

Faroe Petroleum

DNO - Norway Jose

Initiation

Oil & gas

1 October 2018

Price **150p**

Market cap **£561m**

US\$/£0.73

Net cash (£m) at 30 June 2018 83

Shares in issue 372.9m

Free float 63%

Code FPM

Primary exchange AIM

Secondary exchange N/A

Share price performance



% 1m 3m 12m

Abs 7.3 12.3 69.1

Rel (local) 8.0 13.7 63.6

52-week high/low 164.0p 91.2p

Business description

Faroe Petroleum is an AIM-listed E&P with operations in Norway, UK and Ireland. Production in FY18 is expected to be 12–14kboed from an end-2017 reserve base of 98mmboe.

Next events

FY18 results February 2019

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Faroe Petroleum is a research client of Edison Investment Research Limited

Faroe has successfully established a 98mmboe reserve base through an exploration-led organic growth strategy. Norwegian exploration tax incentives, combined with recent success at Iris/Hades, underpin finding costs of c \$1/boe (post-tax) and have delivered a portfolio of development projects with point-forward IRRs ranging from 21% to 41% at \$70/bbl. With a RENAV of 185.2p/share, we believe that the market is not fully valuing the risk value of Faroe's upcoming seven-well E&A programme that targets net un-risked prospective resource of 144mmboe, or is not fully taking into consideration the positive cash flow impact of tax depreciation carry-forwards/consolidation in Norway. Based on current debt availability, we believe Faroe is fully funded for current development commitments at an oil price down to \$40/bbl.

Year end	Revenue (£m)	PBT* (£m)	Cash from operations (£m)	Net debt/ (cash) (£m)	Capex (£m)
12/16	94.8	(61.6)	55.4	(60.9)	(79.4)
12/17	152.9	(21.0)	133.9	(43.3)	(144.2)
12/18e	236.3	62.3	173.6	(43.8)	(225.7)
12/19e	225.0	37.7	173.7	44.7	(263.8)

Note: *PBT and EPS are normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments.

Active H218 and 2019 exploration programme

Faroe's active exploration and appraisal campaign in 2018 and 2019 continues its strategy of creating value through the drill bit. The first well, Iris/Hades, delivered significant success, adding a Faroe-estimated net 2C resources of 42mmboe to the company and rated as one of the largest discoveries worldwide in 2018. The remaining seven firm wells in the programme will target total net un-risked resources of 144mmboe (including 15mmboe in Agar Plantain in the UK continental shelf (UKCS)). The bulk of the E&A programme is focused around the three key hub areas of Ula, Brasse and Njord, allowing Faroe to monetise any discoveries through subsea tie-backs to existing infrastructure.

Prudent financial management – funded at \$40/bbl

Taking into consideration committed exploration spend, maintenance capex and planned development spend, we believe that existing funds and liquidity are more than sufficient, even at an oil price down to \$40/bbl. Faroe's requirement for further capital, whether through equity, asset sales or farm-out, is therefore limited to the development of material new exploration discoveries.

Valuation: RENAV 185.2p/share

Our RENAV of 185.2p/share is based on a long-term oil price of \$70/bbl and 10% WACC, which rises to 215.0p/share assuming an 8% WACC. Key investment risks include service cost inflation, potential for underestimation of decommissioning liabilities and asset integrity.

Investment summary

Norwegian-focused, exploration-led integrated E&P

Faroe Petroleum has built a material diverse portfolio of exploration, appraisal, development and production assets in Norway, UK and Ireland. Production guidance for FY18 stands at 12–14kboed and an end-2017 2P reserve base of 98mmboe. Norway dominates both current production at 77% and 2P reserves at 98% of the group total. Reserves growth has been largely organic, with Faroe demonstrating a strong track record of value creation through the drill-bit; historical average finding costs stand at c \$1/boe. Incentivised by attractive exploration fiscal terms in Norway, Faroe is to spend £80m per year (approximately \$110m) on exploration and appraisal in 2018 and 2019 across a portfolio of drill-ready prospective resource targeting 144mmboe un-risked.

Organic growth potential undervalued

Our base case valuation stands at a RENAV of 185.2p/share based on a 10% weighted average cost of capital (WACC) and \$70/bbl long-term oil price (both key sensitivities). Using a more broad-brush approach and applying generic historical Norwegian M&A multiples for Faroe's 2P reserves and adjusting for financial items would equate to a valuation of 162p/share. We feel that the market is failing to value Faroe's organic growth potential beyond existing discoveries, in particular a drill-ready exploration and appraisal portfolio targeting 144mmboe of un-risked prospective resource over the course of H218 and 2019. Net exploration costs are low, given Norway's 78% tax rebate and commercial success rates of c 31% (Faroe 35%), which reflect the maturity of the Norwegian continental shelf (NCS). In the event of discovery, infrastructure is readily available close to planned prospects and tie-back host tariff structures are state-regulated, driving a relatively low minimum economic threshold for commerciality. Based on Faroe's current development portfolio, we calculate development project IRRs ranging from 21% to 41%. Project IRRs are currently benefiting from significant cost deflation in the service sector; although, if commodity prices stay close to current levels, an element of cost inflation is inevitable.

Financials: Funded development portfolio

Funding of future exploration in Norway is through existing cash resources and a rolling NOK1bn exploration debt facility, while appraisal and development of contingent resource is to be funded through the company's undrawn \$250m RBL and a further \$100m accordion facility. We expect Faroe's borrowing base to grow as contingent resource is progressed to reserves and its RBL potentially re-determined based on a higher commodity price deck. In addition, the NCS offers a liquid asset market, with Faroe having both acquired and divested assets in recent years, offering a monetisation route in the event that management wishes to diversify development risk. Recent M&A transactions include DNO's purchase of an additional 15.37% in Faroe at \$5.2/boe 2P (at 125p per Faroe share), which compares to historical transactions for NCS producing assets at \$11.8/boe 2P.

Risks and sensitivities: Cost of capital and commodity price

Key valuation sensitivities for Faroe include underlying commodity prices and WACC. In our base case, we assume a \$70/bbl long-term (2022) Brent crude price and a 10% WACC, but we provide sensitivities to these assumptions within the valuation section of this note. Key risks include potential underestimation of decommissioning costs for UKCS and NCS assets, service sector cost inflation and asset integrity. We assume decommissioning costs in line with operator estimates where available and note that the Norwegian petroleum safety authority (PSA) is rigorous in prescription and enforcement of oil and gas safety regulation limiting the risk of tail events such as material hydrocarbon releases.

Shareholder value creation: Strategy

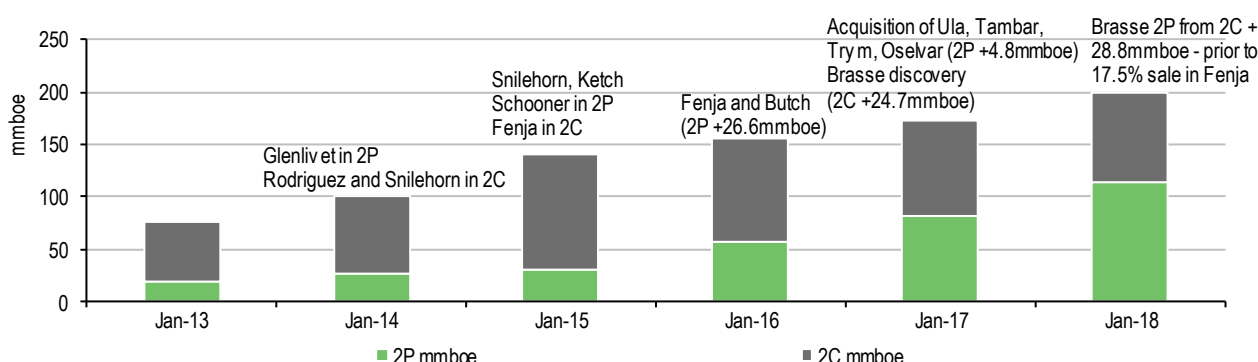
Faroe has a three-pillar strategy, which encompasses exploration, prudent financing and monetisation. Leveraging Norway's generous incentive of a 78% tax rebate on exploration expense, Faroe's experienced exploration team pursues organic growth in resources close to existing infrastructure. Industry-wide commercial success rates in Norway have averaged 31% over the past 10 years with mean discovery size at 31mmboe – Faroe's commercial success rate at 35% exceeds the industry average and implies a post-tax finding cost of c \$1/boe. We expect this to be sustainable, at least in the short term. Faroe has successfully monetised discoveries through asset swaps, divestments, farm-out and development – a liquid asset market and the low cost of capital of qualified operators on the NCS provides support for deal values.

Exploration-led business model

Exploration remains at the core of Faroe's growth strategy, with almost 75% of 2P reserve growth between 2013 and 2018 due to exploration discoveries (either through transfer from 2C or from the swap of the Maria discovery for production assets). The company has to date drilled over 40 exploration wells, with over 30 of these drilled offshore Norway. This has delivered a successful exploration track record, resulting in multiple developments including Maria, Fenja, Oda, Brasse, Bauge and Fogelberg. In 2018 and 2019, Faroe has ramped up its Norwegian exploration and appraisal programme, and has committed six wells to follow on in H218 and 2019 from the 2018 Iris/Hades discovery and the Fogelberg appraisal wells. In addition, the company is drilling one well in the UK North Sea – the Agar/Plantain exploration and appraisal well.

To achieve a sustainable programme of drilling candidates, Faroe participates in licensing rounds in Norway, the UK and Ireland. In Norway, the company has picked up 89 APA licence awards since 2008 and consistently sits in the top quartile of awards. As with the company's strategy for organising its production and development assets, the exploration and appraisal projects are centred on the three hub areas of Ula, Brasse and Njord, and 90% of Faroe's 2P reserves are connected to these hubs. This focus on near-field opportunities allows any discoveries to be monetised through subsea tie-backs. This approach is exemplified in the success at Brasse, Faroe's flagship operated development project (50%WI). Discovered in 2016 and appraised in 2017, Brasse was one of the largest finds of 2016/2017 and was matured to Faroe-estimated net 2P reserves of 30.7mmboe (NPD 34.6mmboe) within 18 months. First oil is targeted in 2021. Similarly, the Iris/Hades discoveries are due to be appraised in 2019, but with estimated net 2C resources of 42mmboe, this is one of the largest discoveries worldwide this year and, if converted to 2P, would be a significant addition to current reserves of 98mmboe.

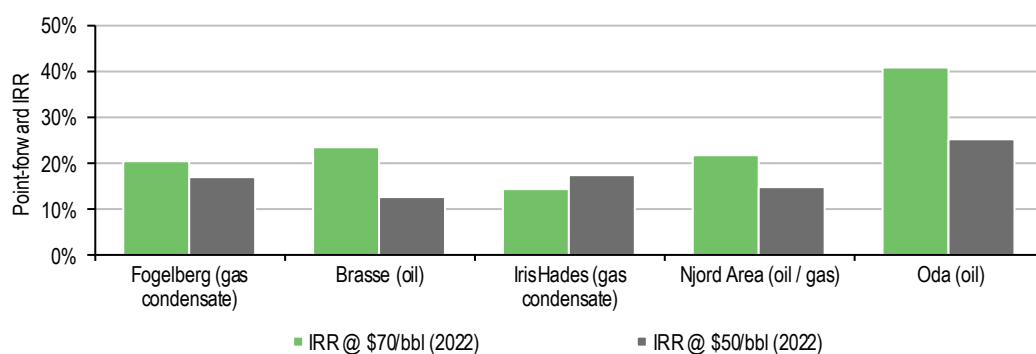
Exhibit 1: Evolution of FPM reserves and resources



Source: Faroe Petroleum, Edison Investment Research

Our analysis of point-forward returns for Faroe's key development projects implies IRRs ranging from 21–41% based on a long-term Brent crude price of \$70/bbl, decreasing to 13–25% at \$50/bbl. Oda's relatively high return reflects that a large proportion of project capex has already been sunk and first oil is expected in 2019.

Exhibit 2: Edison forecast point-forward IRR for projects under development



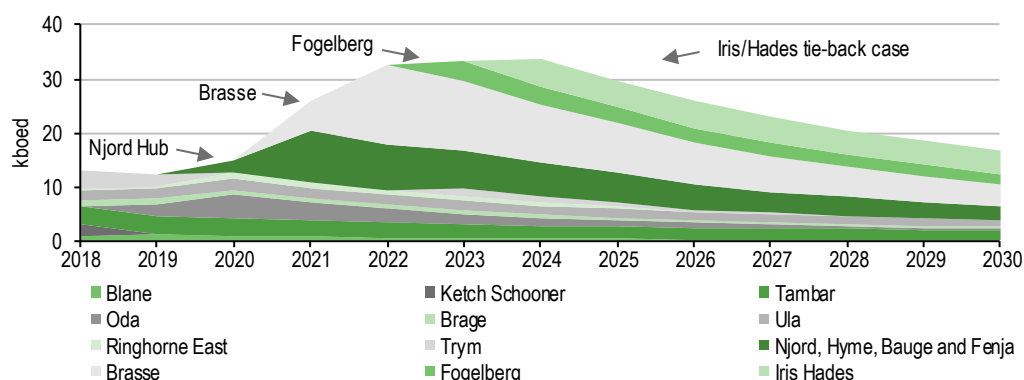
Source: Edison Investment Research

Financing – leveraging fiscal incentives

In 2005, Norway introduced a ground-breaking new exploration tax initiative for those oil and gas companies without production income, whereby it started to directly compensate oil and gas companies for exploration activity. Since then, the Norwegian government has provided a rebate in the following year equal to 78% of the capex spent in the previous year on exploration drilling. Exploration wells effectively became 78% cheaper to drill overnight and resulted in an immediate increase in exploration activity that has continued to today.

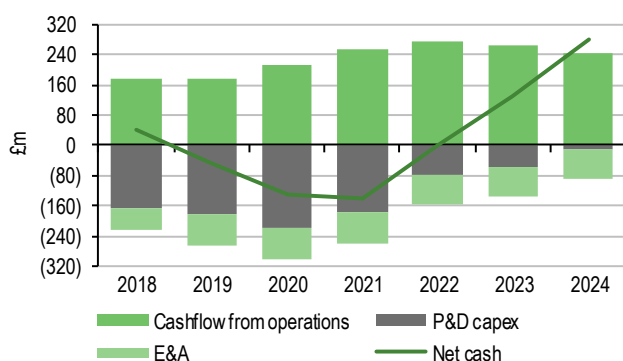
The combination of ordinary tax at 23% and special tax at 55% does place Norway at the higher end of government take for global oil and gas tax and royalty fiscal regimes, but effective tax rates are far lower after deducting capital expense depreciations, uplift and carry forward tax losses. Post-tax debt charges are also low (2–4% for Faroe), providing companies with a low cost of capital and incentivising the use of debt over equity to fund capex requirements. While we value Faroe's assets based on a lifecycle WACC of 10%, a traditional CAPM approach is likely to generate a lower WACC after taking into consideration debt interest tax shield. We provide a sensitivity to WACC in the valuation section of this note and flag that a move from 10% WACC to 8% would increase our valuation to 215.0p/share. Faroe ended December 2017 with total liquidity of £360m consisting of cash, undrawn debt and tax receivables.

Based on our forecasts of anticipated expenditure on planned exploration and development projects, we believe that Faroe is fully funded at an oil price of \$40–70/bbl long term with existing debt facilities, which would organically take production from 12kboed today to c 35kboed and substantially higher, if we were to assume an Iris/Hades standalone development. Prudent financial management has put the company in a position to be able to fund the monetisation of reserves and resources using existing liquidity, without resorting to expensive sources of capital such as equity or farm-out.

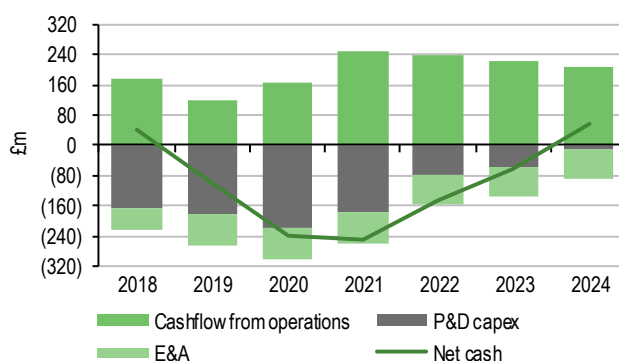
Exhibit 3: Organic growth potential from existing 2P reserves and 2C resource


Source: Edison Investment Research

As shown in Exhibit 4 and Exhibit 5 below, a reduction from our base case commodity price assumptions from \$70/bbl (long-term 2022) to \$40/bbl (FY2019) increases peak net debt and the pace of deleveraging beyond 2021. (Note our long-term oil price assumption is \$70/bbl effective 2022, with our short-term 2018 and 2019 assumptions based on EIA forecasts as shown in Exhibit 12). Essentially, we believe Faroe is fully funded for its development portfolio at \$40/bbl and taking into consideration current liquidity constraints. Current debt capacity (excluding exploration financing facility) stands at £329m (undrawn RBL availability of £175m from a \$250m facility with £77m accordion facility and £77m bond). Further debt capacity is likely to become available on Fenja PDO approval and inclusion in 1P reserves and as development projects move on-stream moving borrowing base to a 2P basis. Management also suggested at the company's half-year results that banks are looking at re-determining existing RBLs based on a higher price deck, given recent strength in oil price.

Exhibit 4: Capex coverage at \$70/bbl


Source: Edison Investment research

Exhibit 5: Capex coverage at \$40/bbl


Source: Edison Investment research

Monetisation – liquid NCS asset market

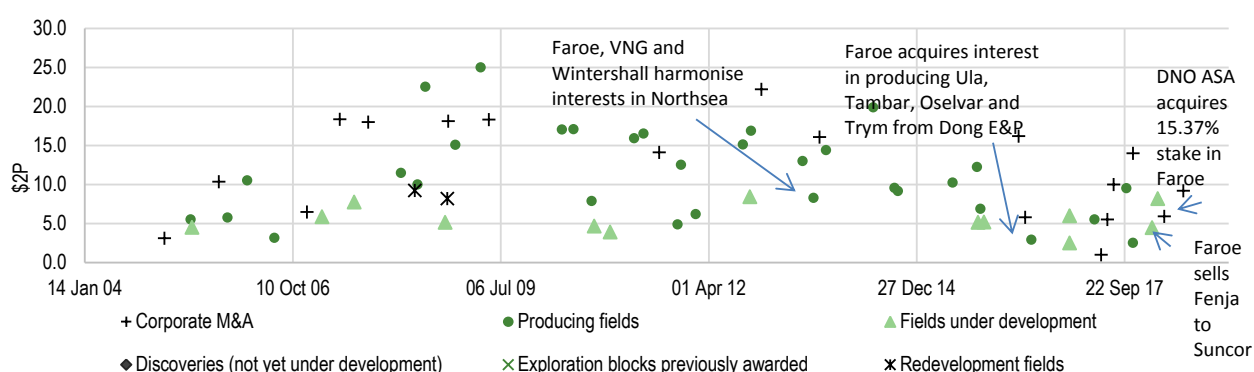
The NCS remains an active jurisdiction for both E&P asset and corporate M&A, with recent history highlighting a movement in assets from the integrated majors and utilities into the hands of NCS pure plays such as AkerBP, Lundin and Point Resources, as well as small/mid-cap E&Ps. Private-equity-sponsored entities have been active in acquiring production and development assets, taking advantage of IOCs portfolio rationalisation programmes.

A liquid asset market provides Faroe with a source of capital for development projects if it chooses to reduce working interest and capex exposure post-discovery. As highlighted above, Faroe's current development portfolio can be funded from cash flow, cash and undrawn debt. We believe Faroe may turn to the asset market, where management feels it can generate a return on capital

superior to that generated on development projects, possibly where Faroe can extricate assets close to the company's existing hubs, extracting operating synergies unavailable to other operators.

Faroe's acquisition of interests in producing fields Ula, Tambar, Oselvar and Trym from Dong E&P appears to have been well timed in July 2016, with oil prices having risen approximately 70% since the deal was announced and Faroe seeing extended field lives and higher resource recovery post-deal. Faroe's February 2018 sale of a 17.5% stake in Fenja to Suncor appears to be broadly in line with historical development asset transaction values and, driven by Faroe's desire to diversify development risk, management estimates a 28% leveraged IRR for this transaction. DNO's April 2018 acquisition of an additional 15.37% stake in Faroe at a price of 120p/share (or \$5.2/boe 2P) appears to be 56% below mean historical NCS corporate transactions at \$11.8/boe and 35% below Edison's RENAV.

Exhibit 6: Headline EV/2P \$/boe for NCS transactions highlighting Faroe asset deals



Source: Edison Investment Research

We expect continued asset market liquidity in H218, as E&Ps look to optimise portfolios. However, recent strength in oil and gas price may increase the bid/ask spread for mature producing assets that offer infill/redevelopment potential.

Valuation

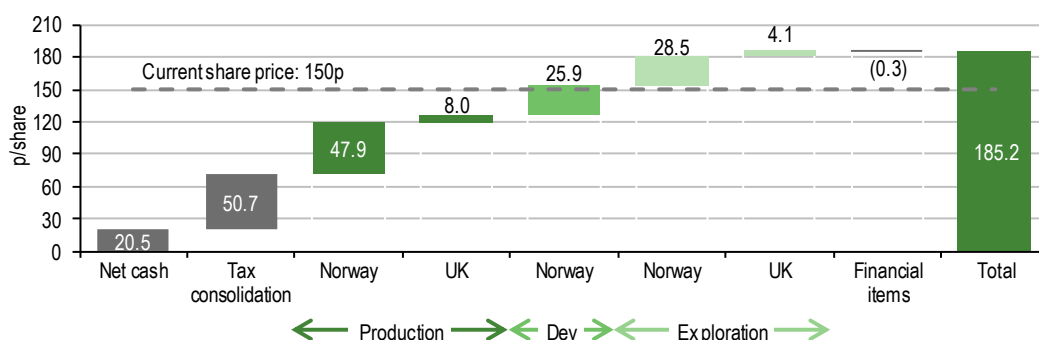
We value Faroe's asset base using a conventional risk-adjusted net asset value (NAV) approach, utilising a discounted cash-flow-based valuation for producing assets and risk-adjusted valuation for proven undeveloped reserves, contingent and prospective resource. Key assumptions in our valuation include estimates of asset development costs, operational costs and abandonment costs in addition to realised commodity prices and cost of capital. We use publicly available sources for key assumptions, including company guidance, analysis of analogous field developments and government data.

We use a standardised approach to discount rate across our E&P coverage; in general, we use a 12.5% to reflect the life of company WACC for an E&P and incorporate asset level dilution (farm-out) for un-funded exploration and development. In the case of Faroe, we believe that the company's relatively low cost capital structure (post-tax), exploration tax credits and undrawn \$250m reserve base lending (RBL) facility provide visibility on development project funding, limiting the requirement for further equity capital. In our base case, we assume a 10% WACC for Faroe, which we believe to be conservative relative to the company's post-tax cost of debt, which ranges from 2% to 4%. We provide a sensitivity analysis for both higher and lower WACC assumptions.

Exhibit 7 below shows a breakdown of our base case valuation by asset class. Key components include production from Faroe's Norwegian asset base, risk-adjusted development value in Norway and the tax consolidation benefit of utilising historical tax losses, depreciation balances and pooling of

depreciation schedules in Norway. We note material variation in analyst valuations of the benefit of Faroe tax consolidation in Norway; we include the benefit of an accelerated depreciation schedule from the consolidation of standalone assets, £21m of corporate tax balances, £58.9m of special tax balances, £107.6m of carried-forward unutilised depreciations, and 180m NOK of unused uplift at year-end 2017.

Exhibit 7: Base case valuation waterfall

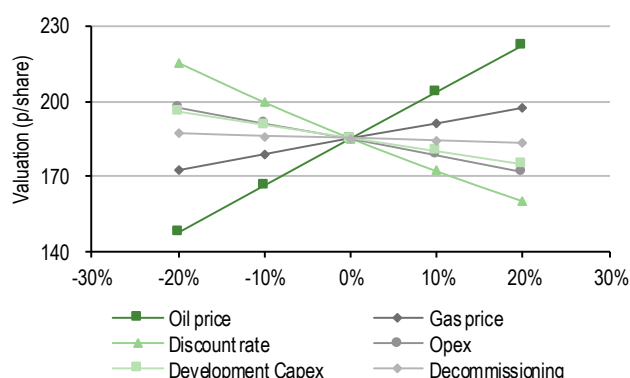


Source: Edison Investment Research

Based on our analysis, and our underlying commodity price and WACC assumptions, the market is fully valuing Faroe's production assets but undervaluing risked development or prospective resource. Given historical basin-wide success rates, Faroe's drill-ready prospects and the post-tax cost of exploration in Norway, we feel that the market should be placing at least some option value on the company's exploration portfolio.

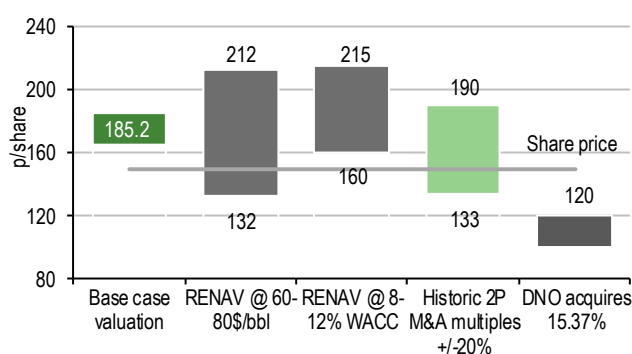
Below we look at key sensitivities to our base case valuation and alternative valuation ranges based on a spread of oil price, WACC and historical Norwegian 2P transaction multiples. We apply a multiple of \$11.3/boe for 2P reserves in production, \$5.5/bbl for 2P reserves under development based on historical NCS transaction values and adjust for financial items in arriving at a valuation of 162p/share (133p/share to 190p/share +/-20%).

Exhibit 8: Spider graph with key valuation sensitivities



Source: Edison Investment Research

Exhibit 9: Alternative valuation ranges



Source: Edison Investment Research

A full breakdown of our asset values that make up our base case RENAV are provided below including key sensitivities and underlying commodity price assumptions. As can be seen, key components include the tax shield of unutilised tax depreciations in Norway and the benefit of tax consolidation, Faroe's key Norwegian production hubs at Njord, Ula and Brage, as well as development projects Iris/Hades and Brasse.

Exhibit 10: Detailed valuation breakdown by asset

Number of shares: 372.9m								
Asset	Country	Diluted WI	CoS	Recoverable volumes		Net value		Value per share
		%	%	Gross mmboe	Net mmboe	NPV/boe \$/boe	Riskied \$m	Riskied* p/share
Net debt/cash FY17							105.0	20.5
Fenja sale proceeds							68.0	13.3
Overheads (3 years NPV ₁₀)							(23.5)	(4.6)
Norway tax consolidation benefit							260.1	50.7
Decomm liability (assets under abandonment)							(10.0)	(2.0)
Committed exploration post-tax							(36.3)	(7.1)
Production								
Tambar	Norway	45%	100%	28.0	12.6	6.5	81.8	15.9
Njord, Hyme, Bauge and Fenja	Norway	8%	100%	334.7	25.1	3.3	82.8	16.2
Oda	Norway	15%	100%	47.0	7.0	6.2	43.9	8.6
Brage	Norway	14%	100%	22.9	3.3	(0.0)	(0.1)	(0.0)
Ula	Norway	20%	100%	48.6	9.7	2.5	24.4	4.8
Ringhorne East	Norway	8%	100%	27.1	2.1	5.1	10.8	2.1
Trym	Norway	50%	100%	7.3	3.7	0.6	2.2	0.4
Ketch Schooner	UK	60%	100%	1.2	0.7	(36.2)	(25.6)	(5.0)
Blane	UK	45%	100%	5.5	2.4	28.5	69.2	13.5
Orca	UK	3%	100%	0.1	0.0	(88.6)	(0.4)	(0.1)
East Foinaven	UK	10%	100%	0.9	0.1	(27.0)	(2.4)	(0.5)
Core NAV					66.8		649.7	126.7
Development								
Brasse	Norway	50%	80%	69.2	34.6	3.3	92.1	18.0
Iris/Hades	Norway	20%	70%	146.5	29.3	1.2	24.9	4.8
Fogelberg	Norway	15%	75%	59.4	8.9	2.4	15.8	3.1
Contingent/development NAV					72.8		132.8	25.9
Exploration								
Agar/Plantain	UK	25%	28%	79.0	19.8	3.8	20.9	4.1
Rungne	Norway	40%	32%	90.0	36.0	2.7	30.2	5.9
Brasse East	Norway	50%	27%	13.0	6.5	2.7	4.7	0.9
Pabow	Norway	20%	16%	135.0	27.0	2.4	10.3	2.0
Cassidy	Norway	15%	27%	80.0	12.0	2.7	8.6	1.7
Bergknapp	Norway	30%	24%	45.0	13.5	2.4	7.8	1.5
Gomez/SE Tor**	Norway	85%	30%	107.5	91.4	2.4	65.1	12.7
Canela**	Norway	40%	24%	95.0	38.0	2.2	19.7	3.8
Riskied exploration					244.1		167.2	32.6
RENAV							949.6	185.2

Source: Edison Investment Research. Note: *US\$/£1.37, **Gomez/SE Tor and Canela are planned for 2019 and hence added to our valuation; however, these are not firm wells.

As can be seen in Exhibit 11, key valuation sensitivities are our underlying long-term oil price assumption as well as WACC. The table below provides further quantification of these specific sensitivities.

Exhibit 11: Valuation sensitivity to WACC and LT Brent price assumption

WACC % / LT Brent \$/bbl	50	60	70	80	90
6%	182.3	216.8	251.0	284.9	318.9
8%	154.3	184.8	215.0	245.0	274.9
10%	131.3	158.3	185.2	211.9	238.5
12%	112.1	136.3	160.4	184.2	208.0

Source: Edison Investment Research

Our base-case commodity price assumptions relevant to Faroe Petroleum are provided in the table below. Our short-term oil price assumptions are based on EIA projections for 2018 and 2019.

Exhibit 12: Edison's valuation pricing

Commodity benchmarks	2018	2019	2020	2021	2022
Brent (\$/bbl)	72.84	73.68	71.07	70.57	70
European gas price (\$/mcf)	7.5	7.69	7.88	8.08	8.28
NBP (p/therm)	56.87	54.65	56.02	57.42	58.85

Source: Edison Investment Research. Note: US\$/£0.73 (due to the recent volatility in exchange rates and for the sake of consistency, we assume the FX based on the average of the past six months before the end of each quarter).

Risks and sensitivities

Faroe is subject to several sector-specific and company-specific risks. We highlight the key risks below.

Sector risks

Generic sector risks include:

- commodity price volatility;
- geological risk and uncertainty and reservoir performance uncertainty. Assets such as Iris/Hades have a high level of uncertainty with regard to recoverable volumes and hence value;
- recent studies on project execution in the upstream oil and gas sector suggest that up to 60% of projects incur delays and capex overruns versus FID expectations;
- small-/mid-cap availability of funding: Faroe Petroleum has access to debt on favourable terms and undrawn debt capacity; and
- volatility in service sector availability and pricing.

Company-specific risks

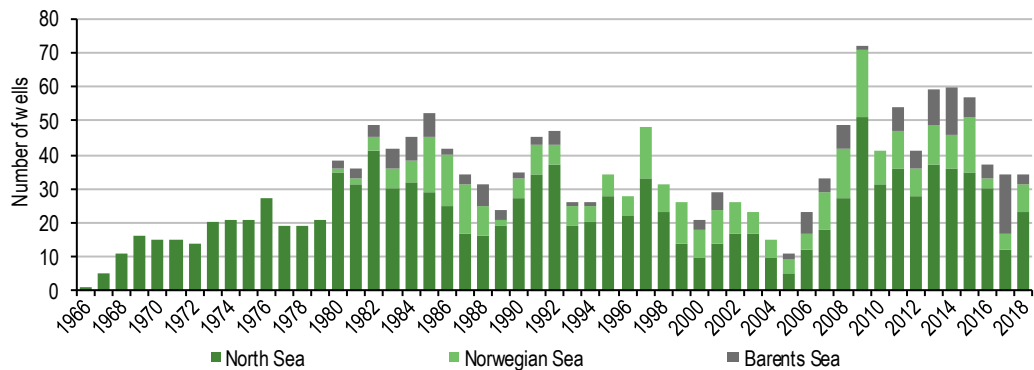
- Geographical concentration: Faroe is 100% exposed to the UK and Norway and associated petroleum fiscal terms. UK fiscal terms have been volatile over the last decade.
- Abandonment liability: Faroe provides for its estimate of present value of future decommissioning costs on the company balance sheet. At December 2017, this value sat at £262m, but is subject to movements determined by expected economic field life, inflation rate, discount rates and decommissioning cost estimates. We include decommissioning costs for production and development assets in our asset valuations and include an incremental expense for non-producing assets to be retired in our NAV.
- Operational risks: Faroe's operations are focused on the offshore UKCS and NCS. Production and development risks are typically higher in an offshore environment in comparison to onshore, but we note both the NCS and UKCS are mature operation areas with established operational practices and regulations that help minimise health, safety and environmental risks.
- Infrastructure access: Faroe's hydrocarbon discoveries can be reliant on third-party infrastructure for commercialisation. In this regard, Norway has an established regime that ensures a competitive, transparent and non-discriminatory process when regulating third-party access.

Tax-efficient exploration on the NCS

In 2005, Norway introduced a groundbreaking new tax initiative, where it started to directly compensate oil and gas companies for exploration activity. Since this time, the Norwegian

government has provided a rebate in the following year equal to 78% of the capex spent in the previous year on exploration drilling. Exploration wells effectively became 78% cheaper to drill overnight and resulted in an immediate increase in exploration activity that has continued to today. In recent years, lower activity in the mature Norwegian North Sea has been partly offset by increased activity in the more frontier Norwegian Sea and Barents. The prize on offer is the potential for more material discoveries with exploration running but at the cost of limited infrastructure access and higher well costs.

Exhibit 13: Exploration well count

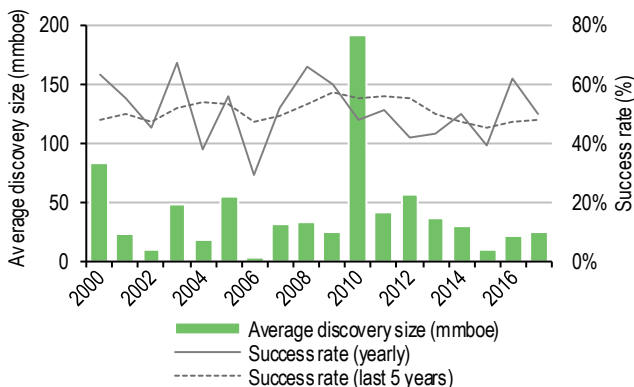


Source: NPD, Edison Investment Research

Post-discovery, the Norwegian fiscal regime allows for capital allowances resulting from almost all E&P investment activities, in addition to uplift (an additional tax shelter), to be deductible against tax. Norwegian E&P companies are taxed at 78% on profits; hence, this is a substantial boost for companies that can offset investments in developments and operations against profits from production.

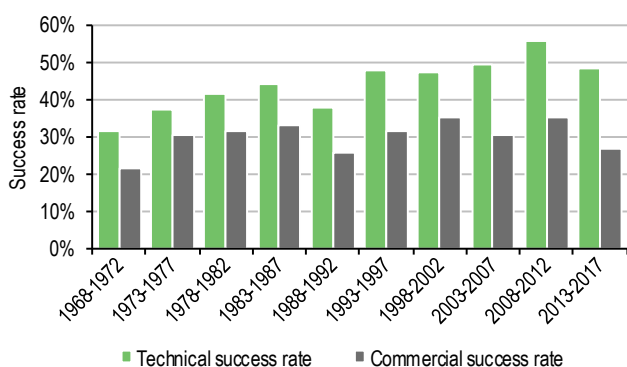
In addition to relatively low post-tax exploration costs, the maturity of the NCS and data coverage provide for relatively high exploration success rates, but against a fall in mean discovery size as basin creaming curves evolve. The average technical success rate over the past 10 years was c 52%, but with mean discovery sizes falling below 35mmboe (excluding John Sverdrup) commercial success rates average c 31%. Increasing infrastructure density and the recent rise in commodity prices ensure that the minimum threshold for commerciality continues to fall.

Exhibit 14: NCS technical success rate and average discovery size, 2000–2017



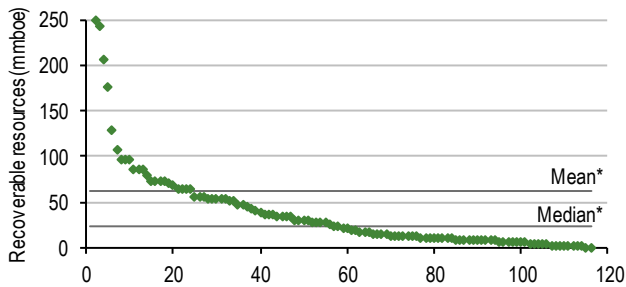
Source: NPD, Edison Investment Research

Exhibit 15: Technical and commercial success rates



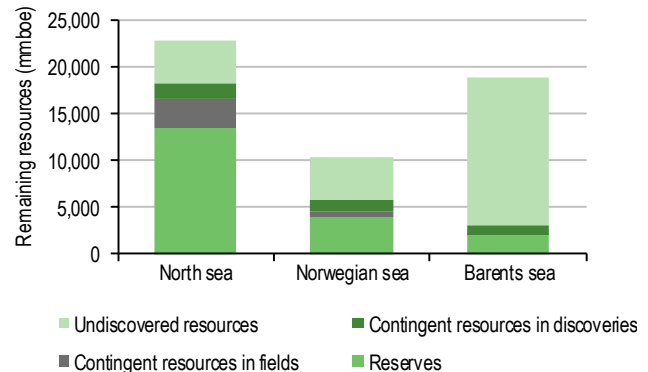
Source: NPD, Edison Investment Research

Exhibit 16: NCS discoveries size, 2008–2017. Johan Sverdrup of about 2,500mmboe falls outside the figure



Source: NPD, Edison Investment Research *Including Johan Sverdrup

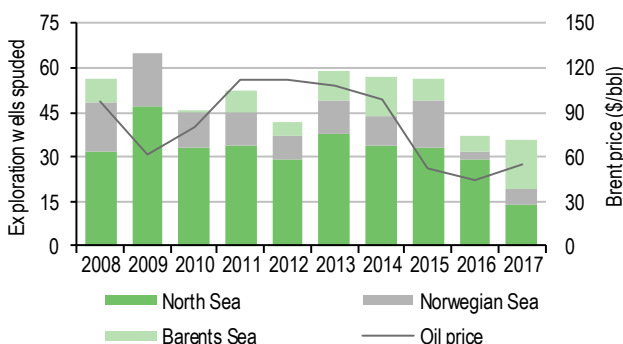
Exhibit 17: NCS expected remaining oil and gas resources (31 December 2017)



Source: NPD, Edison Investment Research

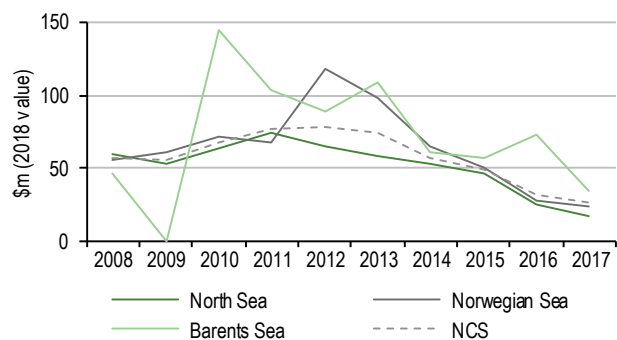
Taking into consideration data post-Johan Sverdrup, (2011–2017), and applying historical average actual data for chance of technical success (48%), mean discovery size (31mmboe) and average post-tax exploration well cost of \$12.3m (gross cost \$55.9m), this would imply that a technical finding cost of c 0.83\$/boe should be achievable. Assuming the same mean volume for a commercial success, at a historical success rate of 31%, this would imply a finding cost of \$1.3/boe. This is broadly in line with Faroe's historical finding cost for commercial discoveries of c \$1/boe.

Exhibit 18: Exploration wells spudded by area, 2008–2017



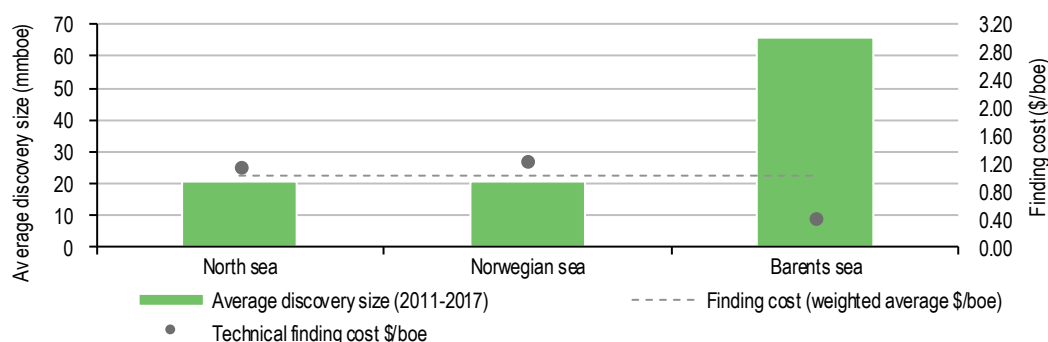
Source: NPD, Edison Investment Research

Exhibit 19: Average exploration well drilling cost per well by area, 2008–17



Source: NPD, Edison Investment Research

We look at historical technical finding costs (post-tax) across the three major NCS offshore areas in Exhibit 20. Technical finding costs in the Barents are low, due to a combination of relatively high historical technical success rates and the discovery of Johan Castberg (c 500mmboe), which positively skews mean discovery size. However, while we do not have historical data on commercial success rates by offshore area, we would expect commercial success rates to be relatively low compared to the North Sea in the Barents, due to the lack of available infrastructure and the need for discoveries to justify standalone development.

Exhibit 20: NCS technical finding costs (2011 to 2017)*


Source: NPD, Edison Investment Research. Note: *finding costs calculated post-tax exploration tax credit.

Seven further E&A wells in H218 and 2019

Faroe commenced an E&A drilling programme in late 2017 and to date has achieved significant successes with the Iris/Hades discoveries and the appraisal of nearby Fogelberg. Iris/Hades discovered gas condensate across two separate reservoirs estimated to hold combined gross 2C resources of 210mmboe. Meanwhile, the appraisal of Fogelberg has resulted in a preliminary gross resource range estimate of 40–90mmboe and the company is now preparing to carry out development planning studies for a subsea tie-back to Åsgard B in H2 2018. Six further exploration wells, together with an appraisal well in Iris/Hades, are committed for H2 2018 and H1 2019, with further targets being matured for potential addition to the current programme.

Exhibit 21: Faroe exploration and appraisal calendar

	2018				2019			
Prospect	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Iris/Hades	■	■						
Fogelberg	■	■						
Agar/Plantain*			■	■				
Rungne*			■	■				
Brasse East*				■				
Pabow*				■	■	■	■	
Cassidy*					■	■	■	
Iris/Hades (appraisal)*					■	■	■	
Bergknapp*					■	■	■	■
Gomez**							■	■
Canela**							■	■

Source: Faroe Petroleum, Edison Investment Research. Note: *firm exploration; **planned exploration.

Iris and Hades: 2018 discoveries

Iris and Hades, originally known as Aerosmith and Zappa, sit across the PL644 and PL644B licences in the Halten Terrace area of the Norwegian Sea and to the north of Njord. Faroe holds a 20% WI in the licences, which are operated by OMV (30%) and partnered by Equinor (40%) and Spirit (10%). The prospects were identified in PL644 by Faroe and the JV subsequently applied for and was awarded PL644B as an extension in APA 2015. The Iris/Hades exploration well, 6506/11-10, targeted the Cretaceous Lange in Hades and the underlying Jurassic Garn in Iris and completed drilling in April 2018. The reservoirs are high pressure/high temperature (HPHT) and gas condensate was encountered in both prospects with pressure data indicating separate accumulations. The Garn reservoir in Iris is 218m thick and of moderate-to-excellent quality, while the Lange sandstones in Hades are of moderate-to-good quality. OMV assigns a combined gross resource of 48-245mmboe to Iris/Hades, of which c 25% is condensate. At this point in time, we assume a mid-case volume based on figures released by the NPD/OMV at 147mmboe for Iris-Hades in our valuation. However we note that Faroe Petroleum is internally holding a higher

resource range of 63mmboe (1C), 210mmboe 2C and 322mmboe. An appraisal well is planned for H1 2019 to confirm the 2C estimates and will target the crest of the structure to the south of the discovery well. Key to the success of the well will be the extent to which the good quality Garn reservoir is distributed across the structure.

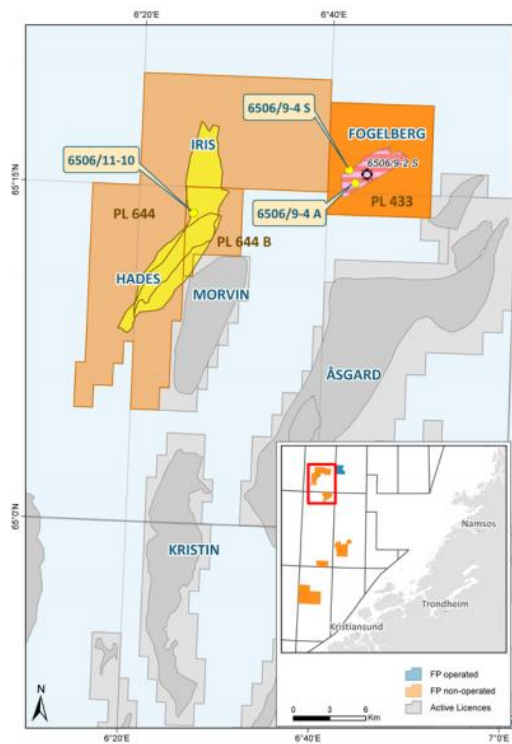
We believe there are three possible development scenarios for Iris/Hades. These include:

- **Tieback to Asgard:** a low production plateau solution with low up-front capex that utilises multiple subsea tiebacks to Asgard, taking advantage of available gas processing capacity.
- **Standalone development:** likely a large fixed or floating platform that is directly connected to the Polarled wet gas pipeline. This will be a high upfront capex cost solution but with high plateau production rate.
- **Asgard interconnector to Polarled:** a development solution that will utilise/expand gas processing capacity at Asgard. Iris/Hades subsea wells would be tied back to Asgard and the platform modified in order to receive/process higher volumes of wet gas. Partly processed gas would then be exported via an interconnector to the Polarled wet gas pipeline. We see this as a solution that may allow a high plateau production but at lower cost than a standalone development.

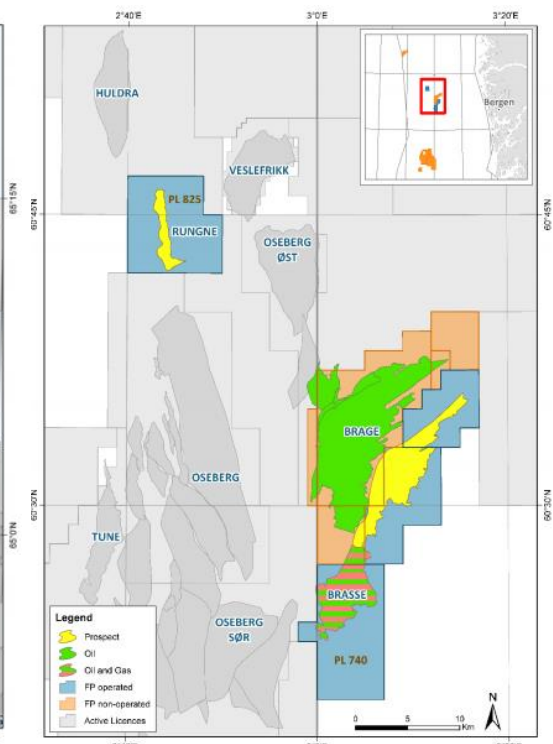
Given the uncertainty with regard to development solution for Iris/Hades ahead of further appraisal, we conservatively assume a tie-back to Asgard similar to Fogelberg in our base case valuation. We limit plateau production to 25kboed gross from 2024, which is substantially lower than the 100kboed gross Faroe management thinks may be achievable under a standalone/interconnector development case. We will reassess valuation of Iris/Hades post-appraisal.

Fogelberg

Fogelberg is also an HPHT discovery that sits in the Halten Terrace area and to the east of Iris/Hades. Faroe holds 15%WI in the PL433 licence, operated by Spirit Energy. The discovery well, 6506/9-2 S, was drilled in 2010 and encountered gas condensate in the Jurassic Garn and Ile reservoirs. The well was drilled high on the structure and did not observe a fluid contact, so the original volumetric range was quite wide at 19–116mmboe. An appraisal well with a sidetrack was drilled, and a DST carried out in 2018, with a view to narrowing this range in reserve estimates and to provide additional information for development planning. The appraisal well, 6506/9-4S, was drilled downdip of the original well and established better reservoir quality reservoir and a deeper gas water contact than previously modelled. The well was subsequently sidetracked as 6506/9-4A and successfully tested at a maximum constrained and stable rate of 21mmscfd and 547bpd condensate (ie 4,047boepd), with no depletion seen over the 24-hour flow period. Faroe has estimated a preliminary resource range of 40–90mmboe on the basis of the new well data; however, this will be updated once the data has been incorporated into the reservoir model. The company is preparing to start development planning studies in H218 on tying Fogelberg back to Åsgard B, 18km to the south. Capacity has been booked in the Asgard transport system (ATS) for 2021–2023.

Exhibit 22: Iris/Hades and Fogelberg


Source: Faroe Petroleum

Exhibit 23: Rungne and Brasse East


Source: Faroe Petroleum

Rungne and Brasse East: Targeting additional resources for Brasse

Rungne (40%WI) and Brasse East (50%WI) are both operated by Faroe and will be drilled back to back from September 2018, with the potential to add further resources to the existing net 2P reserves of 30.7mmboe (NPD 34.6mmboe) in the planned Brasse development, also operated by the company and one of the largest finds on the NCS in 2016 and 2017. The region is a prolific hydrocarbon-producing area: the majority of the fields and discoveries in the area produce from the Brent Group reservoirs and the exploration success rate has been 67% over the past decade. Rungne is located 35km to the NW of Brasse, close to the Oseberg, Veslefrikk and Huldra fields, which have produced over 3bnboe between them. The prospect is analogous to the Oseberg field, where the reservoir is thick with high net to gross sands and good permeability and is estimated to hold c 70–100mmboe gross recoverable resources. Faroe has identified an AVO anomaly that conforms to the mapped structure and is considered to have a high chance of success. Brasse East is targeting gross 13mmboe, but if successful will also de-risk the Brasse Extension, which would likely then be brought forward for drilling in 2019.

Agar/Plantain: Return to UKCS

Agar Plantain is an exploration and appraisal well located in the UK sector of the North Sea and is Faroe's first well in UK waters since 2013. The company farmed into a 25% interest on the sole risk drilling activity and a 12.5% interest in the P1763 licence in August 2018, 10 days before the well was spudded by operator Azinor Catalyst. The Plantain exploration well will target Eocene Frigg sands, which were proven by the Agar discovery well, 9/14a-15A, in 2014 and by the 24/9-12S Frosk oil discovery made by AkerBP in Norway in January 2018. Faroe identified that the seismic anomaly present in Frosk continued on to Plantain and Agar. The prospect is also considered to be an analogue of the Catcher field and Cairn Energy, which holds a 20%WI in Catcher, has also farmed into Agar/Plantain. Plantain will be followed by a contingent sidetrack to appraise Agar. Agar and Plantain are estimated to hold combined mid-case prospective resources of 60mmboe, with an

upside of 98mmboe. The gross well cost is estimated by Faroe to be US\$15m. Agar/Plantain will require further appraisal if the well is successful and benefits from multiple potential development options, including via the Beryl Bravo platform (12km), and the Alvheim FPSO (14km).

Pabow

The Pabow prospect sits in the Stord basin, and close to the producing Skirne, Jotun and Ringhorne fields. The PL 870 licence was awarded in February 2017 and Pabow is planned to be drilled in late 2018. The Equinor operated well (Faroe 20%WI), will target gross gas resources of 70 – 200 mmboe in the Lower Jurassic Statfjord and will test both a proven source and migration model and an unproven deeper gas source rock that would rely on fluid migration through fractures to accumulate in the sandstone reservoirs.

Cassidy and Bergknapp confirmed for 2019

Faroe has confirmed that it will drill exploration wells on the Cassidy and Bergknapp (formerly Yoshi) prospects in 2019; however, additional new prospectivity is under consideration to be drilled during the year, including an exploration/appraisal well in the Gomez prospect and SE Tor chalk oil discovery, and an exploration well in the Canela Prospect.

Cassidy

Cassidy is 8km north of, and on trend with, Oda and is expected to be drilled back-to-back with the Oda production wells in Q119. Faroe holds a 15% WI in the Spirit-operated prospect. The well will target the Upper Jurassic Ula reservoir in the southern compartment of a salt dome structure and there is flexibility built into the drilling programme to allow appraisal sidetracks, if required. The company estimates gross prospective resources of c 50–110 mmboe, and in the case of success Cassidy could be developed via a subsea tie-back to Ula via Oda (6km away).

Bergknapp

Faroe holds a 30%WI in the Bergknapp prospect, which will be drilled in 2019. Bergknapp sits immediately to the south of the Smørbukk South Field and is also close to the Maria development, so can be tied back to nearby infrastructure in the event of success. The Wintershall operated well will target gross resources of 30–60 mmboe in several Early to Middle Jurassic reservoirs, similar to those producing in Smørbukk South.

Management

John Bentley, non-executive chairman

John Bentley has 40 years' experience in the natural resources sector. He served in a number of senior management positions in the Gencor Group in South Africa, the US, UK and Brazil. In 1996, he was instrumental in floating Energy Africa on the Johannesburg stock exchange and was chief executive for the following five years. More recently, he has served on the board of Caracal Energy and currently serves on the boards of Wentworth Resources, Africa Energy Corporation and Phoenix Global Resources. John, who holds a degree in Metallurgy from Brunel University, was appointed to the board in September 2007.

Graham Stewart, CEO

Graham was instrumental in founding the company in 1998, where he has been chief executive since December 2002. He holds an honours degree in Offshore Engineering from Heriot-Watt University and an MBA from Edinburgh University and has over 20 years' experience in oil and gas technical and commercial affairs. He was previously finance and commercial director at Dana

Petroleum and commercial director of the Petroleum Science and Technology Institute. Graham also serves on the board of Alopex Gold as a non-executive director.

Jonathan Cooper, CFO

Jon is a chartered accountant by training having qualified with KPMG before joining Dresdner Kleinwort Benson (later Wasserstein) in their oil & gas corporate finance and advisory team. Jon is a Fellow of the ICAEW and also has a PhD in Mechanical Engineering from the University of Leeds. In 2006, he was appointed as an executive director of Gulf Keystone Petroleum, followed by Sterling Energy in 2008, where he was finance director. He subsequently joined Lamprell as chief financial officer in 2011. Jon was appointed to the board of directors in July 2013.

Helge Hammer, COO

Helge joined the company in 2006, where he is chief operating officer. Prior to joining Faroe Petroleum, he was asset manager and deputy managing director at Paladin Resources. He holds a degree in Petroleum Engineering from NTH University of Trondheim and in Economics from Institut Français du Pétrole in Paris. In addition, he worked for Shell for 13 years as a reservoir engineer, team leader and business manager in Norway, Oman, Australia and the Netherlands.

Financials

In this section, we look at Faroe's debt capacity and cash generation, which provide visibility on funding for maintenance capex, development capex and exploration expense. It is important to note that capital expense provides a shelter against taxable profits and 78% of exploration expense is refunded a year after costs are incurred – we discuss the positive impact of tax consolidation earlier in this note. Based on our analysis, Faroe is fully covered for its published exploration, maintenance and development capital programme from existing sources of cash and debt at our base case commodity price assumptions, as well as when stress testing down to \$50/bbl Brent. Further equity, divestment or farm-out would only be required in the event of further material discoveries.

Debt capacity

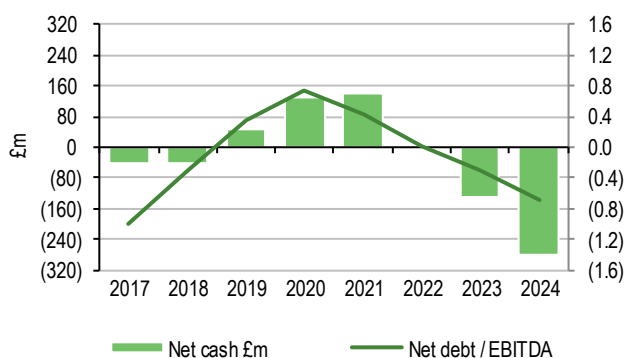
Senior unsecured bond – on 21 November 2017, Faroe issued a \$100m senior unsecured bond in the Nordic market with a fixed coupon of 8% with maturity in 28 April 2023. Faroe's bond currently trades at a 3% premium to par, reflecting the company's strong perceived credit rating.

Exploration Financing Facility (EFF) – Faroe has a committed NOK1bn (c £90.3m) and accordion facility of NOK0.5bn to fund exploration. Interest is charged at NIBOR plus 1.3% and is secured against annual Norwegian tax rebates under which 78% of allowable expenditure is repaid 12m after the end of the tax year.

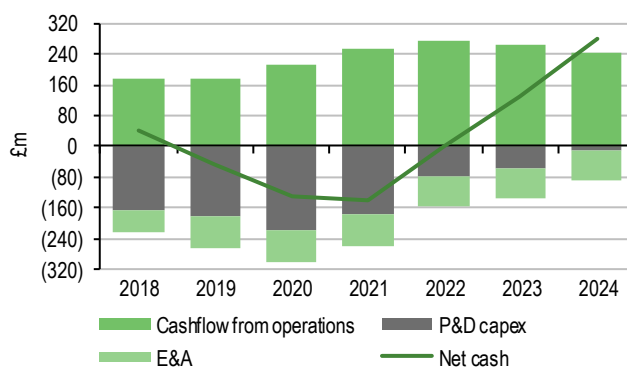
Reserve base lending (RBL) – Faroe has access to a US\$250m RBL facility, which is due to amortise over loan life to end-2023. Interest is charged on utilisation based on LIBOR, NIBOR or EUROBOR rates, depending on currency of drawdown plus a margin ranging from 3% to 4%. As of December 2017, the facility is undrawn.

As discussed earlier in this report, Faroe has sufficient funding to meet projected capital requirements for producing and development projects at oil prices down to \$40/bbl long term. We see potential for RBL capacity to increase as resource for development projects is transferred to reserves, Fenja 1P reserves are included on PDO approval, and development projects are included on a 2P basis once on-stream. The company's post-tax cost of debt is low, given a 40–50% effective tax shield. Faroe's undrawn debt capacity and low cost of debt are key drivers of the company's low cost of capital.

Leverage ratios over our forecast period are low at sub 1x net debt/EBITDA, which is well below normal operating companies for listed E&P companies. In addition, production hedging provides protection to the downside and supports RBL availability (RBL remains undrawn as at June 2018). Faroe typically uses put options, which provide investors with full exposure to the upside. Put protection is in place for 23% of oil production (pre-tax) at \$57/bbl in 2018 and at \$60/bbl for 10% of oil production in 2019. Gas price protection of 42% of production is in place at 42.5p/therm. We note that at current commodity prices these hedges are out of the money, which will lead to non-cash mark to market hedge losses, but investors retain full commodity price exposure to the upside.

Exhibit 24: Net debt and net debt relative to EBITDA


Source: Edison Investment Research

Exhibit 25: Operating cash flow, capex and net cash


Source: Edison Investment Research

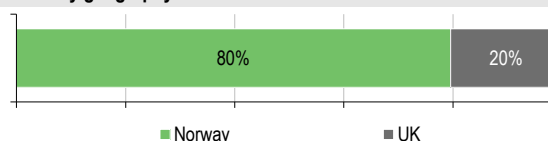
Exhibit 26: Financial summary

£m	2016	2017	2018e	2019e	2020e
Dec	IFRS	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS					
Revenue	95	153	236	225	270
Cost of Sales	(100)	(146)	(122)	(127)	(161)
Gross Profit	(5)	7	114	98	108
EBITDA	(34)	44	121	131	176
Operating Profit (before amort. and except.)	(57)	(2)	81	57	67
Intangible Amortisation	0	0	0	0	0
Exceptionals	0	7	25	0	0
Other	0	0	0	0	0
Operating Profit	(57)	(2)	106	57	67
Net Interest	(5)	(12)	(19)	(20)	(21)
Profit Before Tax (norm)	(62)	(21)	62	38	46
Profit Before Tax (FRS 3)	(62)	(14)	87	38	46
Tax	29	2	28	18	13
Profit After Tax (norm)	(33)	(19)	90	56	59
Profit After Tax (FRS 3)	(33)	(11)	114	56	59
Average Number of Shares Outstanding (m)	311.6	366.0	371.2	372.9	372.9
EPS - normalised (p)	(10.6)	(5.1)	24.2	14.9	15.8
EPS - normalised and fully diluted (p)	(10.6)	(5.1)	24.2	14.9	15.8
EPS - (IFRS) (p)	(10.6)	(3.1)	30.8	14.9	15.8
Dividend per share (p)	0.0	0.0	0.0	0.0	0.0
Gross Margin (%)	-5.1	4.9	48.3	43.7	40.1
EBITDA Margin (%)	-35.4	28.5	61.8	58.3	65.3
Operating Margin (before GW and except.) (%)	-60.0	-1.0	44.7	25.4	24.8
BALANCE SHEET					
Fixed Assets	395	395	581	738	897
Intangible Assets	107	69	105	153	201
Tangible Assets	157	201	327	436	547
Investments	130	125	149	149	149
Current Assets	212	348	289	201	140
Stocks	10	11	3	2	2
Debtors	105	138	138	138	138
Cash	97	149	149	61	0
Other	0	51	0	0	0
Current Liabilities	(91)	(158)	(158)	(158)	(158)
Creditors	(55)	(125)	(125)	(125)	(125)
Short term borrowings	(36)	(33)	(33)	(33)	(33)
Long Term Liabilities	(269)	(359)	(372)	(385)	(424)
Debt	0	(73)	(72)	(72)	(97)
Provisions	(269)	(255)	(267)	(281)	(295)
Other long term liabilities	0	(32)	(32)	(32)	(32)
Net Assets	247	226	340	396	455
CASH FLOW					
Operating Cash Flow	55	134	174	174	214
Interest received	1	1	1	1	1
Tax	0	0	0	0	0
Capex	(79)	(144)	(226)	(264)	(300)
Acquisitions/disposals	0	0	51	0	0
Equity financing	63	0	0	0	0
Dividends	0	0	0	0	0
Other	(30)	(8)	0	0	0
Net Cash Flow	9	(18)	0	(89)	(85)
Opening net debt/(cash)	(36)	(61)	(43)	(44)	44
HP finance leases initiated	0	0	0	0	0
Other	(0)	(0)	0	0	0
Closing net debt/(cash)	(61)	(43)	(44)	45	130

Source: Faroe Petroleum, Edison Investment Research

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Revenue by geography

Management team
Non-executive chairman: John Bentley

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Principal shareholders

	(%)
DNO ASA	28.22%
BlackRock	8.58%
Aviva Investors	6.75%
Invesco Perpetual	3.59%
Legal & General Investment Management	3.18%
Fidelity International	2.77%
NFU Mutual	2.77%
JPMorgan Asset Management	2.22%
Canaccord Genuity Wealth Management	1.95%
Highclere International Investors	1.95%

Companies named in this report

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