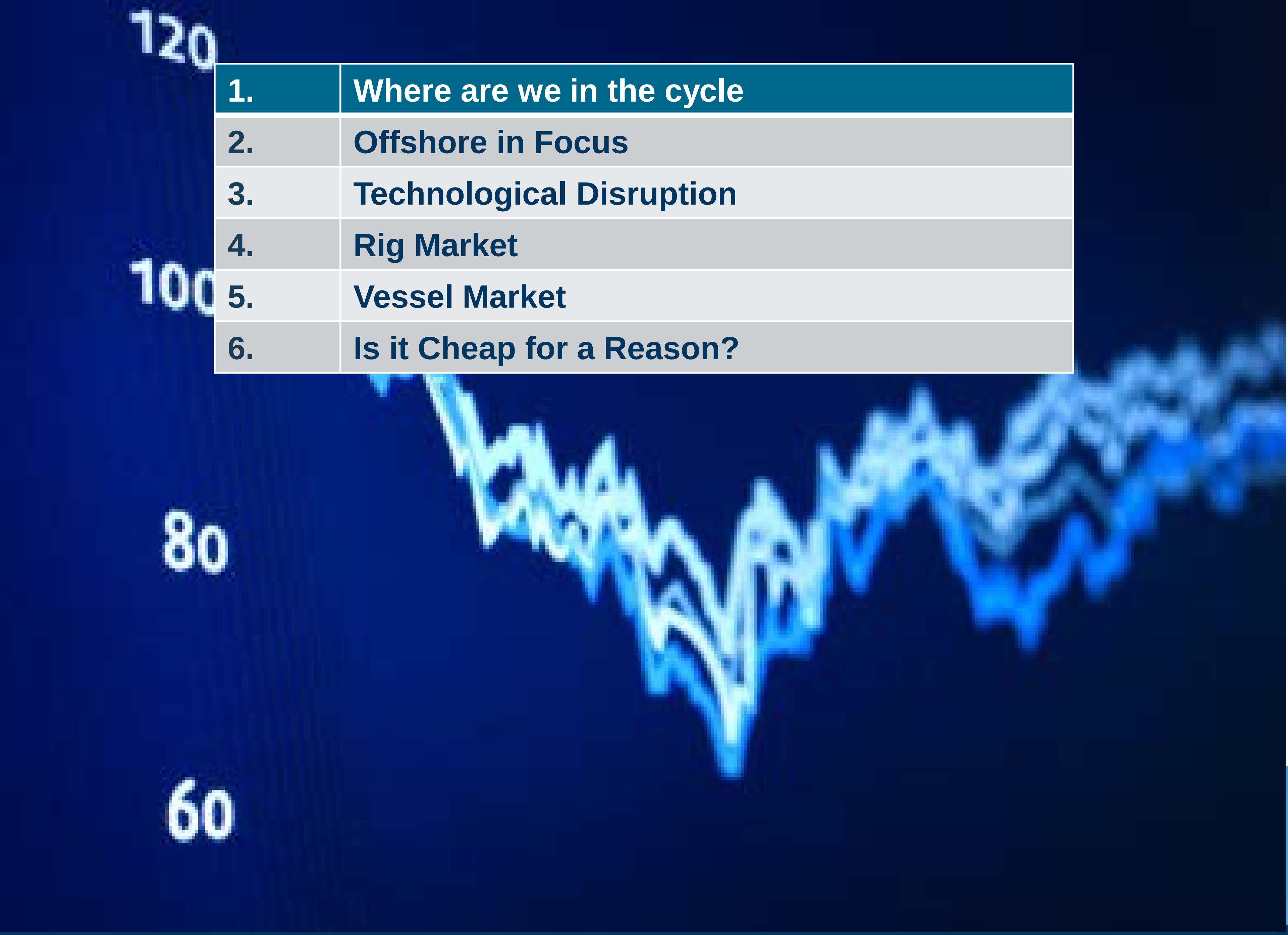
Maybe it's cheap for a reason?

Norway Ship and Offshore Finance Forum
June 2019

1.	**Where are we in the cycle**
2.	**Offshore in Focus**
3.	**Technological Disruption**
4.	**Rig Market**
5.	**Vessel Market**
6.	**Is it Cheap for a Reason?**



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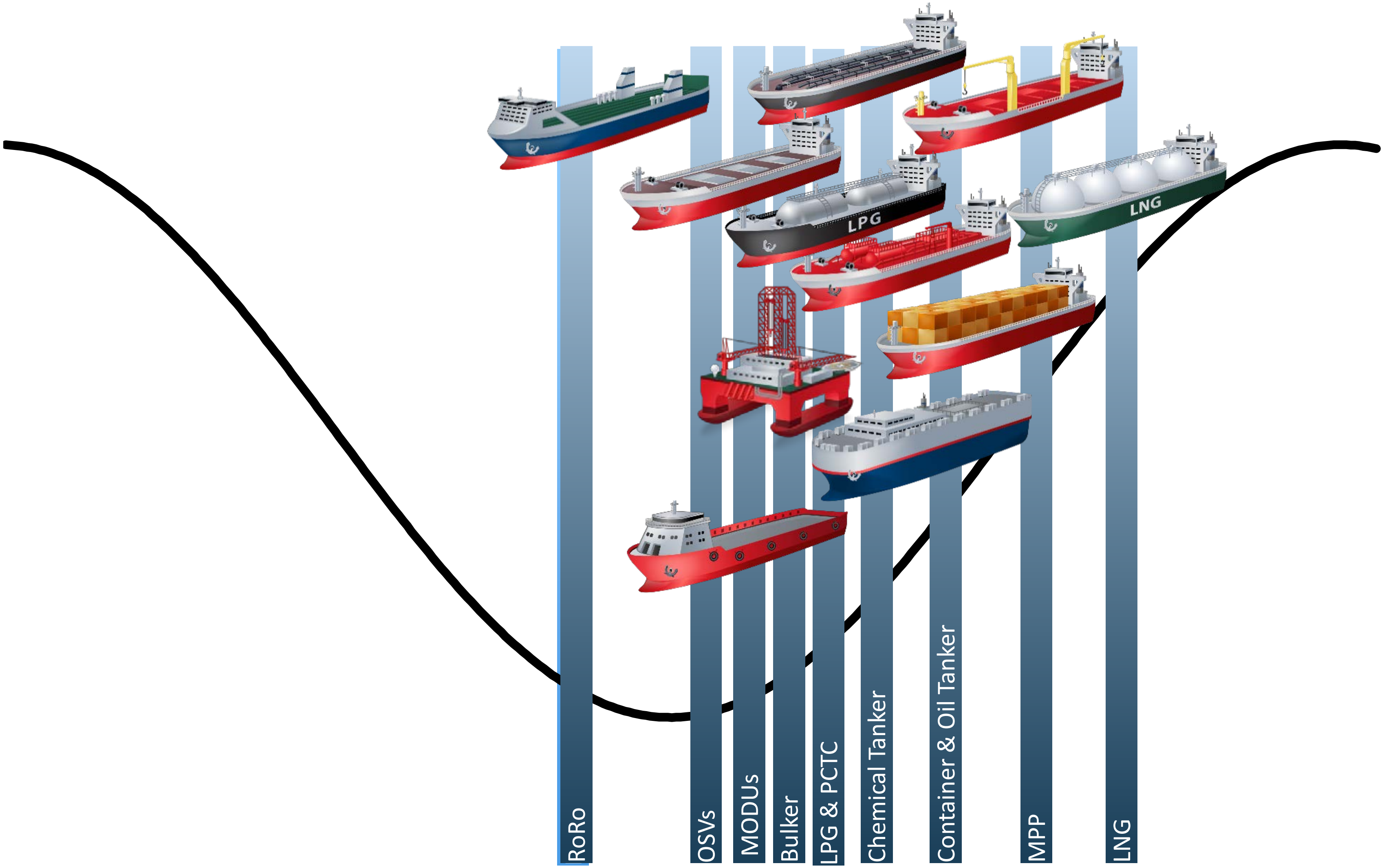
Where on the Earnings Cycle Are We?



Schematic for illustrative purposes only

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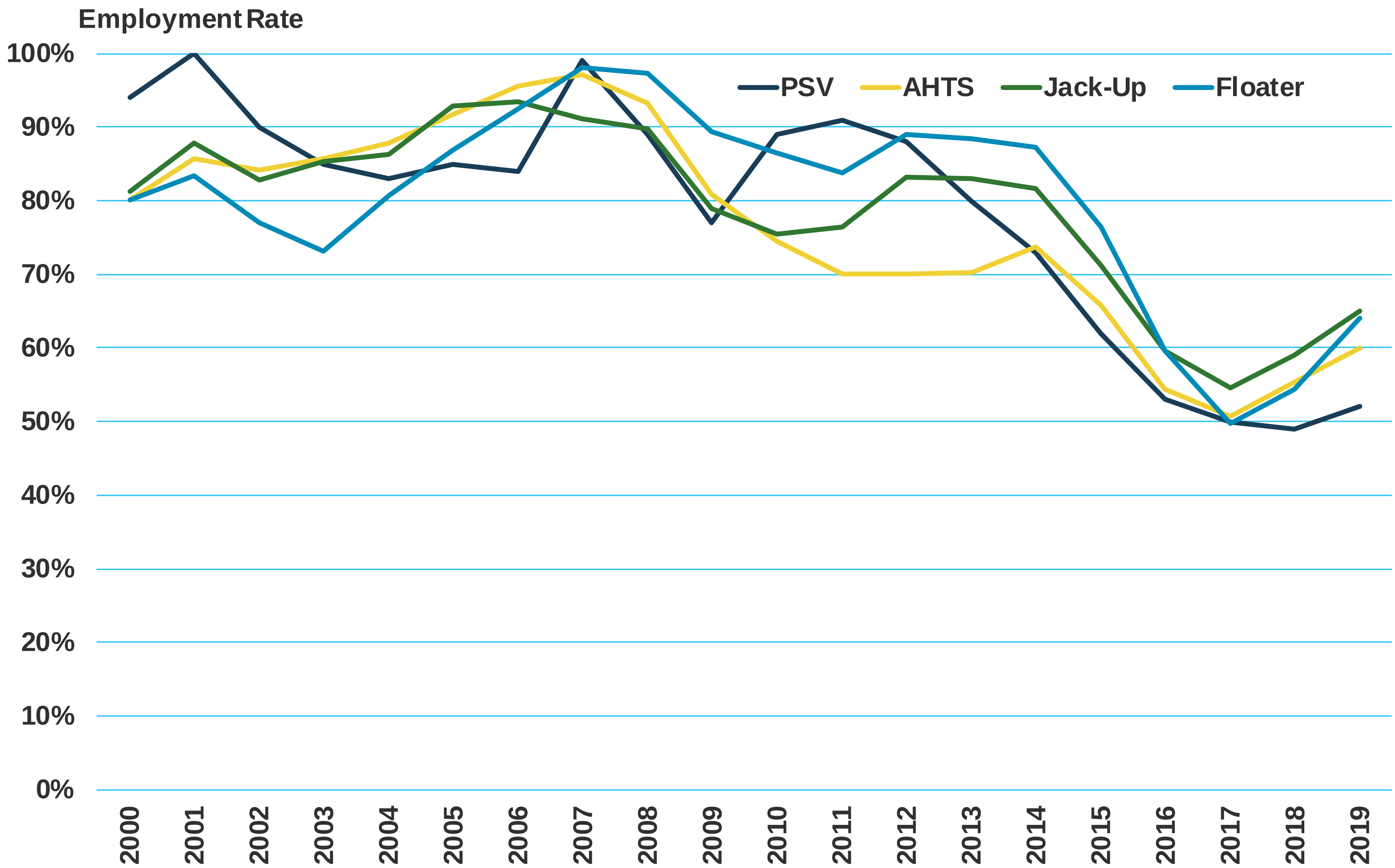
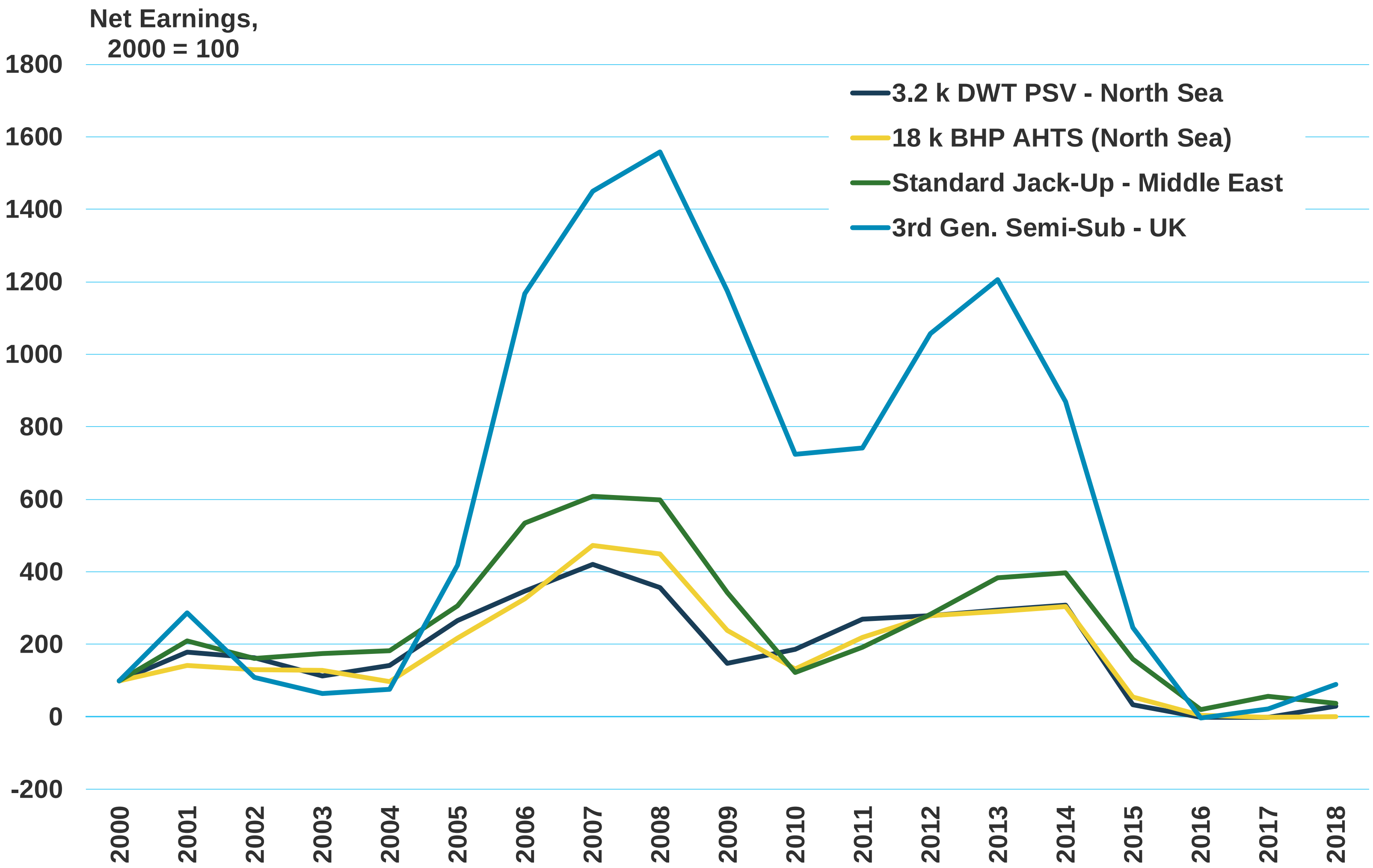
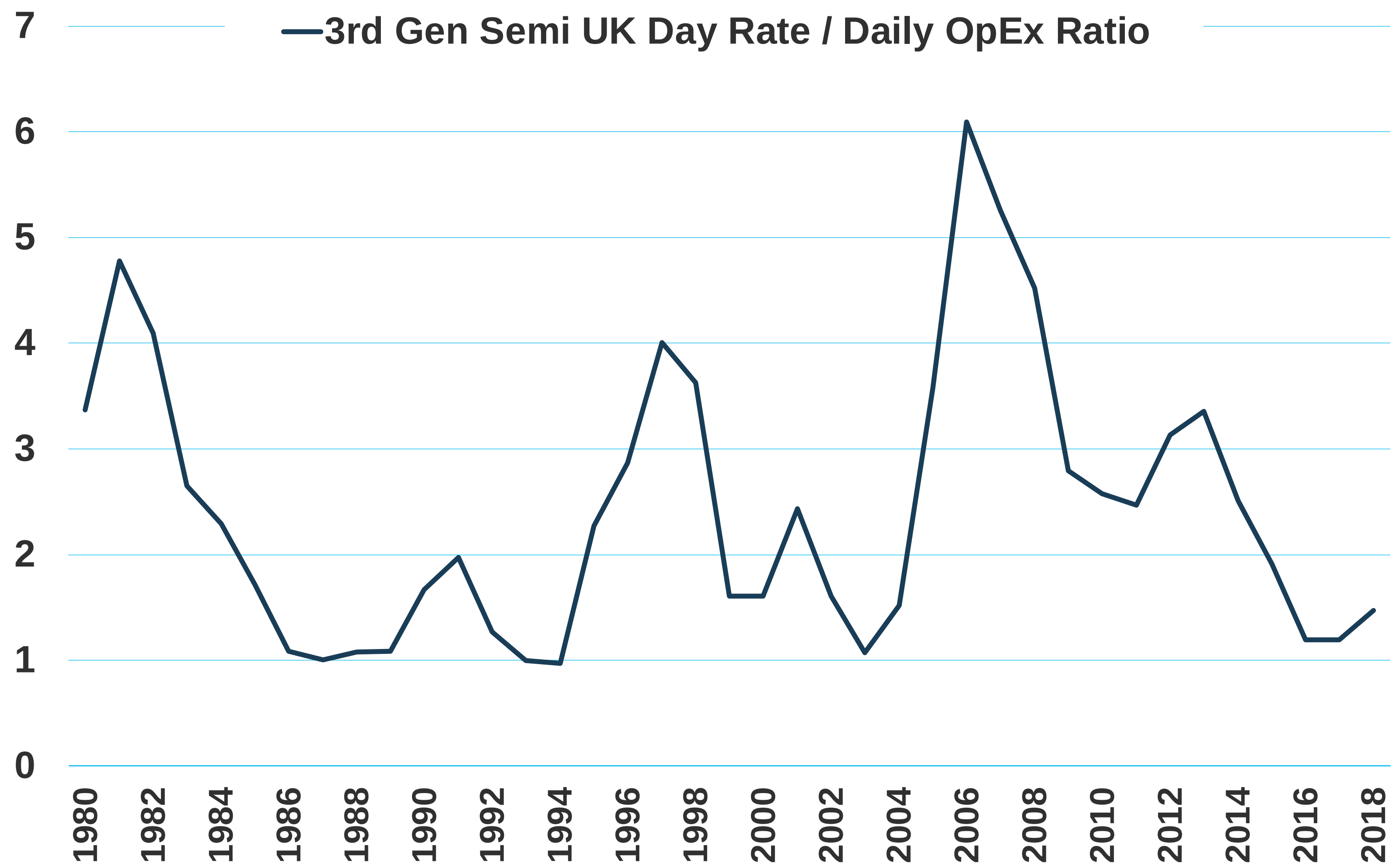
Utilisation is in the early stages of recovery



Earnings still have a long way to go



The long-term context



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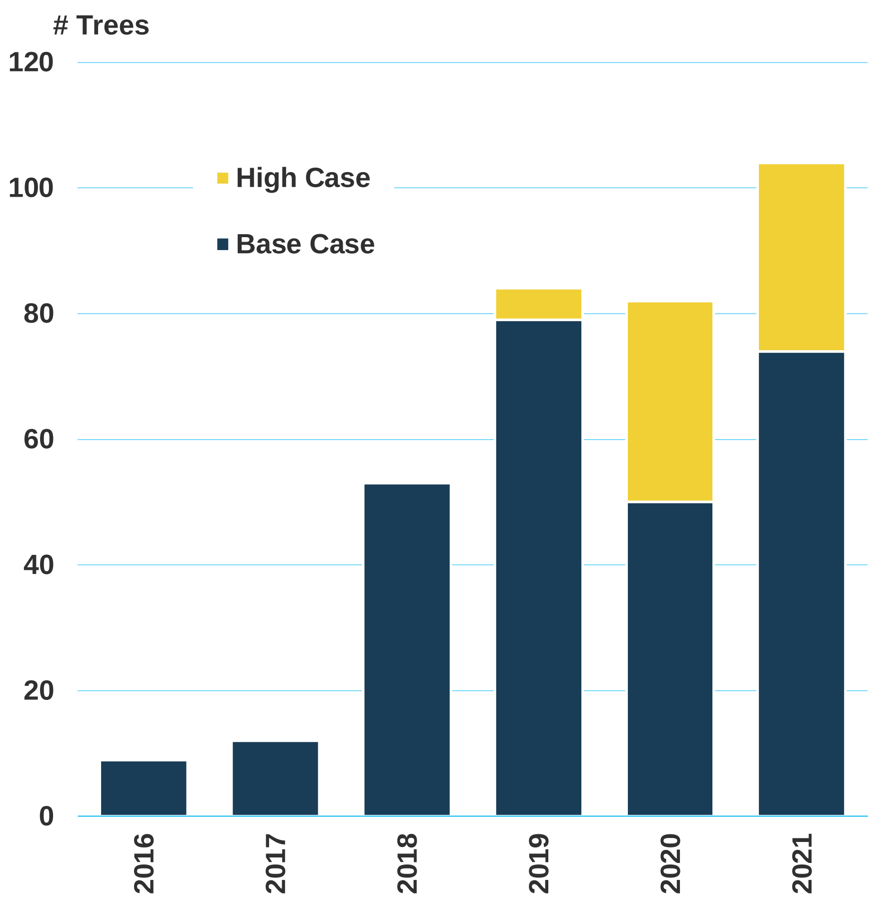
Rise of integrated projects…

Integrated SURF/SPS Projects



Integrated subsea packages are an enabling technology and a key element to tacking offshore's structural cost issue

Coupled with improved technology (EHC pipe, subsea boosters), more projects are viable than would have been previously

Started with small tiebacks (Trestakk) before now moving to large greenfield projects (Tortue, SNE, Scarborough)

Integrated drilling contracts not included in the chart but also increasingly a phenomenon

…but not a global disruptor

Upstream Oilfield Services Supply Chain*					
Well Services	*Drilling*	*Independent Engineering*	*Fabrication*	*Subsea & Offshore OEM*	*EPC/I*
Schlumberger Halliburton Baker Hughes GE Weatherford Core Labs Hunting SBOE Weir Helix	Transocean Seadrill Ensco Rowan Diamond Nabors Saipem Maersk Drilling Atwood Aban Offshore	Wood WorleyParsons KBR Fluor Jacobs Mott MacDonald Doris Xodus	DSME Samsung Hyundai Sembcorp Keppel Lamprell Dry Docks World Kvaerner Aibel Kiewit	Aker Solutions TechnipFMC Schlumberger Baker Hughes GE MSP-Drilex NOV Nexans Prysmian Oceaneering JDR	TechnipFMC Saipem Subsea 7 McDermott NPCC Larsen & Toubro Sapura Energy Petrofac GSP Allseas

- The key impact will be to threaten the position of independent engineers, not disrupt the remainder of the supply chain
- Integrated drilling contracts also may be gaining traction, performance-based contracts certainly are, but overall underlying rig demand not yet disrupted
- From a vessel and rig side, incremental upgrades (batteries, automation) are far more likely to be significant
- **Implication – technological obsolescence will not play a major role in driving the offshore recovery**

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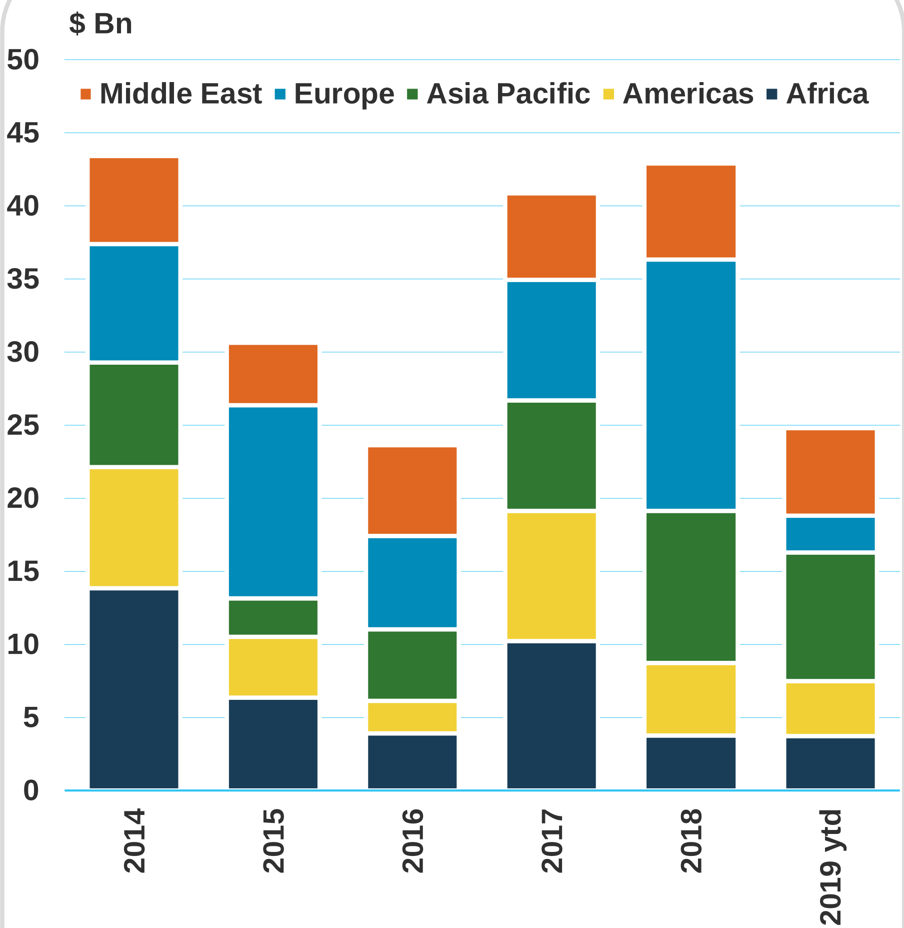
Offshore Contract Awards

Offshore Project Awards



Offshore awards increased by around 5% in 2018

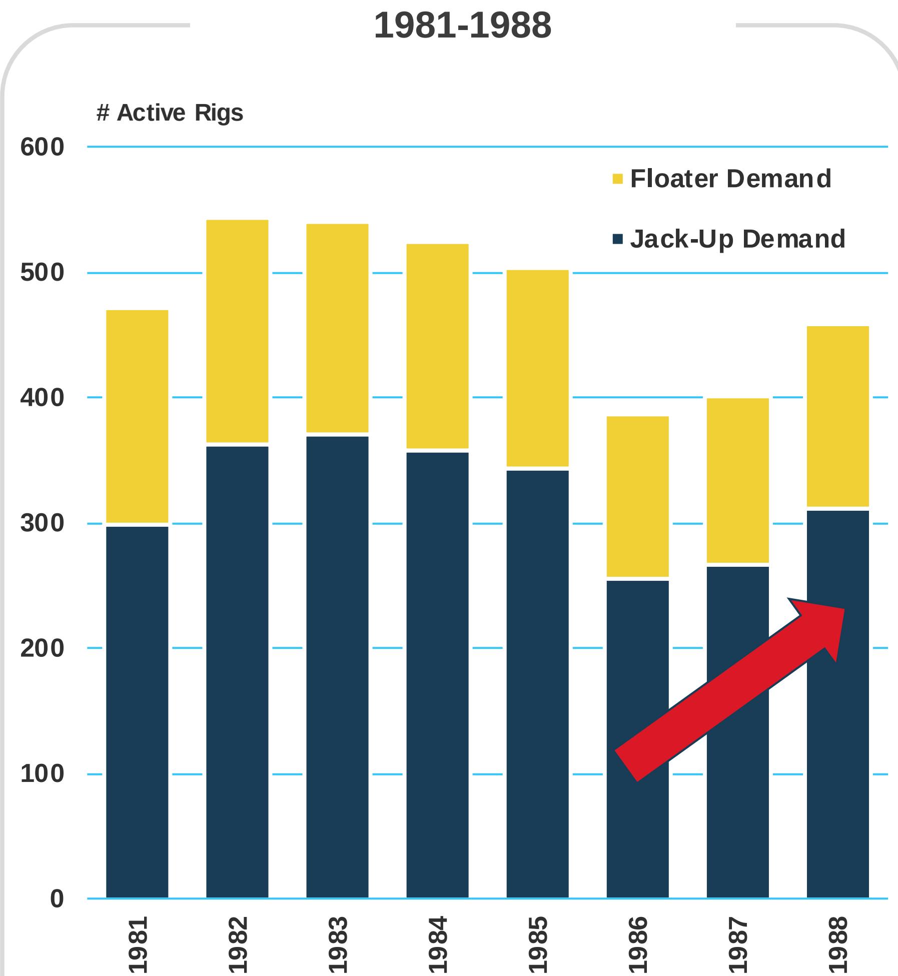
Awards to market tracking more than 30% higher y-o-y after robust Q1 for subsea and LNG

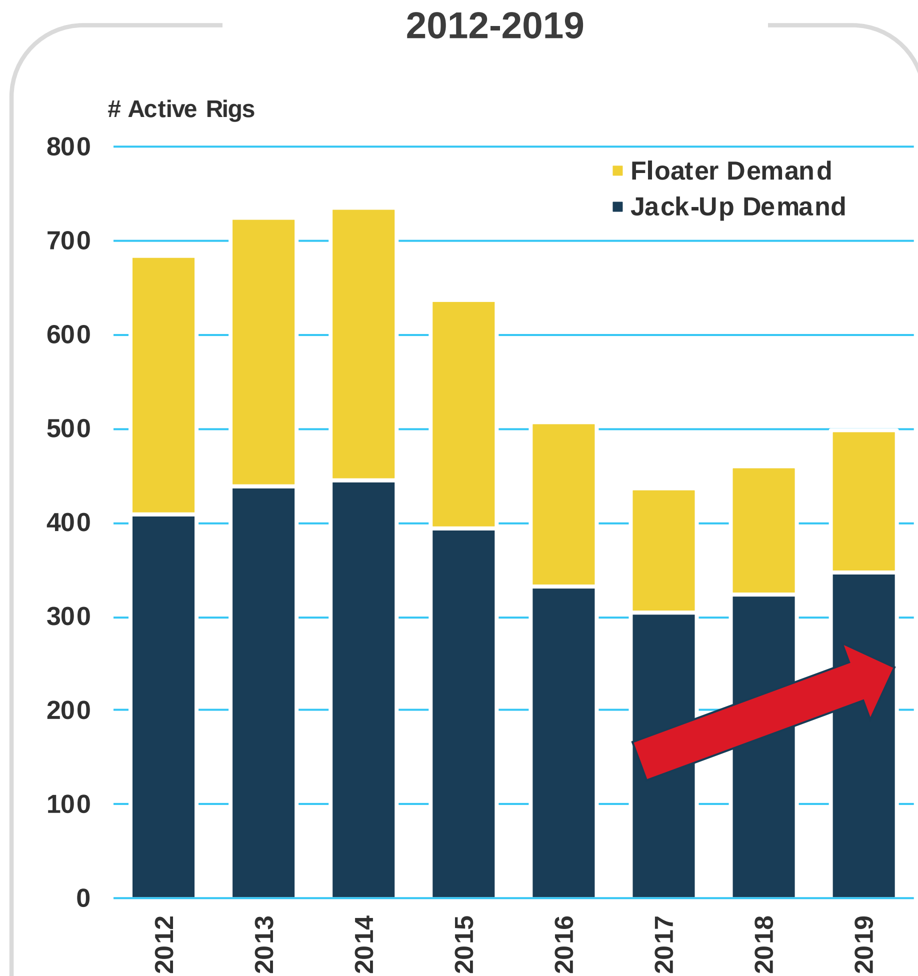
NWECS accounted for than 35% of awards in 2018 – momentum slower in 2019 as Norway rolls off

However, expect number of awards towards year-end across UK and Norway

Floating rigs (particularly harsh semis) well-positioned

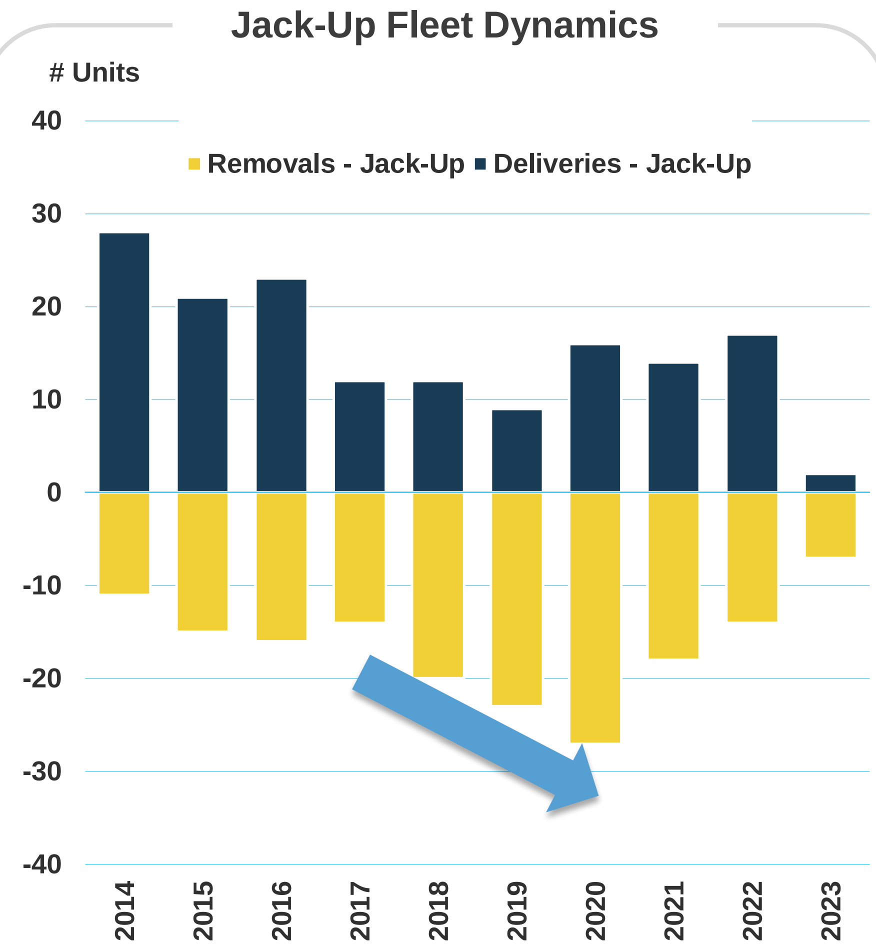
A Throwback to the 80s

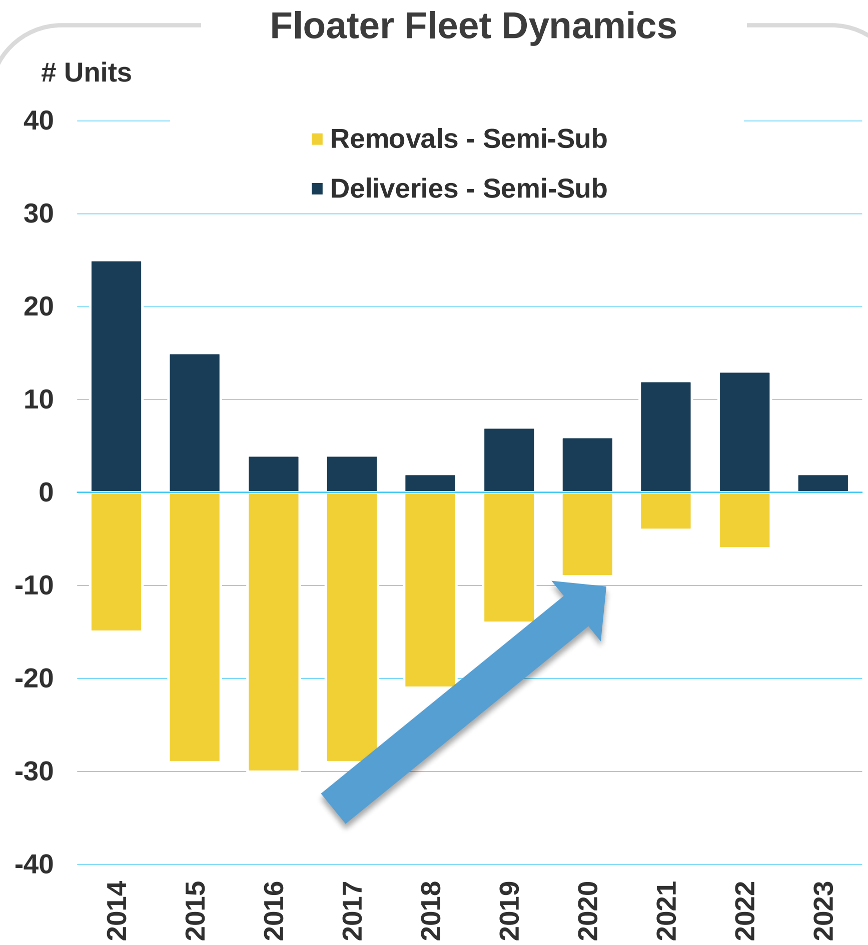




1980s saw a sharper demand recovery – driven by stronger jack-up activity.

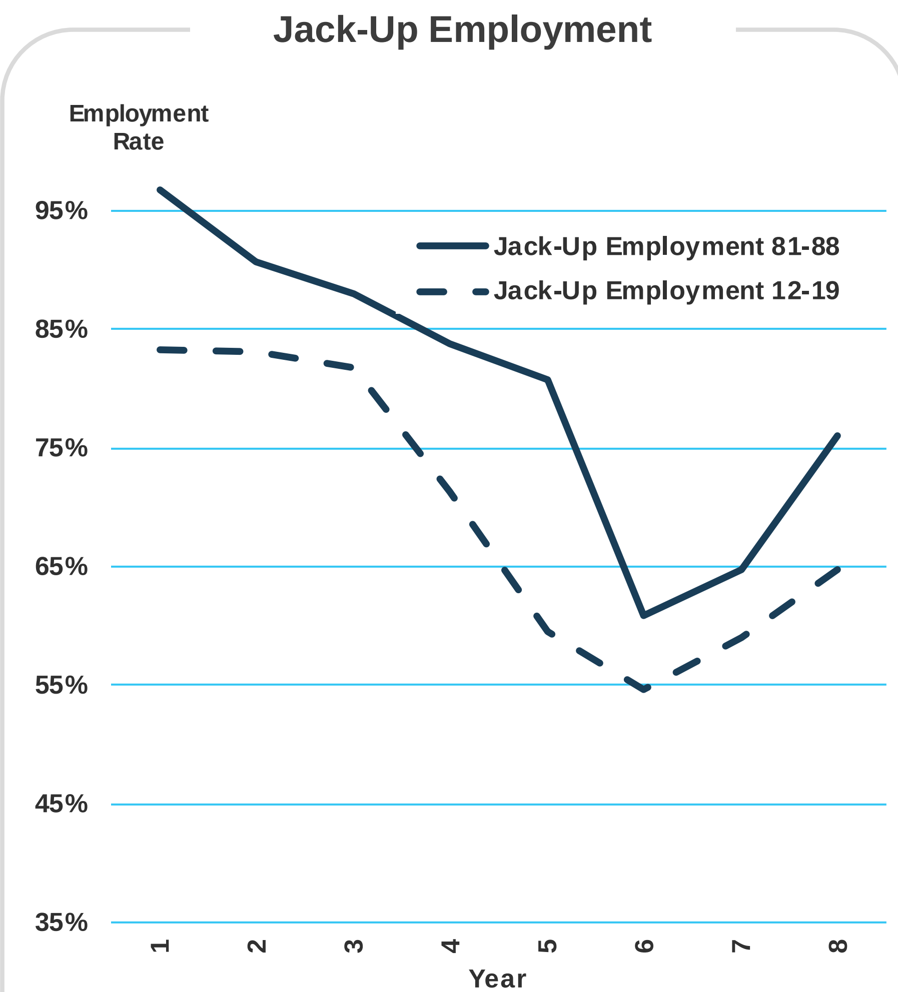
Different Supply Side Dynamics

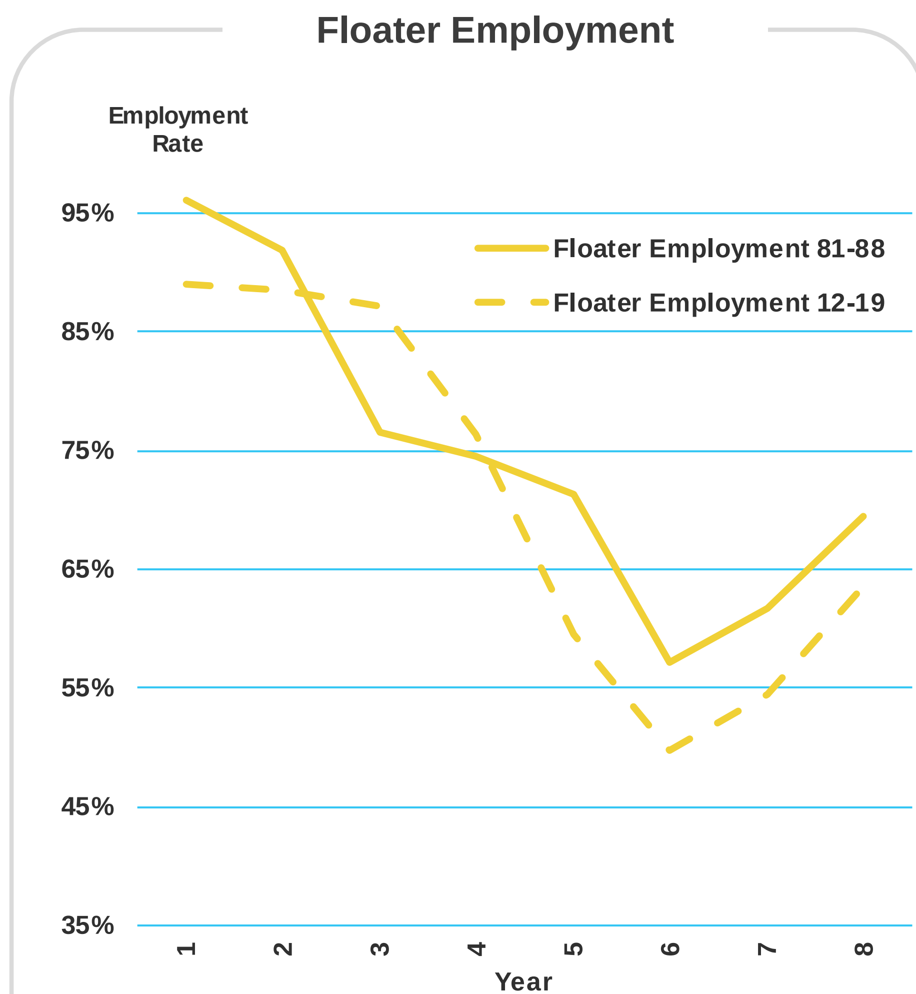




Floaters have done the hard supply-side work – which is still to come for jack-ups

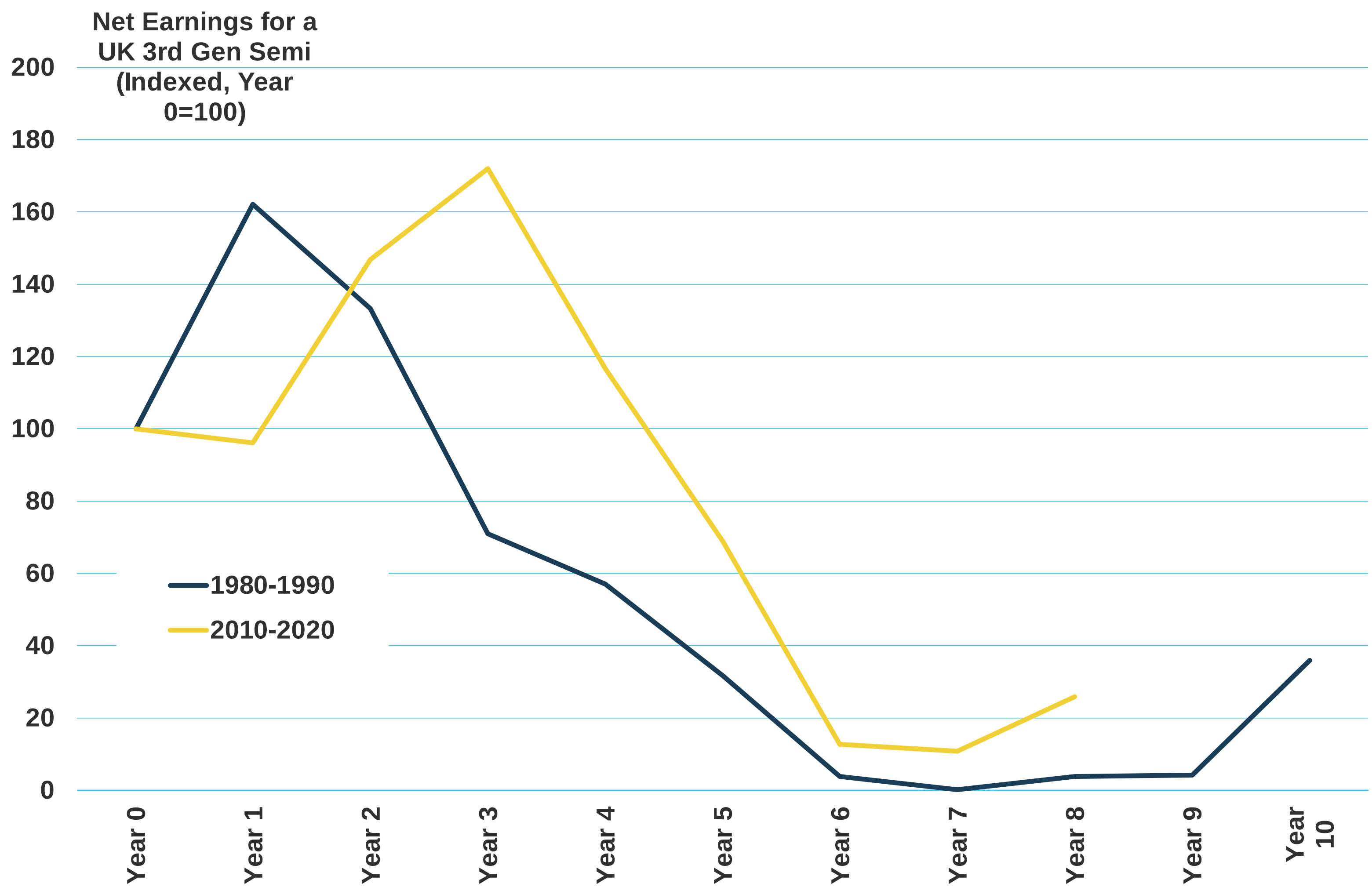
Floaters out on top





Jack-up utilisation recovery already slower than floaters, and likely to remain so

The recovery in context



Aggressive scrapping pays off for floaters

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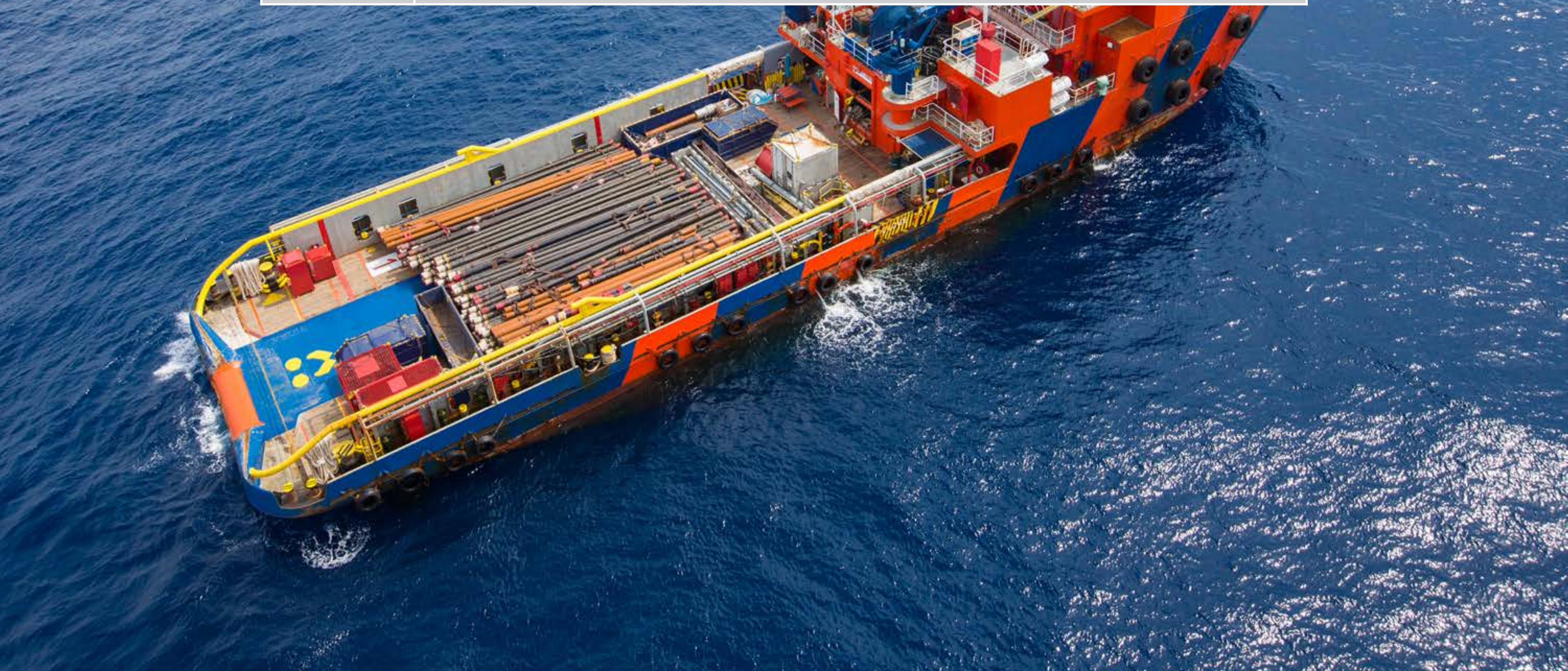
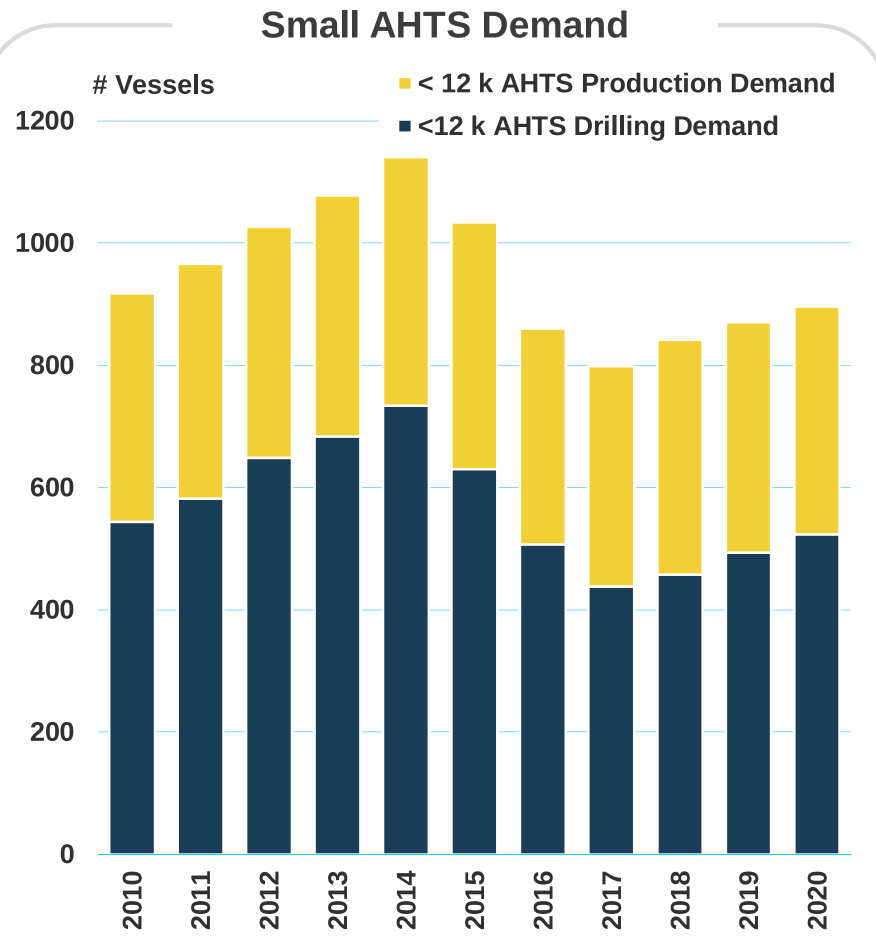
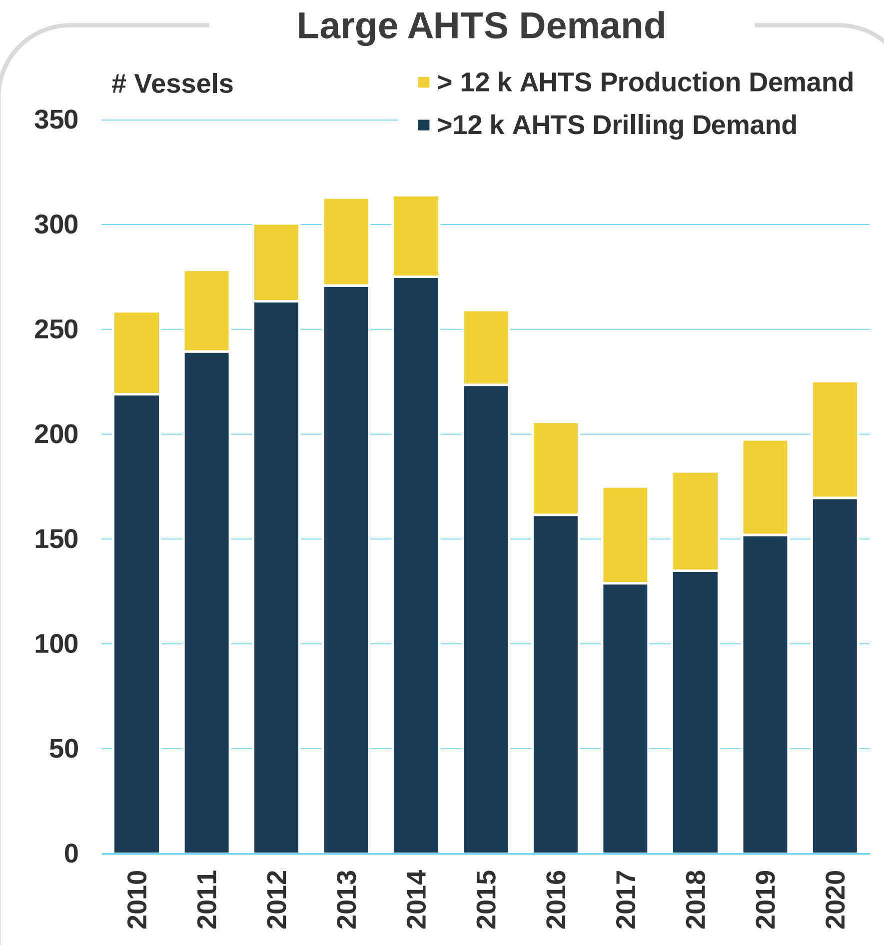


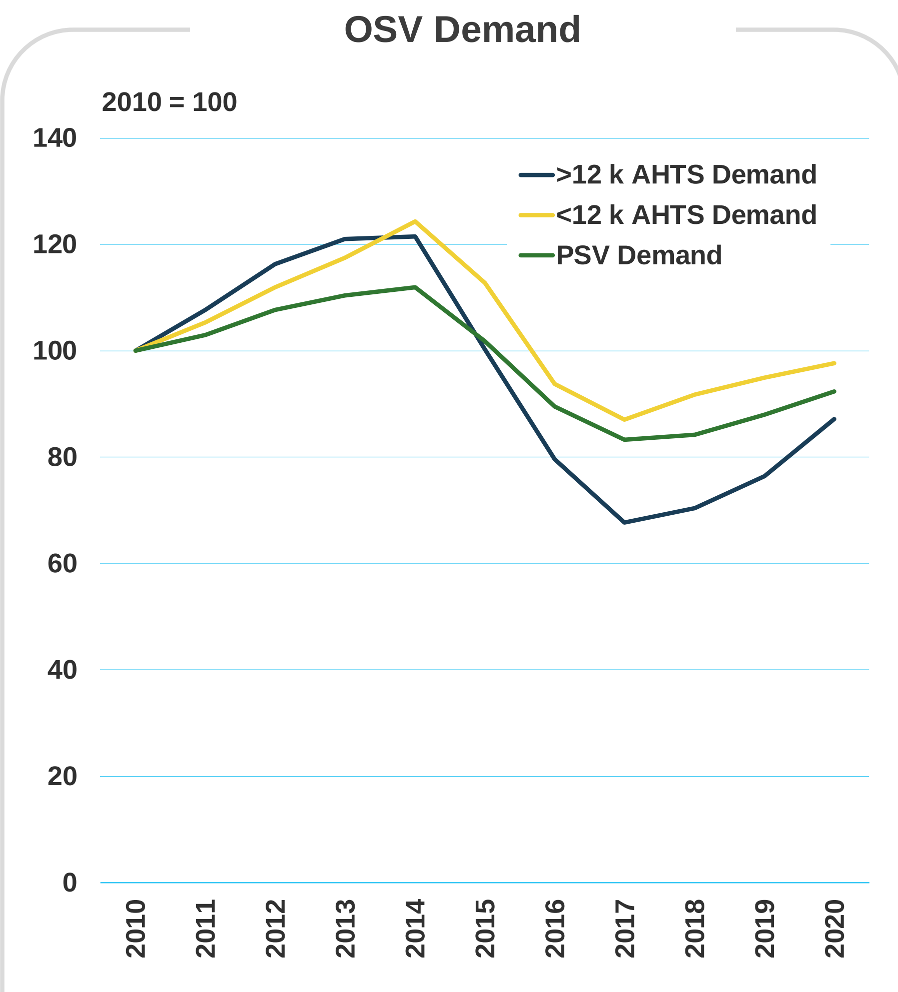
Demand Decomposition

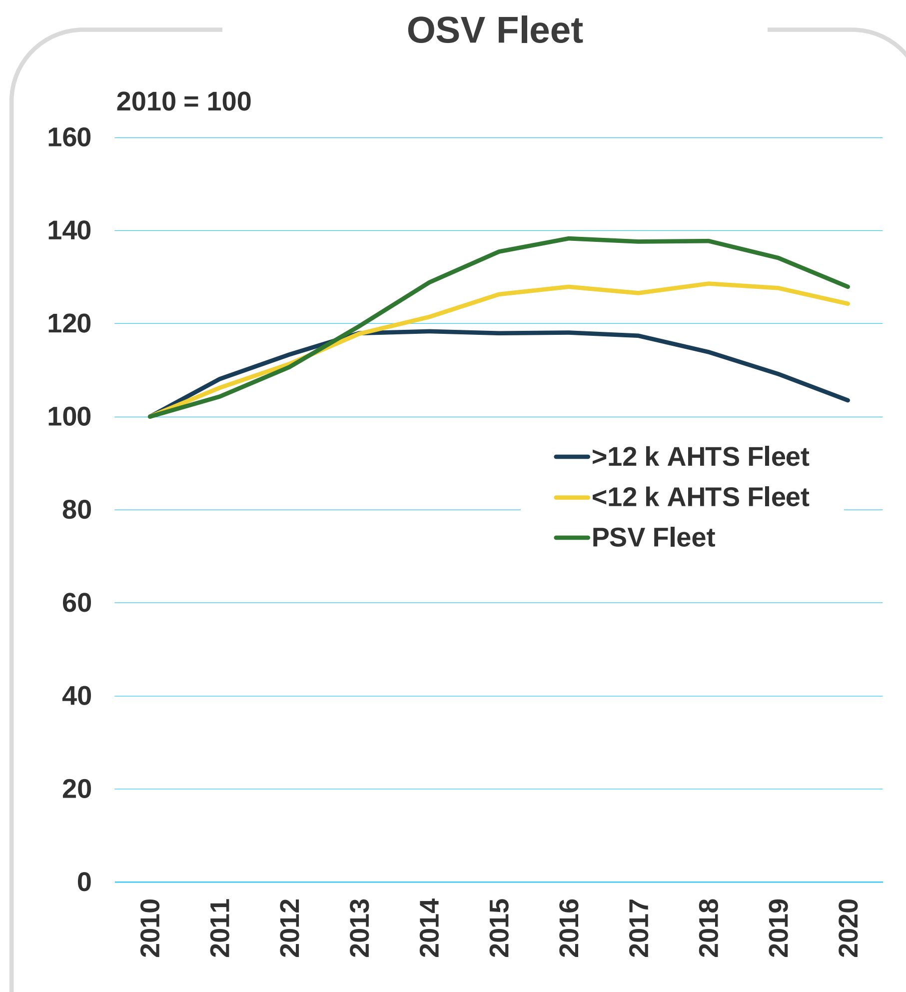




Large AHTS rebound driven largely by floating rigs and FPSO installations

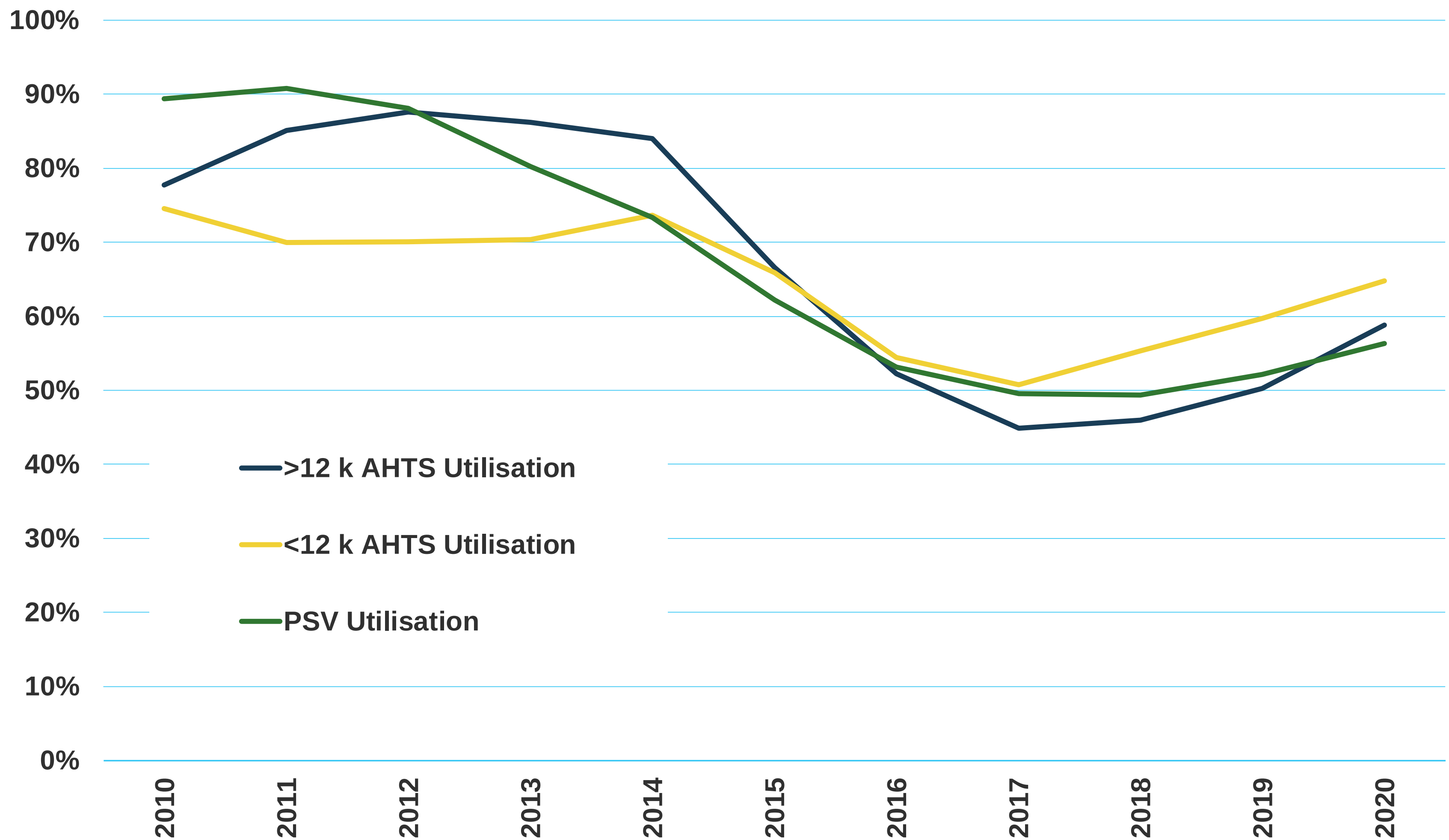
OSV Supply/Demand Balances





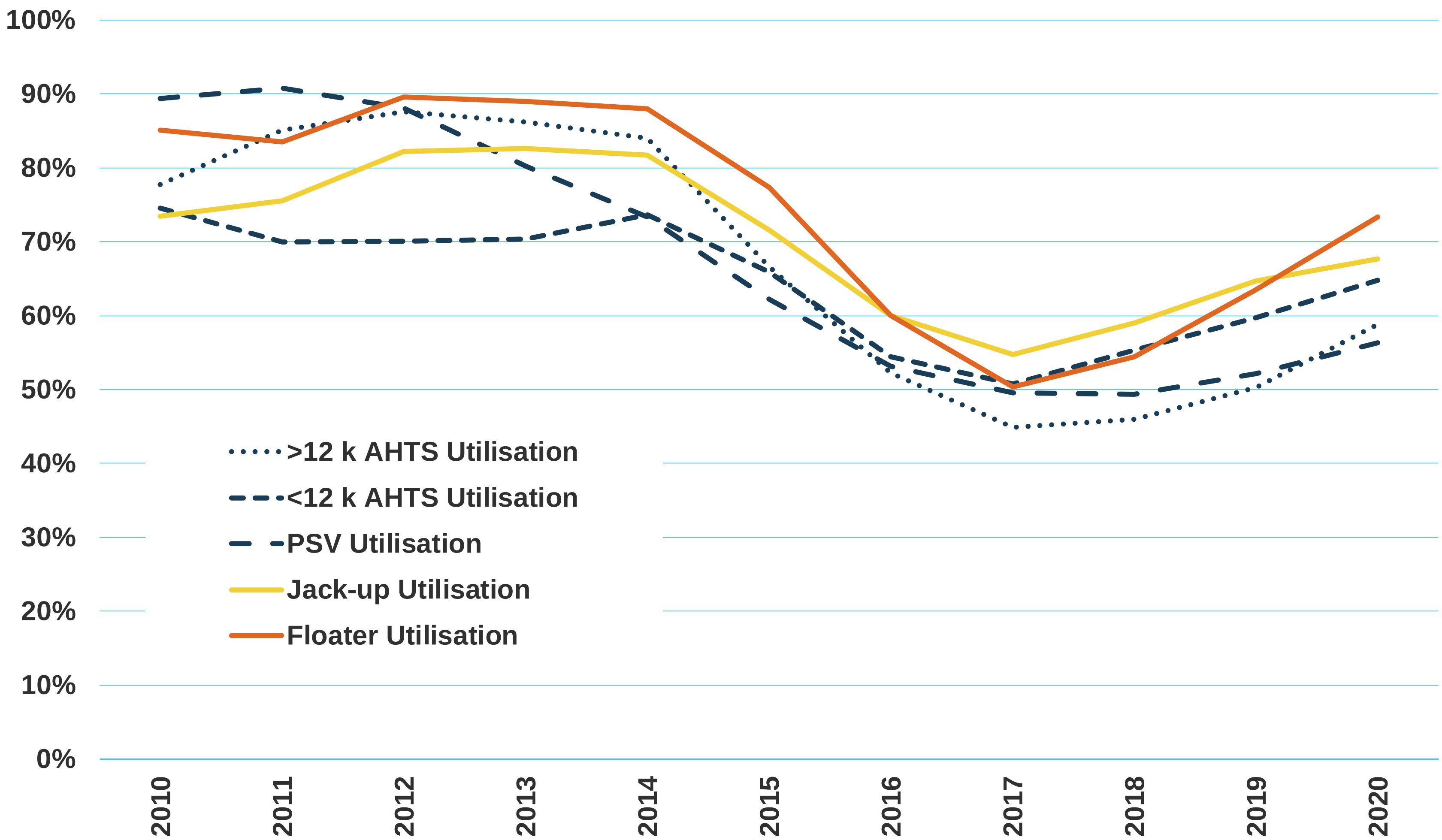
PSVs see high fleet growth and slow demand – large AHTS see the opposite

Utilisation rates compared



AHTS outperform PSVs, with large AHTS exposed to drilling market volatility

Utilisation in perspective



Rigs are still ahead on the recovery curve

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MSI – FMV Online Service

- MSI Forecast Marine eValuator (FMV) is the first web-based tool to provide forecast and historical prices
- Data includes forecasts of newbuilding, second-hand prices, 1 year timecharter rates and operating costs for specific assets.
- MSI FMV draws on MSI's proven, proprietary models and a consistent cross-sectional view across all principal shipping and offshore sectors.

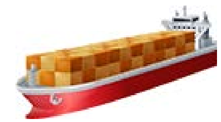

Crude Oil Tanker


Chemical Tanker


Multi Purpose


Product Oil Tanker

LPG Carrier


Containership

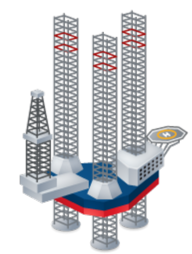

Dry Bulk Carrier

LNG Carrier


PCC/PCTC


Drillship - NEW

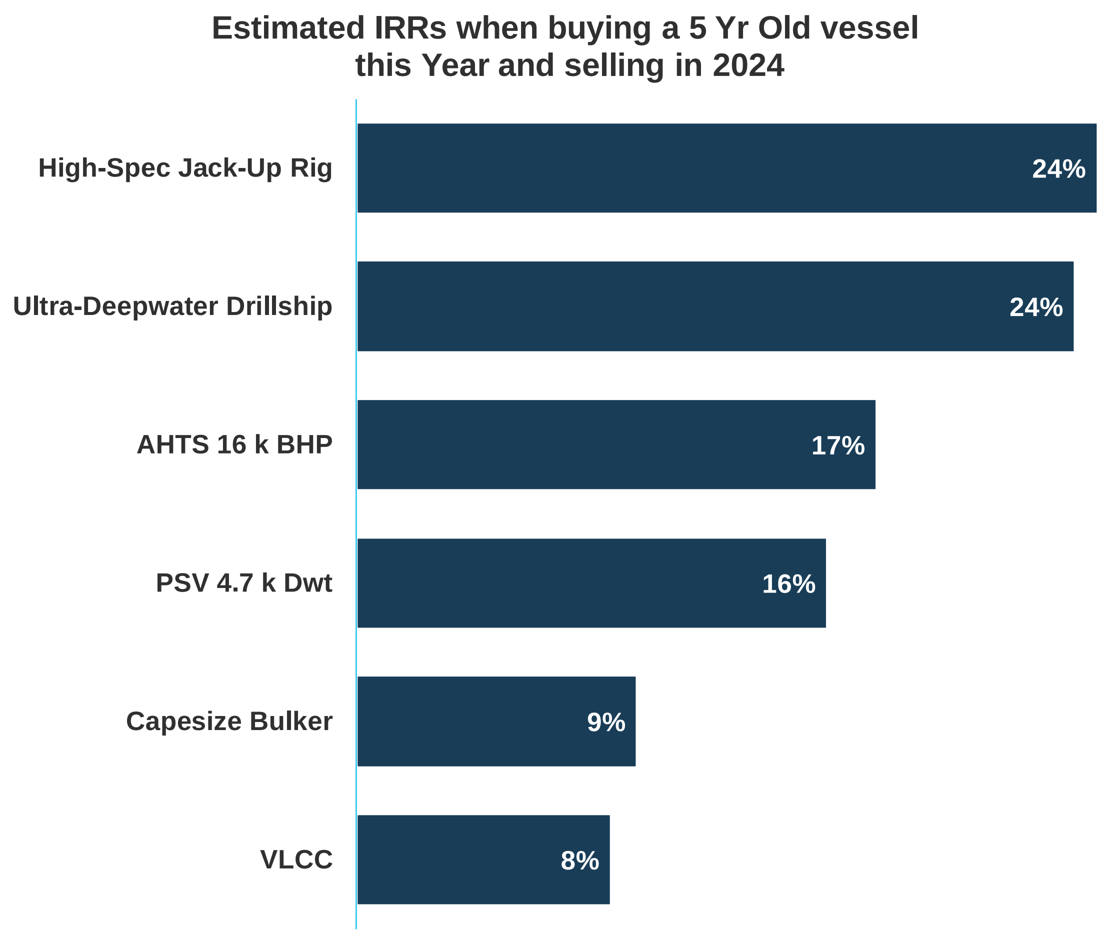

Semi-Sub - NEW


Jack-Up - NEW


AHTS


PSV

It is cheap, but is it good value?



Note: Assumes 100% Equity

IF you can guarantee utilisation, now is the time to invest

MSI Offshore Team

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James has more than ten years experience of analysing maritime markets, and takes overall responsibility for MSI's analysis of the container shipping and offshore oil and gas markets. In addition, James takes a lead role in larger bespoke consultancy and research projects across shipping sectors.

James holds an M.Sc. in International Trade, Finance and Development from the Barcelona Graduate School of Economics, a Graduate Diploma in Economics from Birkbeck College, London and an M.A. in Modern History from the University of Oxford. He is a member of the Baltic Exchange.

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Associate Director - Offshore

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Gregory leads the development of MSI's Oil and Gas Project Tracker, as well as delivering market consultancy, analysis and commercial modelling to MSI's offshore client base of contractors, operators and the financial community.

Gregory received his degree in 2008 from the University of Surrey's School of Management where he read Business Management. Gregory is also an Authorised Person with Part 4A permission under section 31 of the FSMA, 2000 and was admitted to the Association of Surrey with Distinction. He is a member of the Society of Petroleum Engineers.

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Ferenc is responsible for analysing the offshore oil & gas industry and related vessel markets as well as developing MSI's offshore support vessel and drilling rig market forecast models. He is involved in bespoke research and consultancy projects and provides valuations for specialised offshore vessels.

Before taking this role at MSI, Ferenc worked as a post-doctoral researcher at the Commission of Atomic and Alternative Energy (CEA) in France. He has a Ph.D. in Natural Resources from BOKU, Vienna.

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For over 30 years, MSI has developed integrated relationships with a diverse client base of financial institutions, ship owners, shipyards, brokers, investors, insurers and equipment and service providers.

MSI's expertise covers a broad range of shipping sectors, providing clients with a combination of sector reports, forecasting models, vessel valuations and bespoke consultancy services.

MSI's team is comprised of professionals with extensive academic credentials, deep industry knowledge and many years experience of delivering successful client projects.

MSI balances analytical power with service flexibility, offering a comprehensive support structure and a sound foundation on which to build investment strategies and monitor/assess exposure to market risks.

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