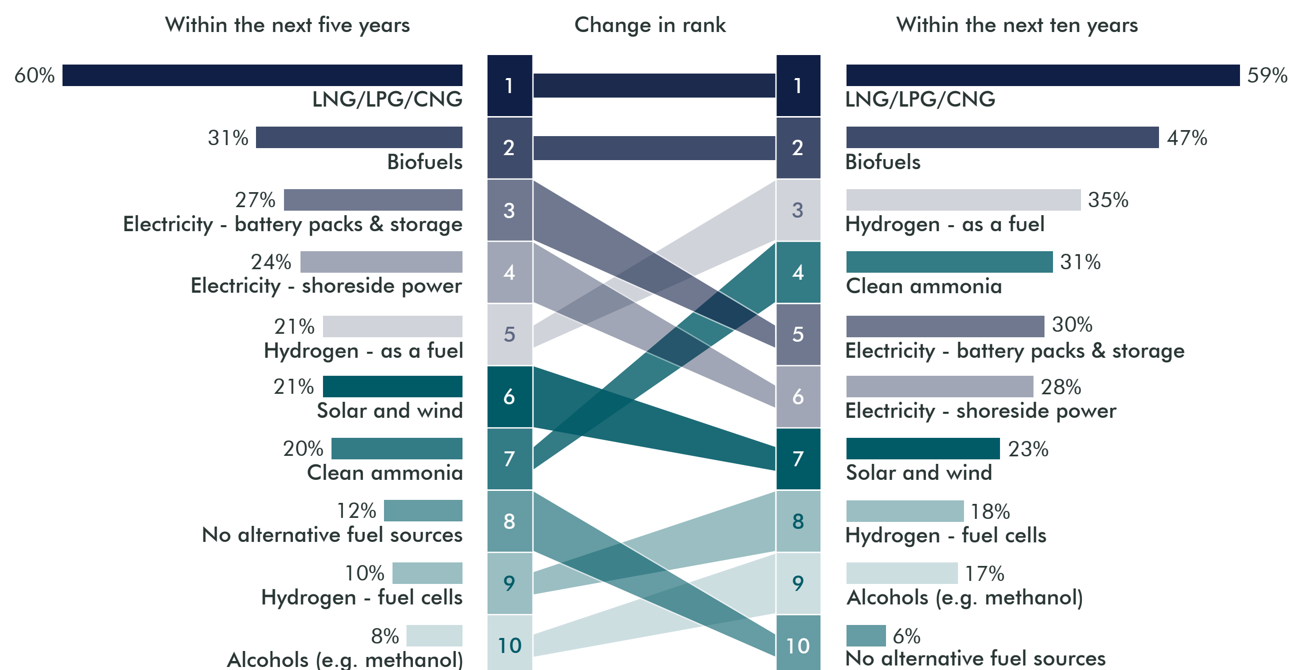
Uncertainty about the ultimate future energy source for shipping means that operators shy away from buying ships that use clean fuel – or even dual-fuel – for fear they make what might turn out to be the wrong choice in a 20 to 30-year investment. This may explain why in the next five years fewer than a third of operators plan to use any alternative to traditional bunker fuel or liquefied gas such as LNG or LPG.

"What we are seeing right now is that uncertainty can also weaken confidence and slow or pause new investment – investments that will be needed to bring about a new generation of more efficient and lower-carbon ships," says Kenneth Hvid, President and Chief Executive of tanker operator Teekay.

Matters improve somewhat over a ten-year horizon, in which almost half of operators say they would consider using biofuel and 35% would consider hydrogen. According to Christos Tsakonas, Global Head of Shipping at DNB Bank: "The solution has to be smaller-scale experiments." In coastal routes, availability of bunkers could be ensured, and, he adds: "Once you gain traction on a specific fuel or type of energy, you can see the technology shifting that way."

However, for the wider industry it is likely to take until 2030 at the earliest for a significant shift to clean fuels. "Realistically, we are on a ten, 15 or 20-year timeline to get the breakthrough we need to really be on a complete decarbonisation trajectory," predicts Bud Darr, Executive Vice President for Maritime Policy and Government Affairs at container giant MSC.

FIGURE 2: What types of alternative fuel sources are you considering using in the future?* (Select all that apply)



*Responses from shipowners/operators

That said, liquefied gas is seen as a key tool for shipping to reach the IMO's 2030 goal of a 40% reduction in carbon intensity, and most ship operators (59%) in our survey are considering using it this decade. However, only 44% see it as a longer-term solution, including companies such as Teekay, which already uses LNG in its LNG tankers and is a big cog in the fuel's supply chain.

"We recognise that other alternative fuels need to come after LNG and the industry needs to keep working on finding those future carbon-neutral fuels," says Kenneth Hvid. "But in the meantime, LNG can be an effective option today while also giving the industry the confidence and time to develop and transition to those future fuels."

The transition

Given that it may take at least a decade until a decisive breakthrough for alternative fuels, in the interim shipping must mitigate its carbon emissions with other technologies, such as better hull and power plant designs, hardware retrofits and voyage optimisation software.

Some of these upgrades are already popular, especially in the digital realm. Almost three quarters of shipowners in our survey are keen to deploy performance monitoring systems in the next five years, while 60% would like to do the same for course correction and weather management systems, which are already widely used.

"Operational and technical measures can be deployed to reduce carbon emissions today and in the future to reduce opex when using a zero-carbon fuel. Whilst these are not new, they are not widely adopted."

Katharine Palmer
Global Sustainability Manager, Marine and Offshore, Lloyd's Register

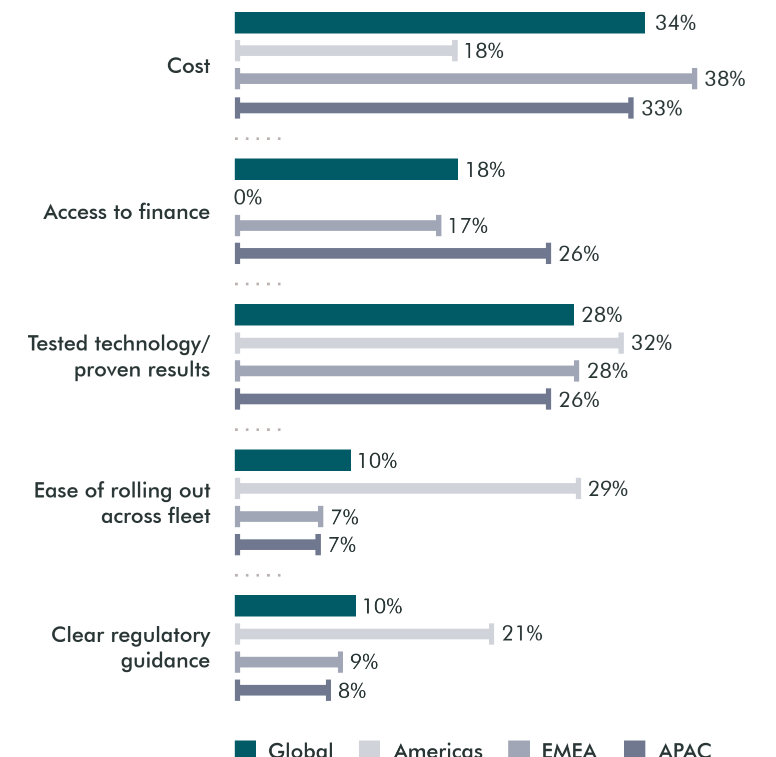
However, views change regarding more expensive hardware retrofits such as Flettner rotors and kite sails, with only 44% of shipowners willing to consider such technologies within five years. Influencing this result may be a lack of experience with less tried and tested technologies.

"There are operational and technical measures that can be deployed to reduce carbon emissions today and continue to be used in the future to reduce opex when using a zero-carbon fuel," says Katharine Palmer, adding: "Whilst these are not new, they are not widely adopted; there is still work to be done to make the business case attractive including cost, payback and access to capital."

It does seem that there is scope for significant emissions reduction through improved processes and greater efficiency.

Our survey shows that, not surprisingly, cost drives a shipowner's decision to invest in a new technology, followed by proven results. Unfortunately, these factors can hold back the adoption of more expensive retrofits, as Tony Foster notes: "The shipowner wants to see it on ships and working before they are willing to invest in it, but the promoter can't get the initial risk capital from anyone else, because they also want to see it up and running before they will support it."

FIGURE 3: Please rank your top three drivers for supporting one technological improvement/fuel technology over another.* (Rank top three; first rank shown)



*Responses from shipowners/operators

The first-mover problem

At the heart of shipping's decarbonisation challenge is the question of who assumes the financial risk of researching, developing and installing less proven technologies and how this investment will be amortised. As indicated above, many shipowners are unwilling to do so, while traditional maritime finance is not necessarily or obviously the likely source of investment.

"All of a sudden we would be asked to assess technology risk, performance risk, execution risk – that's not us in isolation," notes Christos Tsakonas.

Almost half of survey respondents think that governments should take the lead in funding research into alternative fuels and other efficiencies for shipping, a view that is broadly shared across financiers and operators in all regions. That will raise few eyebrows. More interesting is that 14% of shipowners think that they themselves should absorb the cost, illustrating a recognition that decarbonisation is a challenge that all stakeholders need to tackle.

Indeed, many shipowners and other stakeholders already participate in environmentally focused collaborations such as the Sustainable Shipping Initiative, the Getting to Zero Coalition and the Clean Shipping Alliance 2020 – and are willing to contribute to research efforts.

"We're not in the business of designing, manufacturing and installing energy conversion devices, but we have tremendous operational expertise to potentially provide trial platforms for new technologies."

Bud Darr
EVP Maritime Policy and Government Affairs, MSC

"We're not in the business of designing, manufacturing and installing energy conversion devices," says MSC's Bud Darr, "but we have tremendous operational expertise and we have 560 container ships to choose from to potentially provide trial platforms for new technologies."

Echoing the views expressed by survey respondents, Charis Plakantonaki says: "Governments need to work closely to help unlock the scale of capital needed to support decarbonisation and put in place the policies and other levers needed to build a viable business case for zero-emission shipping."

Yet taxpayer funding for cleaner shipping may be difficult for governments to justify given the supranational nature of shipping, the use of open registers and the low tax environment in which a significant part of the shipping industry prefers to operate (see also box Offshore, onshore and rules of economic substance).

One solution may be a global fund, potentially financed by a carbon tax on transportation by sea and topped up by governments, but it is also possible that any public funding will result in more obligations being imposed on shipowners, and that such obligations will extend beyond environmental standards and into governance. The 'soft launch' by the IMO's Maritime Environment Protection Committee in November 2020 of a proposed $5 billion international research and development bond is pertinent in this context, notwithstanding the initial mixed reception it received at the IMO itself.

Offshore, onshore and rules on economic substance

Since the financial crisis, the global tax landscape has undergone incredible reform. Shipping has largely remained at the edges of, or outside, these reforms. For many shipping groups, operating structures and tax governance adopted decades ago remain mostly in place today.

It would be an exaggeration to say that shipping is approaching a crossroads in relation to its tax position. However, aspects of the industry's approach to taxation may need to change in light of tax initiatives and increased social awareness of the taxation of corporates.

Since its inception as a global industry, shipping companies operating internationally have largely been taxed only in their home state. Using offshore centres and flags of convenience, that home state taxation was in many cases avoided altogether. In order to retain and grow its onshore shipping industry, many EU states adopted tonnage tax regimes, effectively EU-approved tax competition with traditional offshore centres, with Singapore and Hong Kong also offering shipping tax incentives.

In response to increased media coverage of corporate tax planning by multinationals, combined with an economic need to generate greater tax revenues, politicians have become more willing to treat tax as a global issue. More countries, directly and through organisations such as the OECD, are prepared to dictate to other nations how their tax systems should operate.

To date, shipping has not been hugely impacted by global anti-tax avoidance measures. Economic substance rules introduced in the Marshall Islands, Bermuda and other traditional offshore shipping centres have had an impact on a number of shipping groups, and as application of those rules develops, we may see further changes. We are also starting to see commercial counterparties, investors and financiers show a greater interest in the tax affairs of others.

Tax exemptions for shipping?

The OECD, with the backing of the EU, is working on an ambitious initiative to redesign the global tax landscape – it is possible that the pressure put on offshore jurisdictions so far is just the tip of the iceberg.

It remains to be seen whether shipping will be granted an industry exemption from these new proposals (and whether there is still the global will and enough cooperation between nations to push through dramatic global tax reforms). Shipping has good arguments as to why it is not an industry in need of additional anti-tax avoidance measures. But granting the industry a blanket exemption from global tax measures will be politically highly unlikely.

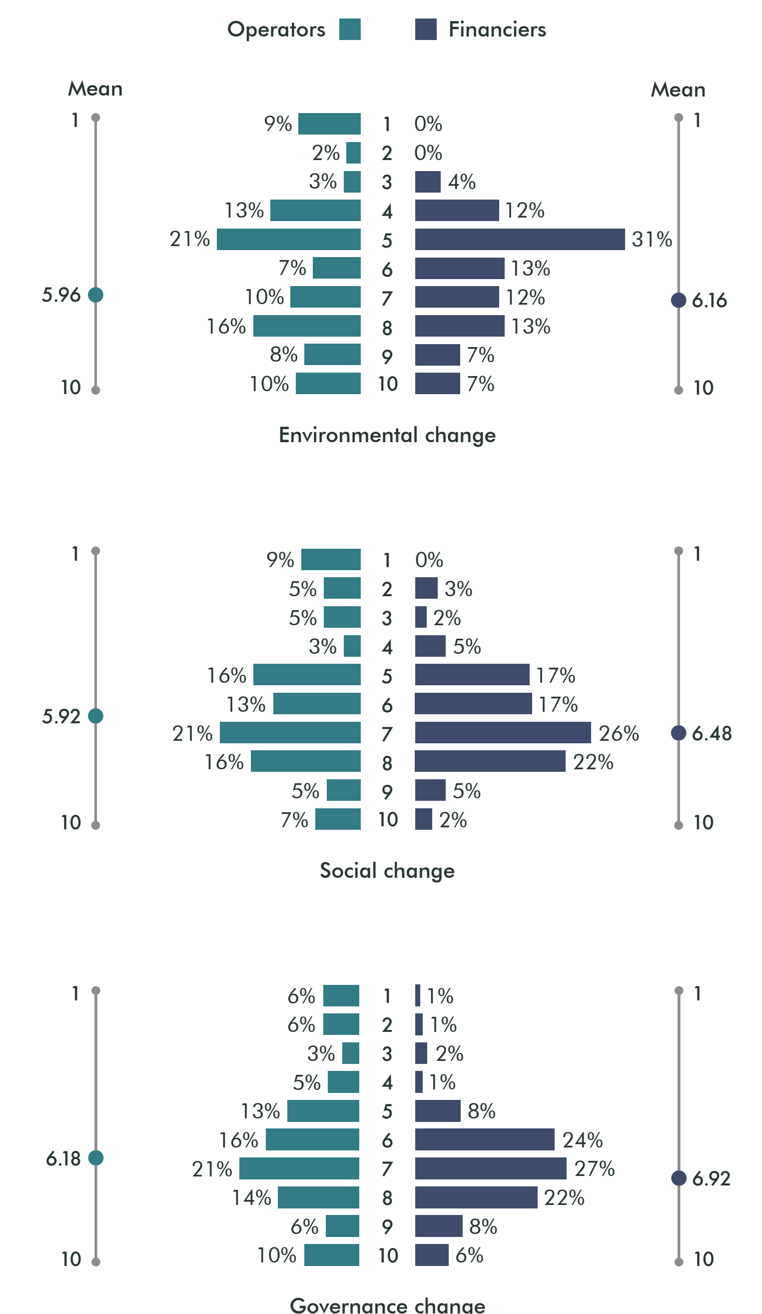
If the measures are taken forward, shipping will need to face up to tax reform. A further push to onshore shipping businesses is likely. It will be interesting to see whether the EU-approved tax competition that gave rise to onshore tonnage tax regimes survives in a world increasingly keen to push international companies to pay their fair share of corporate tax.

Good governance will form part of financiers' investment criteria and the use of offshore structures may very well be part of their focus. Tonnage tax regimes in the UK and the EU will be competing amongst themselves, as well as with Singapore and Hong Kong, which are keen to attract any businesses looking to move onshore.

Whilst the survey suggests that tax is not yet high on shipowners' list of priorities, the data also shows that negative public opinion and consumer pressure are important drivers for change.

As pressure on traditional offshore shipping structures grows, shipowners who have not already moved onshore should expect the governance of their tax position to become increasingly important. Whilst shipowners will always seek to find ways to maintain a cost advantage over their competitors, the option to be based offshore may effectively be removed by tax law changes, but even if it isn't, the relative benefit of paying less tax offshore may be eroded and being onshore (and paying more tax) may become comparatively attractive.

FIGURE 4: What should drive ESG change: voluntary industry initiatives or legislation and regulation? (Scale 1-10, where 1= driven by industry; 10= driven by legislation/regulation)



Regulation

ESG improvements in shipping are more likely to result from regulation than voluntary action, our survey shows, with financiers particularly sceptical about industry initiatives to effect change.

Shipowners are less pessimistic but still lean towards regulation to drive improvements across the ESG arena. They may have legitimate concerns that anyone who can avoid the cost of those improvements would gain an unfair advantage, while having sensible regulations would level the playing field. With that in mind, shipowners may be resistant to rules that don't apply globally, such as the European Union's proposal to include shipping in its Emissions Trading Scheme (ETS). The argument is that a global industry needs globally applicable regulation.

"The idea of regulating shipping under the EU ETS, particularly international shipping, is a bad policy idea on many levels if you are really looking at the long-term goal of decarbonising shipping," says Bud Darr.

However, Charis Plakantonaki notes that: "More regulation to force ESG improvements is already happening and will continue to do so whether shipowners like it or not."

In this respect, shipping can benefit from the supranational nature of the IMO, which can deliver the globally applicable regulation most effective at driving industry change. Yet the UN body's need for international consensus makes it slow moving, which can leave the IMO off the pace of technological progress and shifting environmental deadlines (see also box IMO 2020 & Co: Pressure from many directions).

Cooperation and consolidation

One way to bridge the first-mover problem is through more collaboration and risk sharing – attributes not commonly associated with shipping.

"Right now, while respecting competition rules, the sector needs coalition and cooperation so we all approach ESG from the same angle," says Paul Taylor of Societe Generale.

In fact, a growing number of shipowners appear to agree with Paul Taylor's point of view. Recent examples of shipowners collaborating to pursue commercial opportunities and to develop technical innovations include the partnership between BAR Technologies and Reederei Nord for the use of WindWings, a patented wind-assisted propulsion concept that reduces CO_2 emissions by harnessing the power of the wind on product tankers.

62%

of shipowners are likely or very likely to form joint ventures to fund innovation in the next five years

Less than half of shipowners intend to use new bank debt to fund required technological change over the next five years. Instead – in what may presage a remarkable shake-up – 62% are "likely" or "very likely" to form joint ventures (JVs) to do so. A majority will also look to government funding and to their own resources.

Furthermore, almost three quarters of shipowners would agree to a change in their capital structure if ESG financing terms demanded it.

"Those smaller companies that want to invest in these new technologies which are required for shipping are going to have to look for equity partners to take some of that risk and bring down the leverage required to raise money from banks," observes Paul Taylor.

Yet shipping remains largely a conservative industry and shipowners seeking to fund innovation seem, based on our findings, to prefer to cooperate with their peers rather than with energy or technology companies, despite the latter's specific focus on relevant areas of technical innovation.

"A joint venture with another shipowner provides not just an opportunity to share R&D costs but also to pool technical knowledge and experience," notes Mark Tooke, Corporate and M&A Partner at WFW in London. "The partners can share the operational burden and risk of trialling technical innovations on board vessels."

Lindsey Keeble, Global Maritime Sector Co-Head at WFW, adds: "It is also helpful that owners will often share the same business philosophy and a similar approach to risk, all of which will contribute to a harmonious collaboration." However, horizontal JVs between shipowners carry an enhanced regulatory risk. "They must be carefully structured and operated to avoid apparent or substantive infringements of competition law." (See also box Tech JVs: Innovation through collaboration).

The IMO headquarters, London

IMO 2020 & Co: Pressure from many directions

Pressures on the shipping industry to address environmental issues grow ever stronger from a number of different directions.

The IMO 2020 regulation has been implemented through the MARPOL Convention, specifically the amendment to Annex VI in 2008. The MARPOL Convention was originally introduced in 1973 in response to oil tanker spills and has been expanded and adapted to apply to other forms of pollution, including emissions.

The IMO's ability to develop and implement initiatives swiftly is often compromised by the differing interests of member states. Another common and long-standing criticism is that the IMO does not properly represent the interests of the shipping industry, in particular that its proposals to implement technological changes are unworkable or impractical.

The other side of the coin is that the industry has been resistant to any form of change. This has sometimes brought down criticism on the organisation. The proposed launch by IMO's Maritime Protection Committee of a $5 billion decarbonisation research and development fund received a mixed reception when it was put before the IMO in November 2020. The 2009 Hong Kong Convention on Ship Recycling is still not yet in force, although it has some effect and influence.

Industry initiatives

The relative speed with which the Poseidon Principles and the Sea Cargo Charter have been launched make for an interesting contrast and indicate how quickly industry sectors can mobilise. The challenge to the IMO as the ultimate and overarching authority does not come only from sectors of the industry itself. The EU Emissions Trading Scheme has recently been expanded to shipping, in effect imposing a version of port state control on vessels trading to EU ports.

The groups and bodies behind these initiatives would say that they are pushing in the same direction and that the various initiatives are not in conflict or inconsistent. Others may disagree and feel that shipping is under pressure from too many directions at once: from the industry's main regulator (the IMO), from governments (the EU), from financiers (the Poseidon Principles) and from end-users (the Sea Cargo Charter). This concern may be detected in the response in October 2020 by the International Chamber of Shipping to the launch of the Sea Cargo Charter, pleading for alignment with the IMO.

The shipping industry has sometimes been less than transparent in governance terms. In addition, it lacks a single overarching international body representing the interests of the majority of the industry. These factors mean that bringing about change is not going to be quick, easy and seamless. There can be no doubt that the forces that have now been mobilised will have a transformative effect on the nature and shape of the industry. The only question is: how quickly?

Tech JVs: Innovation through collaboration

Most shipping JVs are aimed at achieving financial leverage or operational and commercial efficiencies. Less common are JVs for the development of new technology for use in the maritime sector. To ensure their success, they require careful consideration of unique, complex legal and practical issues – these can be quite different in character to those commonly experienced by shipowners and operators.

While every JV or collaboration is different, early consideration to some of these fundamental matters will be important:

- What are the goals and deliverables of the JV? How will progress and success be measured?
- How can the brand be used (including the existing brand of JV partners)?
- Who owns intellectual property rights (IPR) created by the JV? This can raise tricky practical issues in an IPR context.
- How are existing IPR owned or used by the JV? Solely for the purpose of the JV? Can existing IPR be made available for use by third parties?
- What about newly created IPR? Can they be used by third parties? Are they restricted to the scope of the JV or are they for unrelated applications?
- Is there agreement on the approach to publicity and use of brand? Are there reputational risks for any JV partner?
- Who is responsible for product liability? Some new technologies may have high degrees of latent risk (e.g. ammonia or hydrogen power plants for installation on passenger vessels.)
- Is any information to be provided or created commercially sensitive? (e.g. data on vessel efficiency, customers, routes, proprietary software.) How will confidentiality be enforced?
- What regulatory issues are relevant (e.g. competition law is particularly important in a shipping context) and how will they be mitigated in the JV structure/operational arrangements?
- When will the JV come to an end? What are the consequences? Can a party elect to leave the collaboration before its aims have been achieved? Are there additional consequences of an early exit? Can a party sell its rights arising in connection with the JV to a third party?

Even for horizontal integration, there is likely to be stiff resistance from certain quarters, whatever the financial pressures, says DNB's Christos Tsakonas. "As long as small players have sufficient equity to run a smaller operation on their own, they might not want to follow logic and consolidate."

Charis Plakantonaki also expects small players to come under significant pressure, although she points out that: "Increased consolidation may be avoided depending on the support that will be provided to the industry by governments and international and regional bodies."

Until such subsidies materialise, though, Paul Taylor questions the ability of small shipowners to finance themselves through fleet upgrades.

"If you are a small company with a commoditised product, this is a very difficult market and a very difficult time to exist, and these companies are open to being acquired."

Another hurdle is the shipowner-charterer relationship and the extent to which the costs of clean technology retrofits are reflected in charter rates. George Wells, Global Head of Assets and Structuring at Cargill Ocean Transportation, one of the largest ship charterers, points at one possible way to address this issue. "We have installed energy-saving devices on board vessels," he says, continuing: "Because we've paid for them and owners worked with us to get them installed, we take the risk and we get paid back for the cost of those fuel savings."

However, while some charterers express a willingness to cover a portion of costs, shipowners argue that this is only commensurate to the fuel burn saving over the term of the charter and does not reflect amortisation over the much longer life of the asset.

"Charterers will only pay according to the benefit they get, they are not enabling you to get a return on the extra capital you have had to deploy," says Tony Foster, adding: "So yes, that is definitely the area where you need greater cooperation and new ways of addressing the risk on new technology."

"We have installed energy-saving devices on board vessels. Owners worked with us to get them installed, we take the risk and we get paid back for the cost of those fuel savings."

George Wells
Global Head of Assets and Structuring, Cargill Ocean Transportation

CHAPTER TWO

ACCESS TO FINANCE AND PRESSURE ON DIVESTMENT

Although shipowners do not place access to finance among their leading challenges, there is a gap between how they view ESG and the actions of banks and other providers of capital to adjust their portfolios according to sustainability and governance criteria.

"Those providing capital to this industry have this high on their agenda – they all make this evaluation before they lend or invest," says Kristin Holth.

Our survey shows that most financiers would reconsider backing shipping companies that didn't comply with environmental regulations or policies. And although only 29% demand more than minimum environmental standards from their counterparties, the additional compliance most commonly required is for emissions targeting and monitoring.

This suggests a push on shipowners to improve, although financiers appear to disagree on their role in improving shipping's environmental credentials.

"Financiers are not policemen. We are not here to police the shipping industry or the way people do business," says Christos Tsakonas, although he adds that "it would be very difficult for us to justify a project which does not fit our ESG strategy."

Learning from aviation

Nearly 50% of the global commercial aircraft fleet is owned by operating lessors. There are a small number of players in the shipping leasing space, but the scale of them individually and in combination is not comparable to the position of lessors in aviation. The obvious question is why does shipping not have an operating leasing industry equivalent to that for aircraft.

Under normal market conditions, aircraft values have remained stable and there has been a large and growing airline customer base ready to take on popular aircraft types. This in turn has resulted in residual values of aircraft being relatively stable and predictable.

There are also fewer manufacturers of aircraft than ships and fewer models or variants, leading to a greater degree of standardisation of the asset itself.

These differences explain why it is harder to find parties in shipping willing to take on residual value risk.

However, while the historic volatility of ship values is off-putting for financial institutions, it is positively attractive to a segment of the shipowning community, which has traditionally relished asset play. In contrast, a priority for most airlines is the mitigation of residual value risk.

In the past few years the shipping industry has seen increased consolidation. Should this trend accelerate in response to the possible structural changes indicated in our survey, the industry's appetite for operating leases of ships might grow.

On the supply side, there are signs that some Chinese leasing houses, whilst predominantly offering finance leasing, are open to operating leases. It is always important that both parties to a leasing transaction are aligned at the outset about the allocation of residual risk and upside benefit if the lease runs to term.

Ex-DNB banker Kristin Holth agrees, saying that ESG pressures stem from society as a whole, not from banks. "It is more about where banks can influence and where they can give directions."

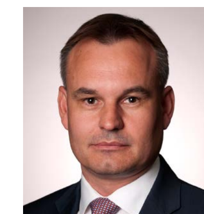
However, Paul Taylor is more explicit. "We have a huge role to play in putting pressure on shipowners on ESG, certainly on the environmental side, but not just that."

"We have a huge role to play in putting pressure on shipowners on ESG, certainly on the environmental side, but not just that."

Paul Taylor
Global Head of Shipping and Offshore, Societe Generale CIB

Regardless of the distinction between pressure and influence, other sources of finance are stepping up their ESG monitoring as well. For example, institutional investors like pension funds are becoming more concerned about how individual investments influence the long-term health of diversified portfolios.

"In owning such diverse assets, and therefore sometimes being known as universal owners, they are – very rightly – concerned about the overall health and sustainability of the economy," notes Paulo Almeida, Chief Investment Officer for fund manager Tufton.



"During our latest NOK bond issuance, bond investors were very focused on ESG issues and the long-term effects of the energy transition."

Kenneth Hvid
President and Chief Executive, Teekay

Capital markets are also taking an interest, notes Kenneth Hvid at tanker operator Teekay. "During our latest NOK bond issuance, bond investors were very focused on ESG issues and the long-term effects of the energy transition."

"Greater emphasis on ESG may also open the door to some institutional investors who are more active in the aviation space," highlights Lindsey Keeble. "However, to date the shipping industry has not replicated the operating lease model of the aviation industry to the same extent – which may provide access to a greater array of financing tools for the lessor." (See also box Learning from aviation).

Poseidon Principles

The most prominent manifestation of ESG in finance is the adoption of the Poseidon Principles by 20 banks, which represent about a third of global ship financing at the date of this report. The Poseidon Principles provide a framework for these banks to monitor and disclose the carbon intensity of their shipping portfolios, which they aim to keep in line with IMO targets.

However, most of these banks are European. So far, the Poseidon Principles have attracted just one signatory from Asia, an ever-growing source of shipping finance. Furthermore, two thirds of Asian financiers do not plan to sign up to the Poseidon Principles, according to our survey, which raises questions about the treatment of ESG in different parts of the world.

"We need more Asian banks," says Paul Taylor, who also serves as Vice Chairman of the Poseidon Principles. "If they don't [sign up] it will be a huge disappointment, but I don't think it will impact the effectiveness of the Poseidon Principles to the point where they don't apply. It will just become a more European and US phenomenon."

"There will be different types of lenders to old shipping and different types to new shipping."

Tony Foster
CEO, Marine Capital

This chimes with where Tony Foster at Marine Capital sees maritime finance heading. "The whole picture will change dramatically over this decade. There will be different types of lenders to old shipping and different types to new shipping, but it won't be the status quo ante."

However, it would be too simplistic to reduce maritime finance to an ESG-respecting West and an unconcerned East. In our survey, Asia-Pacific and European financiers were equally likely to require additional environmental compliance, while

the proportion of Asia-Pacific respondents for whom ESG exerts a big influence on decision making was also very similar to that in Europe.

So it might be too early to draw conclusions based solely on geography. "Chinese lessors are increasingly appreciating the need and importance to adopt the Poseidon Principles in their leasing transactions, which will enable them to have greater access to refinancing opportunities from the international financial markets," says Madeline Leong, Finance Partner at WFW in Hong Kong.

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Madeline Leong
Finance Partner at WFW in Hong Kong

Paulo Almeida highlights the Chinese government's increasing focus on the environment and how this will feed into banking policy. "Asian banks might be behind European banks regarding ESG," he says, "but that is just today. They are not too far behind and they can and will catch up quickly." It should also affect Chinese lessors – many owned by Chinese banks – which have become a crucial source of shipping finance as they have replaced the capacity relinquished by the exit from the market of a number of European lenders.

The survey shows that financiers' risk appetite for clean technology does not vary significantly in different parts of the world. For example, fewer than a third of financiers in either Asia or Europe would allow a subordinate security interest on a vessel to help finance add-on fuel-efficient technology, and even fewer would allow SPV owners to lease equipment to do so.

Finance from the Americas is more receptive to leasing, although the overall picture still shows a relatively inflexible approach to funding new technology. A possible explanation for this finding may be that traditional ship financiers are so far not in a position to finance new technologies themselves, nor are they especially willing to risk compromising or diluting their vessel security to facilitate financing by others.

The risk of separate ownership and/or security of a ship and the technology installed on it presents additional problems. And while leasing equipment that becomes an integral part of a vessel (such as scrubbers) presents legal challenges, structures for other types of add-on technology may be more palatable (see also box Financing new tech equipment).

"If an owner wants us to finance a multi-fuel vessel, there is a lot of technology risk, so we want to finance it as conservatively as possible or spread the risk across stakeholders," notes Christos Tsakonas.

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Christos Tsakonas
Global Head of Shipping at DNB Bank

Another factor affecting lending appetites are increasingly stringent capital adequacy requirements, as set out in the Basel accords.

Paul Taylor points out that as a result Western banks may be more reluctant to lend to shipping: "More capital is required from the bank to be put aside to support a loan, so these banks are going to have to justify the allocation of that capital," he says, adding that those banks' shipping departments will have to promote alternative services as well.

However, when asked what might prompt a retreat from maritime finance, only 18% of financiers put capital adequacy requirements as their top factor, while 38% don't consider them a disincentive at all. This compares with a total of 82% of financiers who see a failure to meet collective ESG criteria as a deterrent and the 52% who consider environmental shortcomings to be the main deterrent. Nevertheless, capital requirements could put further pressure on traditional debt financing and contribute to the relative attractions of other options: leasing, joint ventures and the capital markets.

Financing new tech equipment

At some point, once the shipping world has decided on which 'add on' Environmentally Sustainable Transport (EST) equipment is preferred, it will cease to be 'add on' and will become part of a newbuilding specification. It can then be financed as part of the newbuild ship.

In the meantime, however, there are challenges in retrofitting delivered ships, not only as regards selecting technology but also, once that is established, how to pay for it.

Existing financiers can increase their facility to finance the new equipment – secured by their existing security package – as enhanced by the new equipment. This has been the predominant approach so far to finance the retrofitting of scrubbers.

The additional exposure and any consequential changes to the financing terms might require amendments or supplements to the security package. This depends on the governing law of the security, not least the law of the flag state that governs the mortgage. These technical legal issues can be managed relatively painlessly once commercial agreement has been reached.

Specialist financiers of EST equipment, including supplier financing, have not yet emerged to any great extent in shipping outside of larger corporate/ ECA-backed facilities. It remains to be seen whether such participants will stand ready to take on a mixture of shipowner credit risk and asset risk (possibly even residual risk) as and when the drive to fit a particular type of EST equipment accelerates.

At this point intercreditor issues will likely arise between such EST financiers (who will most likely be a type of lessor) and existing ship financiers.

Issues that will need to be addressed include:

- The EST financier will want to be assured of an income stream to service its debt. This will need to be carved out of the ship's earnings, at least before shipowner default.
- Whether the EST financier gets a right to arrest the ship if it is not paid, even if ranking behind the existing financier.
- Waiver of existing covenants, such as restrictions on the incurrence of financial indebtedness or modifications to the ship.
- Can the EST equipment be removed without damaging the fabric of the ship?

The successful resolution of these issues will require an understanding by the EST supplier and financier of the complex underlying maritime law issues. It will also require a degree of accommodation on the part of the ship financier or lessor, which, our research suggests, is not currently something they are keen to accommodate. This may however change as ship financiers and lessors adopt more policies to support and promote environmental projects.

If the funding gap is filled by new entrants/sources of capital, a collaborative approach to find constructive solutions to address these issues to the satisfaction of existing lenders and new financiers will be needed.

Evolution in mindsets

Venture capital is starting to take an interest in the maritime sector. New technology incubators, accelerators and venture building have shipping firmly in their sights. Rainmaking (venture builder) and Techstars (accelerator), names previously unheard of in shipping circles, have raised their profiles and are generating much interest; evidence of an evolution in mindsets in the move towards sustainability.

The majority of owner survey respondents want governments and the public purse to play a significant role in financing new technology. The considerable investment needed and the speculative element, against a traditional backdrop of income volatility and low margins, speak as to why.

Shipping is a mature industry, but the sustainability challenges faced are very modern. The solutions under consideration have potential applications beyond pure shipping and into transportation, infrastructure, logistics and the global supply chain generally, which lends itself to the public sector.

The renewable energy sector may provide inspiration. From small and unprofitable beginnings, huge strides have been made in just a few decades. None of that would have been possible without massive political and public financial support.

Joining forces
Among the shipowners we surveyed, joint ventures are the most popular form of external finance to fund innovation and required technological change.

"We are going to see quite substantial cooperation on the horizontal chain, rather than on the vertical," says Kristin Holth, commenting on survey data showing that partnerships with other shipowners will be the preferred type of joint venture to help finance innovation (see Figure 5).

Linked to this trend is the growing pressure on smaller shipowners to consolidate or relinquish equity, either to access financing in general or to secure funds for technological upgrades.

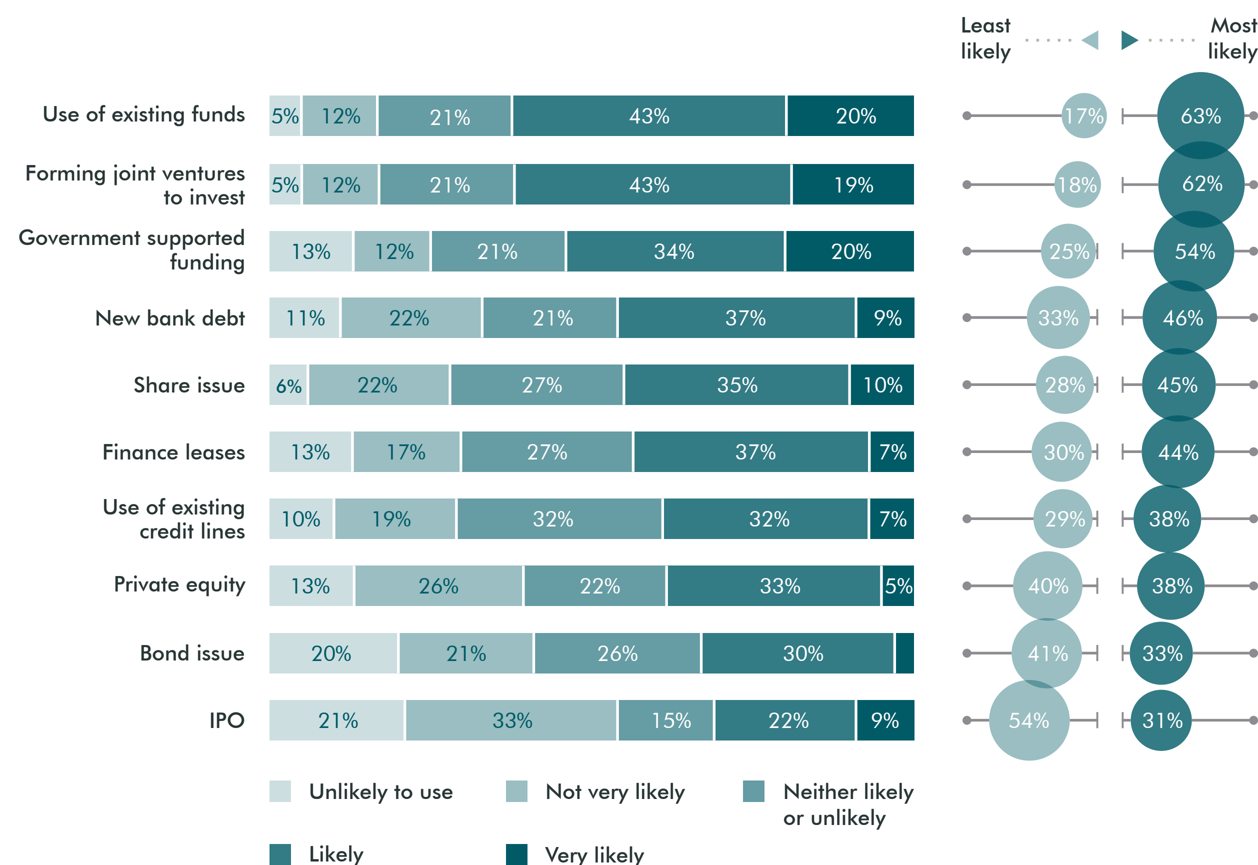
"Lenders increasingly focus on larger players that are able to cope with the new decarbonisation standards, thereby driving consolidation," notes Charis Plakantonaki.

The extent of any consolidation will vary by sector, of course. MSC's Bud Darr sees little scope for further tie-ups among container operators, but Teekay president Kenneth Hvid highlights merger potential in the dry bulk, crude oil and LNG sectors.

In the meantime, capital markets may provide an alternative source of financing and a means of sharing the risk of investment in new technologies more broadly. Almost a third of non-listed shipowners in our survey say they are likely to pursue an IPO in the next five years to help fund new technology. Nearly half of listed companies expect to rely on a share issuance and almost a third of all shipowners in our survey expect to issue bonds to fund innovation.

This has implications: unlisted companies may need to get their house in order on governance matters before an IPO or publicly listed bond, and all listed companies will need to monitor fast-evolving ESG reporting obligations (see also box Accessing capital markets).

FIGURE 5: What sources of finance will you use to fund innovation and required technological changes within the next five years?*



*Responses from shipowners/operators

Accessing capital markets

Any privately held shipowner pursuing an IPO or looking to issue bonds for the first time will need to make preparations in order to access capital markets.

Significant corporate renovation may be required. Some steps are mandatory to meet regulatory requirements and the demands of the market, while others are advisable to preserve some of the flexibility that a private company may take for granted. "It is always preferable to anticipate problems before they arise during an IPO or after going public," notes Will Vogel, Capital Markets Partner at WFW in New York. "The solutions adopted should be tailored to meet the distinctive corporate structure and future operational needs of a shipowning company."

Below are examples of important considerations that commonly arise as a privately held shipowner prepares to access the public markets, which may not be applicable to other industries.

Not all of these concerns will be relevant to every company or for every offering and typically a bond issuance will present less onerous requirements than an IPO.

GOVERNANCE

Legal structure:
- Jurisdiction of organisation (public markets accept Marshall Islands/Liberia)
- Segregation of assets in new holdco
- Transparent ownership

Corporate structure incompatible with public markets?
- Shareholders agreements?
- Preemptive rights?
- Rights of first refusal?

Organisational documents to cover:
- Corporate governance best practices
- Anti-takeover protections tailored to a public company (e.g. staggered board, limited shareholder voting rights)
- Related-party transaction evaluation

Initiate ESG disclosures?

Executive compensation disclosable:
- Regularise off-market management compensation?
- Establish equity-based incentive plans?
- Eliminate personal loans to directors?

ACCOUNTING

Engage recognised auditors

Appoint CFO

Historical audited financial statements required

IFRS or US GAAP?

Non-GAAP measures require appropriate disclosure

Address common accounting issues, e.g.:
- Consolidation of JVs
- Treatment of recent acquisitions
- Impairment of vessels

Establish internal controls over financial reporting

COMMERCIAL

Executive management with operational shipping experience?

Non-competition agreements with key stakeholders?

Select board members:
- Additional shipping expertise to market?
- Independence from controlling shareholder?
- Emphasis on board diversity by US regulators/ESG investors

Commercial arrangements common in shipping may present issues e.g.:
- Related party transactions will be scrutinised (fees for related-party ship management/S&P fees)
- All material arrangements (e.g. time charters, pools, financing agreements) will be subject to disclosure to investors
- Informal intercompany arrangements need formalising
- Public company disclosure obligations potential to conflict with private nature of shipping

CHAPTER THREE

GOVERNANCE

Although environmental concerns are regarded as the biggest challenge by shipowners and financiers, compliance with governance and social standards is becoming rapidly more important.

"The more traditional shipowners that wish to stay more opaque – they will find access to capital very difficult going forward," predicts Paul Taylor at Societe Generale.

Another motivator for better governance is to attract fresh capital to the sector. "Why have institutional investors not flooded this market?" asks Paul Taylor. "Firstly because there has been no sustained profitability for the last ten years and secondly because of transparency."

In addition, pressure from regulators and law makers is increasing. According to Simon Ovenden, Capital Markets Partner at WFW in London: "There is a strong argument that better governance will become a necessity rather than a voluntary exercise, in order to satisfy new laws and regulation."

"Better governance will become a necessity rather than a voluntary exercise."

Simon Ovenden
Capital Markets Partner at WFW

Simon Ovenden points to the EU's new Sustainable Finance Taxonomy Regulation and the Non-Financial Reporting Directive. Under this net set of rules financial market participants and companies seeking to access EU financial markets will be required, from January 2022, to provide enhanced disclosure on a range of ESG criteria – and investors and financial intermediaries will expect this to be available.

Meanwhile, the regulatory scheme applicable to US-listed companies includes very few specific ESG reporting mandates. This is particularly true in relation to environmental and sustainability reporting, where no substantial formal disclosure guidance has been issued.

More extensive requirements apply to social and governance matters, although most US-listed shipowners are non-US companies, thereby being exempt from most of these 'S' and 'G' disclosure rules.

Still, pressure on US-listed companies to provide more extensive ESG disclosures is rising, especially regarding climate change. Time will tell whether, like in the EU, more detailed ESG disclosure rules will be adopted in the US.

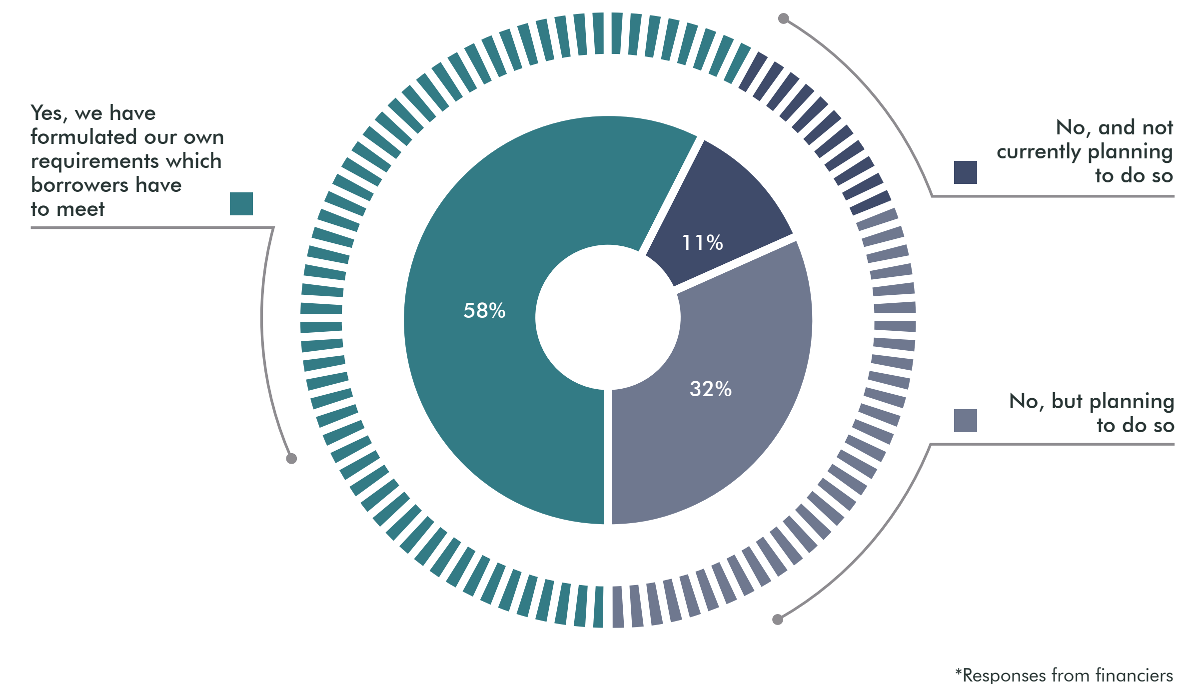
Shipowners and charterers are slowly taking this message on board: just over half want to improve transparency in order to attract new investors.

Those that channel institutional money into shipping agree. According to Tufton's Paulo Almeida: "Anyone who is serious about ESG, as all shipping stakeholders will need to be soon if they aren't already, must be serious about transparency."

Meanwhile, the increasing use of sanctions is pushing existing lenders to do extra governance checks, says Christos Tsakonas. "Sanctions have become wider, faster and much more unpredictable, so it's extremely important that you deal with counterparties who have extremely solid, transparent governance structures, whether public or private."

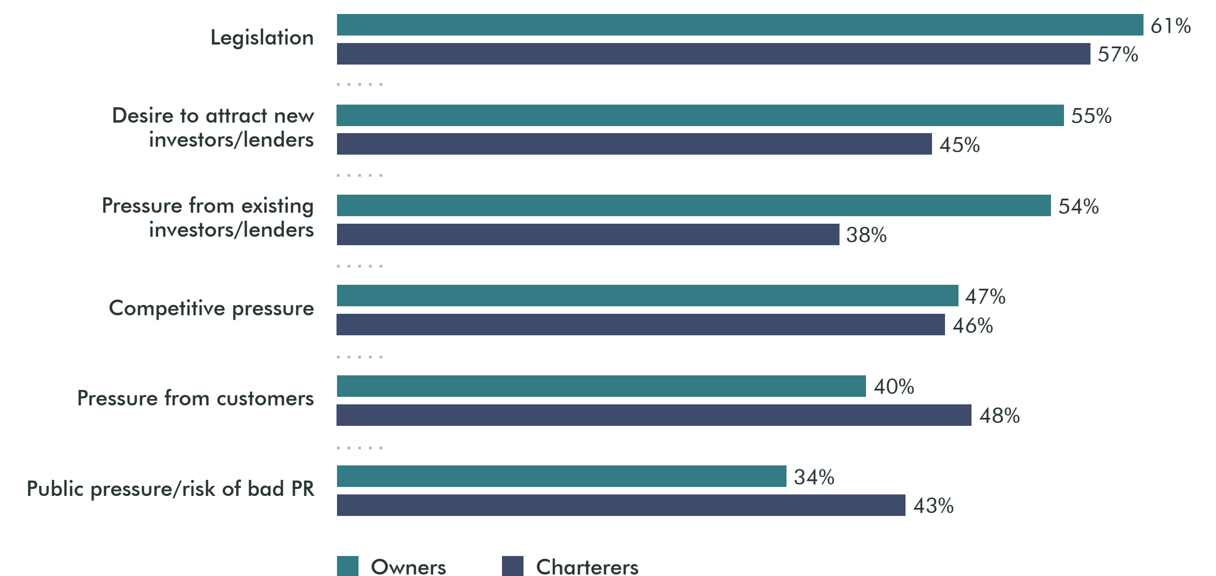
Our survey backs this up, with almost 90% of financiers either going beyond standard governance checks or planning to do so in the near future (see Figure 6). However, only 54% of shipowners and 38% of charterers say that pressure from existing lenders and investors is a motivator for better transparency (see Figure 7).

FIGURE 6: Do you require borrowers/lessees/targets to meet governance requirements which go above and beyond standard anti-money laundering/know your customer checks before lending?*



*Responses from financiers

FIGURE 7: What motivates you/would motivate you to increase transparency and reporting on non-financial and ESG activities?* (Select all that apply)



*Responses from shipowners/operators and charterers

39%

of survey respondents expect most shipowners to meet crew welfare targets within five years

Most shipowners (61%) would not change their corporate structure in response to governance pressures, while only 18% may look at onshoring operations as a result. In fact, pressure to onshore is the lowest ESG priority among shipowners we surveyed, despite new regulations such as EU economic substance rules that limit companies' ability to base themselves in low-tax jurisdictions.

Furthermore, our survey shows that legislation is the best prompt for better transparency and ESG reporting, with 60% of shipowners and charterers flagging it as their prime motivator. Listed companies should be particularly concerned, as they face the most demanding (and growing) regulatory requirements and commercial incentives towards transparency and ESG reporting (see also box Accessing capital markets, page 21).

As well as regulation, end users such as charterers and energy companies also have a role to play in demanding better governance, says Tony Foster.

"Poor governance is a negative for investment capital so things have to change – things like major end users doing business without really being sure where the equity in the vessel is coming from."

Still, shipowner respondents to the survey view the social element of ESG as more important than governance criteria. They are significantly more concerned about crew welfare than they are about financial reporting.

A significant focus on the issue during the COVID-19 crisis, as lockdowns and travel restrictions prevented many seafarers from joining ships or returning home, may explain this finding – and may hopefully prove a catalyst for change. For while only 39% of our survey thinks that most shipowners will meet crew welfare targets within the next five years, that is a more optimistic forecast than for any other ESG criterion except financial reporting.

"Banks and lessors are increasingly looking at the social side, particularly crew welfare, which has been very prevalent during the COVID-19 crisis in terms of the inability to change crews – it's been a real humanitarian issue," says Paul Taylor.

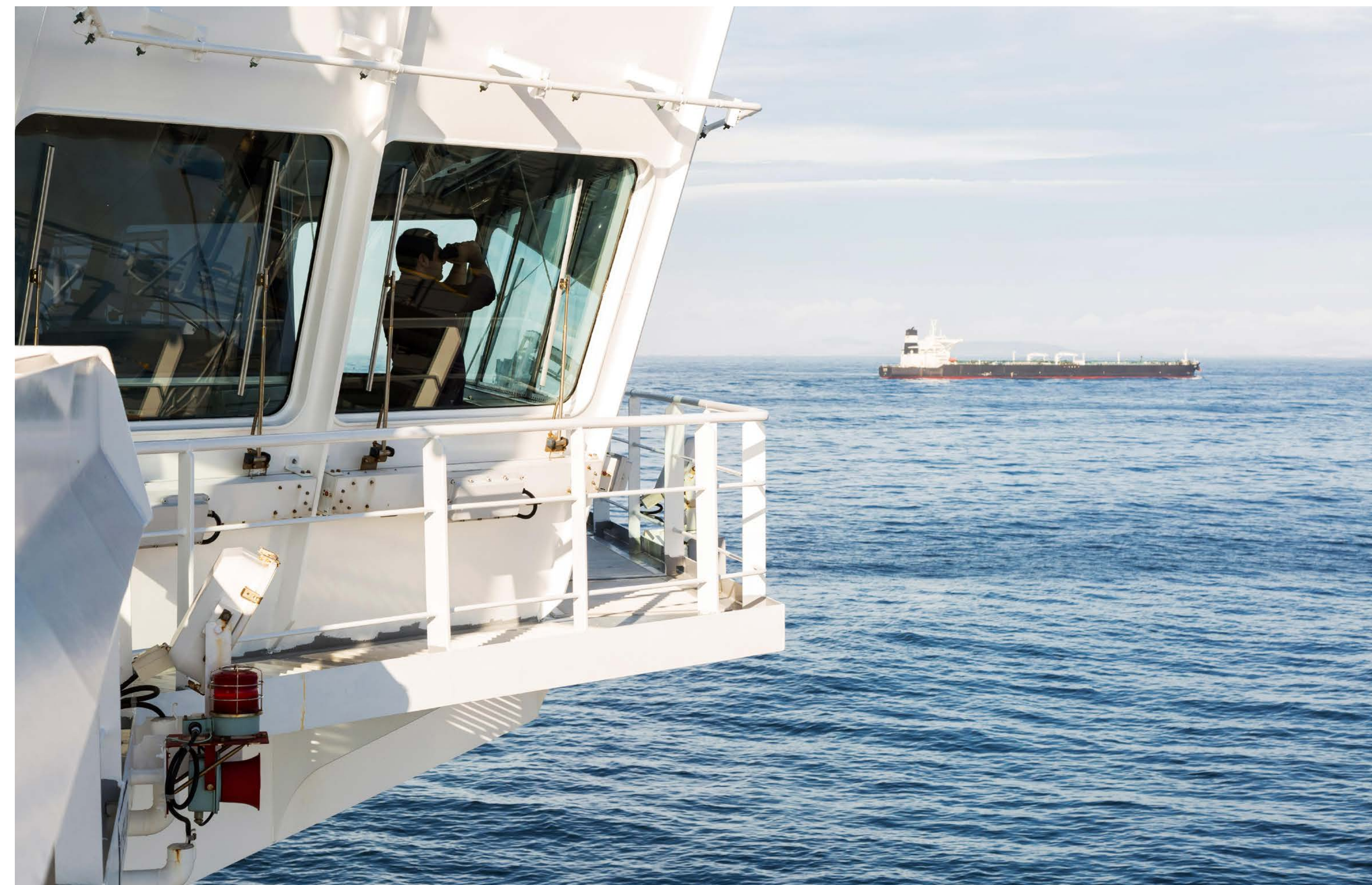
"Attracting, retaining and supporting a diverse workforce is key for the long-term sustainability of any business."

George Paleokrassas
Global Maritime Sector Co-Head at WFW

In addition to crew welfare, the maritime industry is also placing a focus on the benefit diversity brings as part of good board governance. As George Paleokrassas, Global Maritime Sector Co-Head at WFW explains, "attracting, retaining and supporting a diverse workforce is key for the long-term sustainability of any business. In addition to the benefits of drawing upon different experiences and perspectives, research has proven that organisations with diverse leadership teams are more likely to have improved financial returns due to increased innovation. This is no different in the shipping sector."

CONCLUSION

SHARED DIRECTION OF TRAVEL



Greater focus on ESG criteria is an established and growing reality. Shipping's place in the ESG spotlight is a relatively recent phenomenon, but it is not a passing trend. And while regional priorities vary regarding sustainability and governance, the direction of travel is shared.

In part, this is down to geopolitics – almost every country recognises the dangers of climate change – but it is also because ESG is sector agnostic, with improvements in other sectors putting increasing pressure on shipping to catch up.

"Sharing of information, whether directly between peers or indirectly via public disclosures, is key to ESG and this will reinforce efforts by leaders by helping later adopters, encouraging a new cycle of innovation that everyone will benefit from," says Paulo Almeida.

"Sharing of information is key to ESG, encouraging a new cycle of innovation that everyone will benefit from."

Paulo Almeida
Chief Investment Officer, Tufton

The unique dynamics of shipping could make this pressure particularly productive. As the survey shows, many companies would collaborate with others to help meet environmental targets and such partnerships will necessitate transparency. And while many shipowners value their independence, the financial demands of clean technology upgrades could well force them to consolidate, give up equity or go public – avenues associated with better governance, better financial reporting and more transparency.

"The traditional shipowning entrepreneurial, family business will fight all the way against transparency and regulations – it's the last thing they like – but I think it will overpower them in the end and that will have other consequences such as consolidation," says Tony Foster.

Vertical integration will also be required, as well as more cooperation between shipowners, charterers and end users, if the technical and financial challenges of decarbonisation are to be met.

"Shipowners are being asked or expected to be the first movers to try new fuels and propulsion types, but this cannot happen without risk-sharing with customers," notes Kenneth Hvid.

Governments also have a big role to play, especially initially, says George Wells at Cargill. "You need to bridge the economic gap that is there at the moment between the status quo and the future." He also points out that much of the investment to enable clean shipping will need to be on land – in fuel infrastructure.

Charting a course

To effect the environmental improvements from which other ESG gains may flow, all stakeholders in shipping will need to contribute. Exactly how is up for debate, but common ideas among our interviewees include: matching innovation funds from governments and banks; credits from shipyards for greener options such as dual-fuel ships; and longer charter terms (or higher rates) to support shipowners' clean investments.

Against this backdrop, several specific policies are favoured by many of our interviewees, chief among them a global emissions or fuel tax to help fund clean technology research. However, only 10% of our survey thinks this should be the predominant source of funding.

There is more consensus across the survey and interviewees about the need for regulation to drive forward the ESG agenda, notwithstanding the growing role of banks, investors, employees and customers. Regulation can both force change and limit the uncertainty that stymies it, giving companies a clearer picture of what will be expected of them and their competitors.

"The desire to mitigate regulatory risks and offer a more efficient and competitive service to customers will continue to be what drives the push towards clean technology in shipping," says Kenneth Hvid.

At the same time, everyone accepts that regulators cannot do the job alone. Actors across the supply chain will need to cooperate more and maybe also engage with new stakeholders such as technology start-ups.

"Only by bringing all [stakeholders] together will the industry be in a position to demonstrate the technical, operational and commercial feasibility of zero-emission vessels to facilitate their rapid deployment," says Charis Plakantonaki. "Initiatives such as the Global Maritime Forum's Getting to Zero Coalition, which creates the framework for industry constituents to collaborate and take collective action, are critical to driving early adoption projects involving green energy and technology."

While the results of the survey suggest the most pressing focus is on 'E', it is important to also note that many in the industry believe the drive to sustainability will bring about changes in the shape, capital structure and financing of the sector. And therefore, the shipping industry won't be able to bring about significant change without addressing the 'S' and the 'G'.

Either way, the separate elements of ESG look set to reinforce each other in shipping over the coming years. In spite of its reputation as being old-fashioned and resistant to any form of change, shipping has shown itself to be a highly resilient and adaptable industry. Disasters have historically been the catalyst for successive improvements as regards operational, safety and environmental matters. ESG issues, in contrast, are a constant, inexorable and growing imperative rather than a single incident or series of incidents. Accordingly, they will bring about changes to the structure of the industry that will be deep and far-reaching.

The results of the survey show a clear recognition within the industry that we are on the cusp of a new era and while there is an understandable reluctance to being the first mover, especially when it comes to new technologies, that recognition itself suggests we are likely to see significant changes in the coming years that will reshape the industry.

METHODOLOGY

For this report, Thought Leadership Consulting surveyed 545 senior executives from the maritime industry. Sixty-three percent of respondents hold C-level or other leadership roles in their companies (CFO, CEO, COO, SVP, EVP, VP, Global Head of Shipping, Head of Investment or similar). The remaining 37% are directors or similar (Managing Director, Finance Director, Head of Shipping, General Counsel, General Manager).

Forty-four percent of survey respondents work for deep-sea commercial shipping operators across all maritime classes including tankers, bulk-carriers, container vessels, car carriers and LNG and LPG gas carriers. Another 44% are financiers working for banks, lessors, private equity firms, shipping investment funds, pension funds or other institutional investors. Twelve percent work for energy, container or commodities charterers and other end users.

Forty-eight percent of respondents are based in Europe, the Middle East and Africa, 35% in Asia Pacific and 17% in the Americas.

In addition to the survey, in-depth interviews were conducted with ten independent industry experts.

Survey fieldwork ran from 17 September to 12 October 2020. In-depth interviews took place throughout September and October 2020.

WFW and Thought Leadership Consulting would like to thank all the independent experts for their expertise and contribution to this report:

Paulo Almeida
Chief Investment Officer, Tufton

Katharine Palmer
Global Sustainability Manager, Marine and Offshore, Lloyd's Register

Bud Darr
Executive Vice President for Maritime Policy and Government Affairs, MSC

Charis Plakantonaki
Chief Strategy Officer, Star Bulk Carriers

Tony Foster
Chief Executive, Marine Capital

Paul Taylor
Global Head of Shipping and Offshore, Societe Generale CIB

Kristin Holth
Board member, Maersk Drilling and board member, GasLog

Christos Tsakonas
Global Head of Shipping, DNB Bank

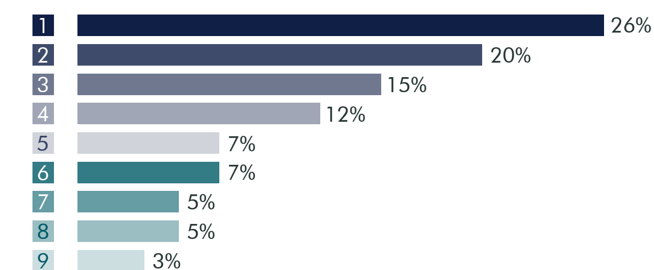
Kenneth Hvid
President and Chief Executive, Teekay

George Wells
Global Head of Assets and Structuring, Cargill Ocean Transportation

APPENDIX – SURVEY RESULTS

Q1

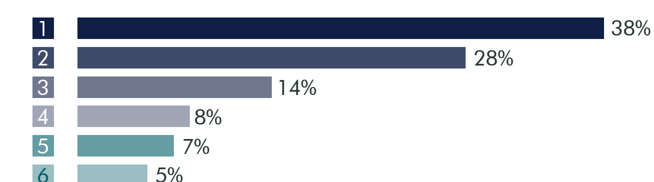
In your view, what are the biggest challenges for the maritime industry in the next five years? (Top three; first rank shown)



1. Reducing emissions/carbon footprint
2. International trade tensions (including sanctions)
3. Impact of COVID-19/similar unknown 'black swan' events
4. New technological requirements and developments
5. Regulatory (IMO, health & safety, environmental regulation, crew welfare)
6. Regulatory (tax, governance, disclosure & transparency requirements)
7. Access to financing (pricing)
8. Access to financing (availability of providers)
9. Military conflict/political instability

Q2

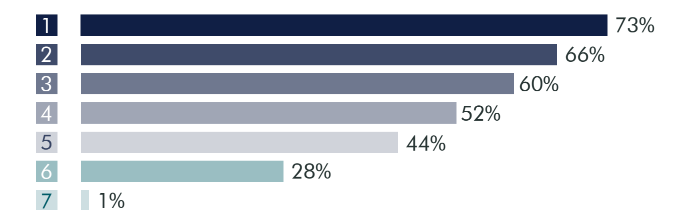
Please rank your top three ESG priorities in order of importance for your decision making (First rank shown)



1. Environmental targets-efficiency/emissions & carbon reduction
2. Environmental targets - end of life assets/ship recycling
3. Diversity targets/board constitution
4. Social/crew welfare
5. Financial reporting
6. Pressure on offshore jurisdictions/onshoring of operations

Q3

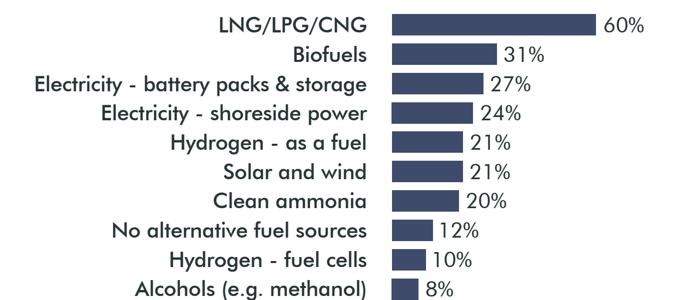
What technologies are you considering supporting/deploying over the next five years? (Select all that apply; shipowners/operators only)



1. Performance monitoring systems (e.g. fuel optimisation /emission reduction/equipment performance)
2. Technology-vessel design (e.g. hull/engine design /economies of scale/more efficient equipment)
3. Artificial intelligence/big data (e.g. route planning/just in time arrival planning/weather & ocean conditions data)
4. Technology-fuel technology/R&D investment
5. Technology-add-on equipment (e.g. 'scrubbers'/flettner rotors/kite sails)
6. Distributed-ledger technologies (e.g. bills of lading)
7. Other

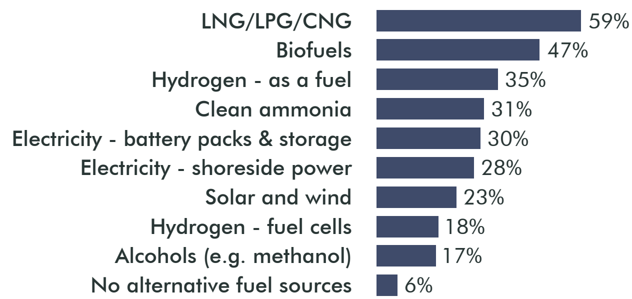
Q4

Within the next five years: What types of alternative fuel sources are you considering using in the future? (Select all that apply; shipowners/operators only)



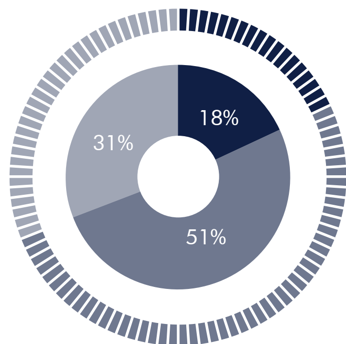
Q5

Within the next ten years: What types of alternative fuel sources are you considering using in the future? (Select all that apply; shipowners/operators only)



Q6

Do you see LNG as a transition fuel or a longer-term solution?

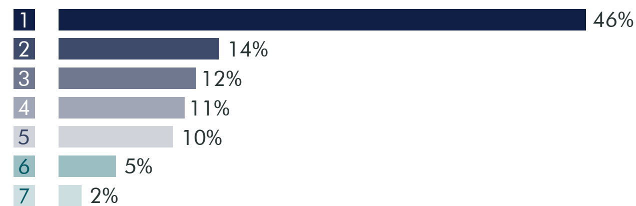


Q7

Please rank, in order of importance, your top three drivers for supporting one technological improvement/fuel technology over another (Shipowners/operators only; first rank shown):

Q8

Who should predominantly fund research into alternative fuel sources/increased efficiency?



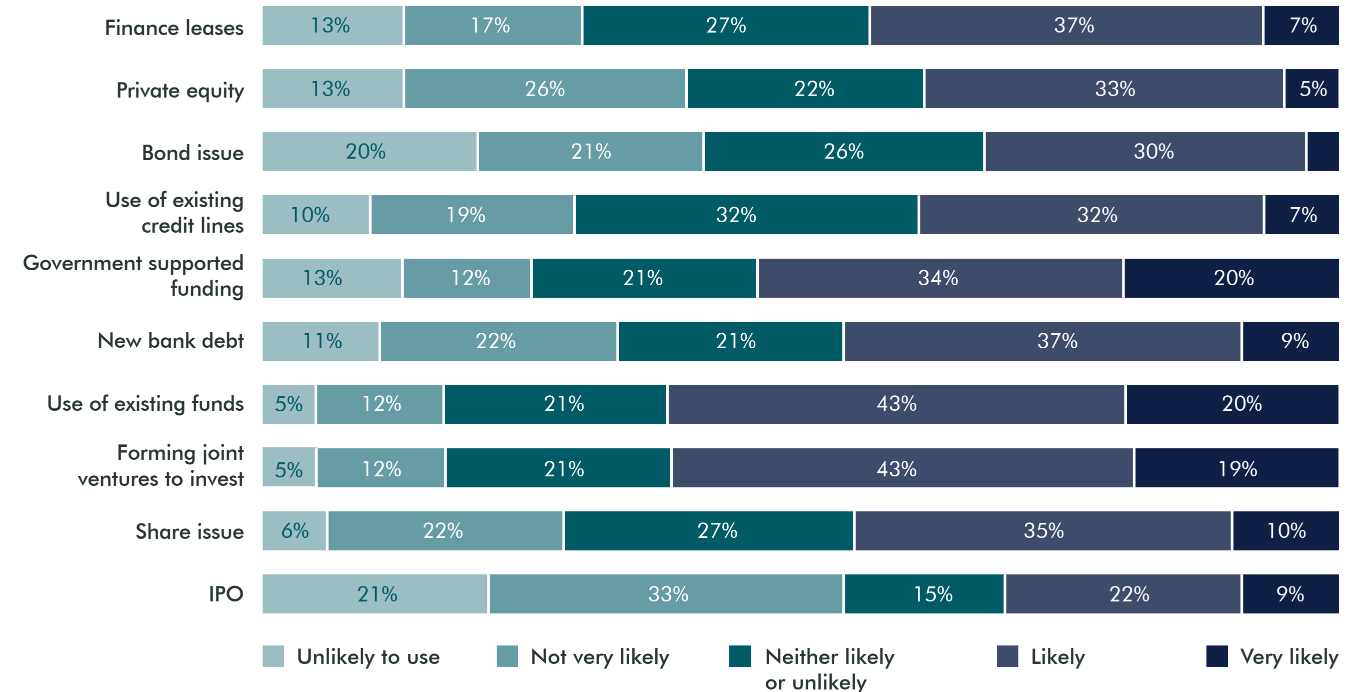
1. Governments (given public benefit element)
2. Private investment by shipowners
3. Private investment by other
4. Private investment by fuel providers
5. Industry via carbon tax/fuel levy
6. Charterers and end users
7. Other

Q9

What should drive ESG change: voluntary industry initiatives or legislation and regulation?

Q10

What sources of finance will you use to fund innovation and required technological changes within the next five years? (Shipowners/operators only)

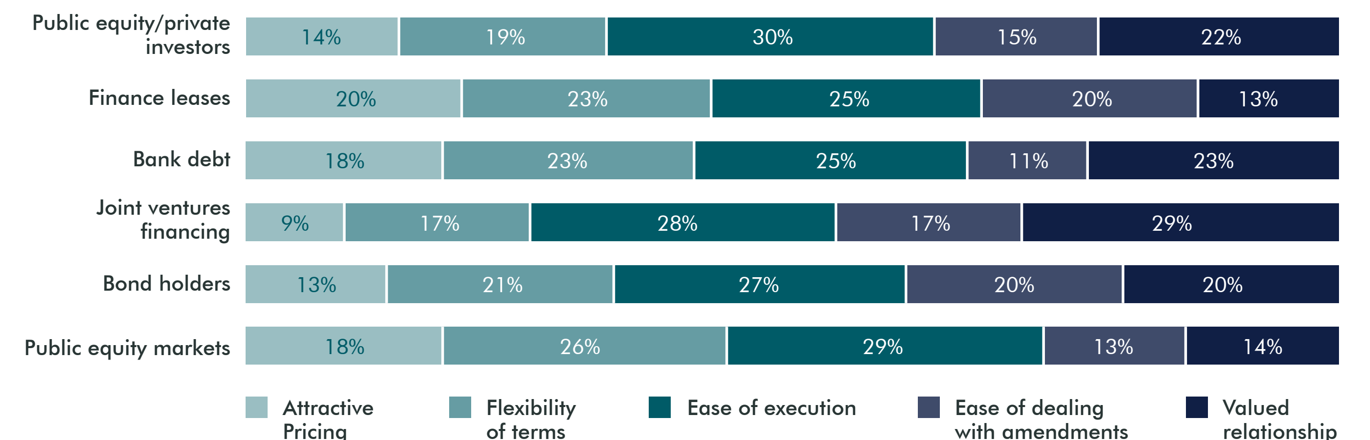


Q11

Who are you most likely to form JVs with? (Shipowners likely/very likely to form JVs only)

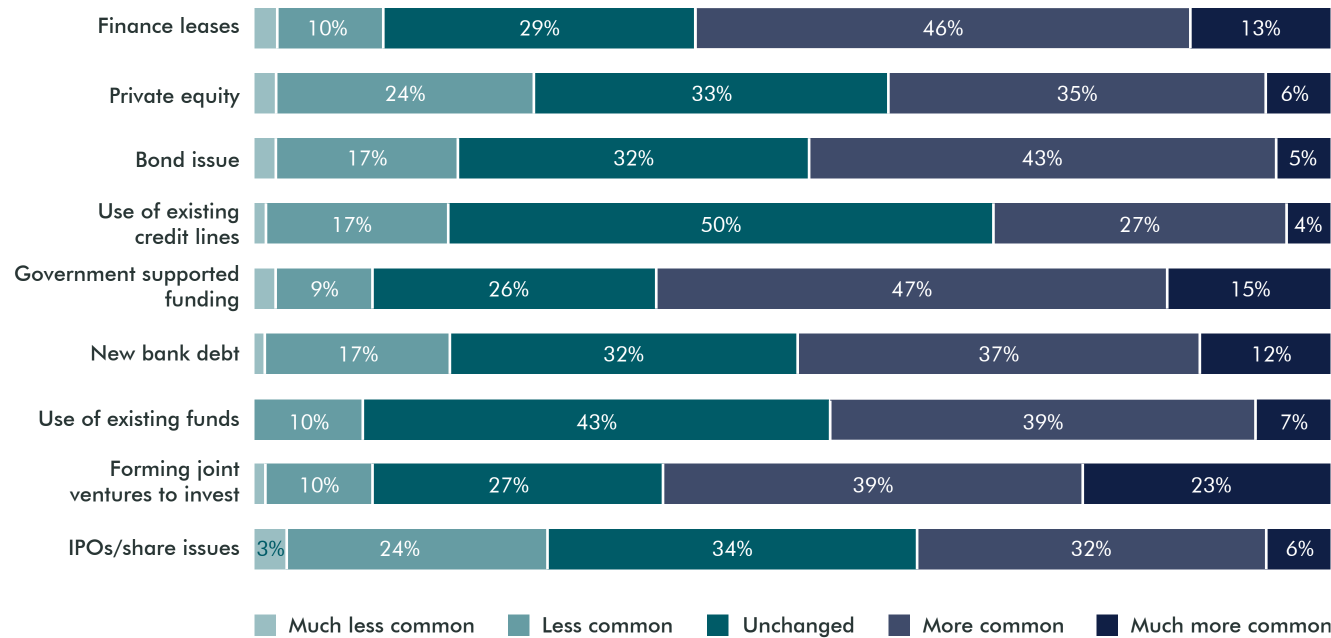
Q12

Looking at your existing sources of financing, what do you value most from each option? (Shipowners/operators only)



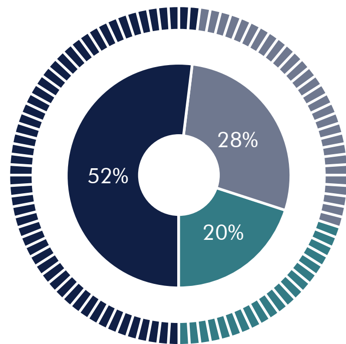
Q13

How common will the following sources of finance be five years from now for shipping operators seeking to fund innovation and required technological changes? (Financiers only)



Q14

How will changes to the shape of the shipping industry over the next 5-10 years impact reliance on asset security in financings (whether by way of leasing or mortgaging)? (Financiers only)



- Reliance on asset security will be more important
- Reliance on asset security will be less important
- No change

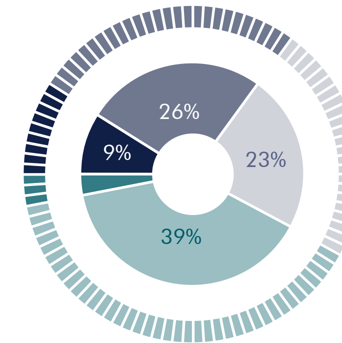
Q15

Which, if any, of the following factors would make you reassess your willingness to continue financing the maritime industry?
(Financiers only; ranked; first rank shown)

1. Lack of compliance with environmental regulations/policies
2. Cost of compliance with capital adequacy or other banking regulatory requirements
3. Lack of compliance with social and governance regulations/policies
4. Lack of transparency in corporate structures

Q16

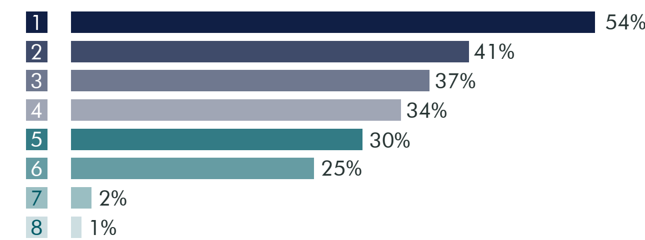
Airlines lease almost 50% of all commercial aircraft from aircraft operating lessors. Is a similar operating lease model attractive to separate vessel operators' asset risk from operational risk?



- Not attractive
- Somewhat attractive
- Neither attractive nor unattractive
- Attractive
- Very attractive

Q17

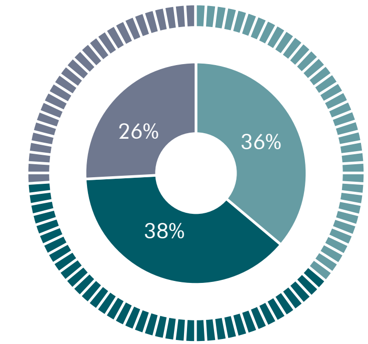
When financing the underlying asset, under what conditions would you be prepared to relax covenants in order for an owner to finance add-on fuel efficient technology?
(Select all that apply; financiers only)



1. Depending on collateral available/credit enhancement
2. I would be prepared to increase the existing financing to fund fuel efficient technology
3. I would allow the owner to incorporate technology by way of leasing equipment for the vessel which will become an integral part of the vessel (requiring the owner to incur additional indebtedness)
4. I would allow the owner to assign excess charter hire/ receivables to fund fuel efficient technology
5. I would allow the owner to incorporate technology by way of leasing equipment for the vessel provided it can be easily removed (requiring the owner to incur additional indebtedness)
6. I would allow a subordinate security interest on the vessel
7. Other
8. Under no condition

Q18

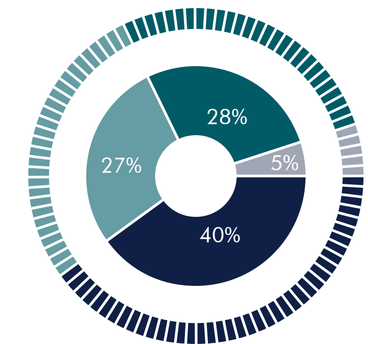
If the availability of finance includes ESG conditions requiring a change of capital structure, would you consider this? (Shipowners/operators only)



- No
- Yes, reluctantly
- Yes

Q19

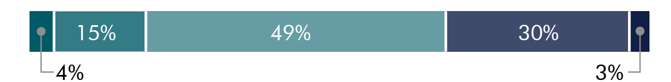
Who would you prefer such a dilution of current equity control to go to? (Shipowners willing to consider a change of capital structure only)



- Private equity
- Supply chain stakeholders
- Public markets (listed)
- Other

Q20

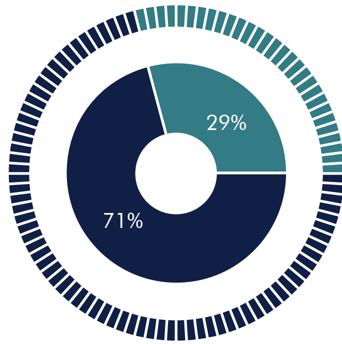
To what extent do ESG factors influence your investment/financing decisions?



- No influence
- Minimal influence
- Some influence
- Significant influence
- Crucial

Q21

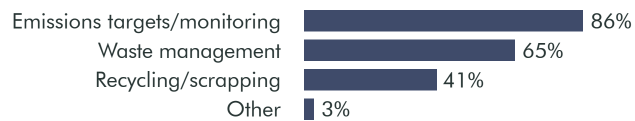
What level of environmental standards do you require borrowers/lessees/targets to meet before financing/investing? (Financiers only)



- We require them to meet the minimum standards of applicable regulatory requirements
- We have formulated our own requirements which go beyond the minimum standards

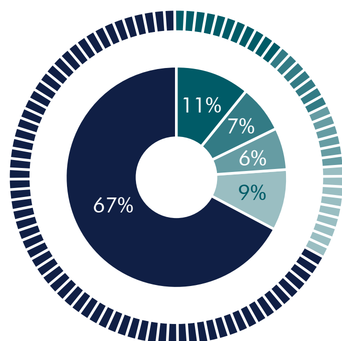
Q22

For which aspects of environmental standards do you require additional compliance? (Select all that apply; financiers who have formulated own requirements only)



Q23

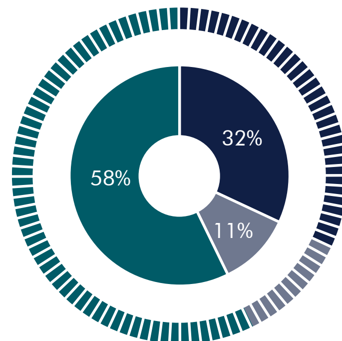
Have you signed up/are you planning to sign up to the Poseidon Principles? (Financiers only)



- Yes, we have signed up to the Poseidon Principles
- Yes, in the next 12 months
- Yes, in the next 2 years
- Yes, in the next 3 or more years
- No

Q24

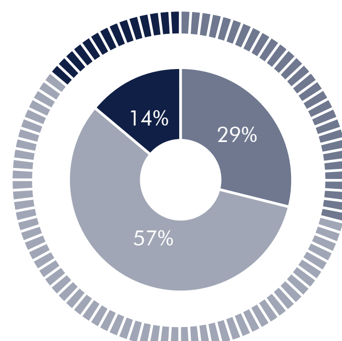
Do you require borrowers/lessees/targets to meet governance requirements which go above and beyond standard anti-money laundering/know your customer checks before lending? (Financiers only)



- Yes, we have formulated our own requirements which borrowers have to meet
- No, but planning to do so
- No, and not currently planning to do so

Q25

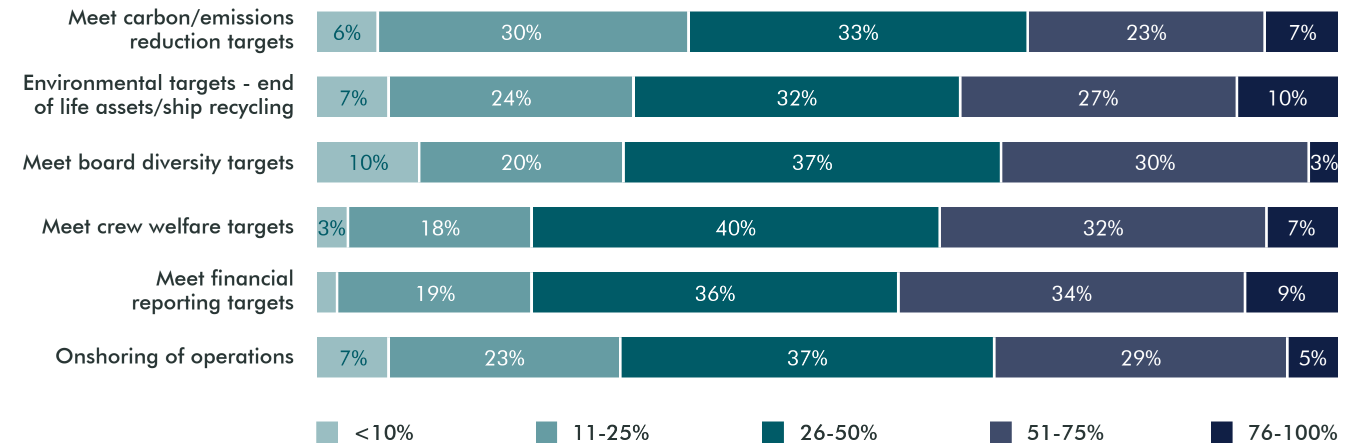
When do you expect to introduce governance requirements for lending? (Financiers planning to formulate own requirements only)



- In the next 12 months
- In the next 2 years
- In the next 3 or more years

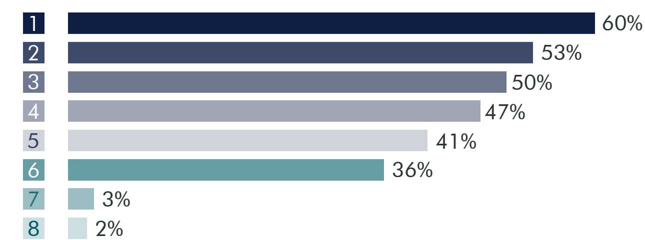
Q26

What proportion of the maritime industry do you expect to successfully address the following ESG issues within the next five years:



Q27

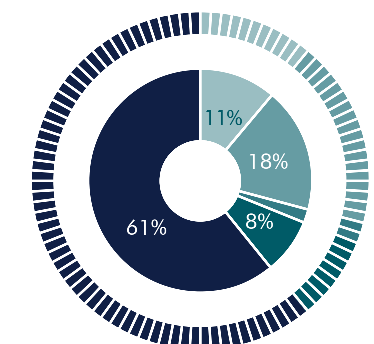
What motivates you/would motivate you to increase transparency and ESG activities? (Select all that apply; shipowners/operators and charterers only)



1. Legislation
2. Desire to attract new investors/lenders
3. Pressure from existing investors/lenders
4. Competitive pressure
5. Pressure from customers
6. Public pressure/risk of bad PR
7. Other
8. None of the above

Q28

Are you looking to change your corporate structure in light of governance pressures? (Shipowners/operators only)



- No
- Maybe, looking at changing flags in next 1-5 years
- Maybe, looking at onshore jurisdictions in next 1-5 years
- Yes, looking at changing flags currently
- Yes, looking at onshore jurisdictions currently

Due to rounding, some totals do not equal 100%.

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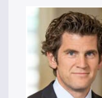

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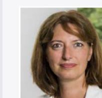

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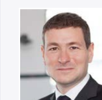

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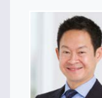

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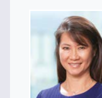

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