

16 November 2011

Quadris Fuels International

Year End	Revenue (£m)	PBT* (£m)	EPS* (p)	DPS (p)	P/E (x)	Yield (%)
06/10	0.0	(1.0)	(0.25)	0.0	N/A	N/A
06/11	0.0	(1.8)	(0.33)	0.0	N/A	N/A
06/12e	0.0	(1.4)	(0.19)	0.0	N/A	N/A
06/13e	1.4	0.0	0.0	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding intangible amortisation and exceptional items.

Investment summary: Lower cost fuel

Quadris International Ltd, 100% subsidiary of Quadris Fuel International (QFI), has the licence to manufacture and market an environmentally friendly substitute for heavy fuel oil (HFO), which can be sold at a material discount to traditional fuels, and is branded MSAR. The potential for MSAR, targeting the global 600MT HFO market, is supported by a production alliance with chemical giant AkzoNobel, while the world's largest owner of merchant shipping, Maersk, is conducting pre-production trials. MSAR could be commercial by 2012 with potential additional agreements with both a Saudi Arabian refinery and a Mexican refinery.

MSAR: A low-cost alternative to HFO

MSAR is a new low-cost alternative to HFO that provides like-for-like thermal power characteristics. It does not need to be "cut" with expensive diesel to render it pumpable, enabling a material discount to traditional heavy fuels. Additionally, MSAR is cleaner burning, producing significantly less NO_x emissions and zero soot.

Maersk opportunity in marine

The marine market accounts for approximately one-third of global HFO demand of 600Mtpa. Maersk, the world's largest shipping line, is currently conducting sea trials with MSAR. Its involvement has added considerable credibility to MSAR/QFI's future dealings. QFI estimates that MSAR will save container vessel owners \$1m/vessel/year in fuel costs.

Saudi Arabia and Mexico

QFI is on the cusp of separate long-term agreements with large refineries in Mexico and Saudi Arabia. These agreements are expected to be signed in the near future.

Valuation: Value to be achieved through commercial use

The recent commencement of MSAR sea trials with Maersk marks a key step towards scale commercial use; this will form the base for significant value uplift. On a conservative basis, we value QFI, based on these three projects, a 10 year cashflow and applying varying risk factors, at £84m, or 11.6p per share.

Price 7.0p
Market Cap £51m

Share price graph



Share details

Code QFI
Listing AIM
Sector Oil & Gas
Shares in issue 722m

Price

52 week High Low
10.20p 2.25p

Balance Sheet as at 30 June 2011

Debt/Equity (%) N/A
NAV per share (p) 3.0
Net cash (£m) 3.9

Business

Quadris Fuels International (QFI) has a licence to manufacture and market MSAR, an oil-in-water fuel emulsion that is a low-cost substitute for heavy fuel oil used in marine, power and other industrial units.

Valuation

	2011	2012e	2013e
P/E relative	N/A	N/A	N/A
P/CF	N/A	N/A	N/A
EV/Sales	N/A	N/A	N/A
ROE	N/A	N/A	N/A

Revenues by geography

	UK	Europe	US	Other
N/A	N/A	N/A	N/A	N/A

Analysts

Jackie Ashurst +44 (0)20 3077 5719
Roger Johnston +44 (0)20 3077 5722
Peter Darling +44 (0)20 3077 5700
industrials@edisoninvestmentresearch.co.uk

Investment summary: Low cost fuel

A three-prong development strategy

QFI has a three-prong strategy to commercialise the MSAR technology: the global marine business (MSAR will be a substitute for marine bunker fuel, a market estimated by QFI at 200Mtpa) and the Saudi Arabian and Mexican domestic markets.

The first part of this strategy seeks to capitalise on the marine market, which is (unlike most other fuel markets) still seen as a major growth area. The second and third parts are both focused on bringing a commercialising trial to fruition in order to service Saudi Arabian and Mexican domestic utility demand, by turning their own refinery residue into MSAR for combustion in their own (domestic) power generating units.

Valuation: Value to be achieved through commercial use

We have applied varying risk factors to the businesses; we assume a lower risk factor for the marine business than for the less developed Saudi and Mexican business models. Allowing for these variations in risk, we apply a blended 10-year discount factor of 12% (base year 2013), giving an NPV of £84m, or 11.6p per share. This includes end June 2011 cash of £3.9m and the end June 2011 £8.3m book value of the Canadian assets.

Sensitivities and risks

Given that the Quadris technology is proven, the key sensitivities that remain lie in the potential for MSAR to be accepted as a marketable, environmentally friendly and economic substitute for HFO, and for volume uptake by the power and marine bunker sectors. The value-add of MSAR is a function of the refinery price “spread” between diesel and HFO, and the customer’s share of this benefit. But environmental issues are also key. The progressive implementation of environmental restrictions on marine engine emissions plays to the advantages of Marine-MSAR. On the other hand, some oil-fired power stations are switching to natural gas. It is possible that Maersk, as potential lead client, may decide to disengage from its relationship with Quadris, thus removing a key platform for the company’s commercial growth. However, given the size of Maersk’s fuel bill this seems unlikely, especially with the potential benefit from royalties associated with sales of Marine-MSAR to third parties. AkzoNobel has been working with Quadris since 2004 through an alliance agreement. While it might choose not to extend the agreement after December 2013, AkzoNobel is obliged to honour existing project arrangements. Furthermore it would lose additional opportunities to offset the considerable R&D costs already invested into MSAR. Finally the majority of oil purchase transactions are arranged through bank loans. For the moment QFI is not sufficiently funded to purchase and process hydrocarbons, which is why its working model is based on licensing or toll processing contracts. Going forward, once MSAR is recognised as a “conventional” fuel, such lines of credit will become available to the company.

Financials

In the year to June 2011, Quadris raised £4.45m net via two equity funding programmes; end-June 2011 net cash was £3.9m. The business model comprises revenues generated via a mix of licence and toll fees and royalty streams (netting out opex and licence costs) and carrying minimal capital outlays. We expect first revenues in 2013 of around £2m, rising and surpassing the £10m mark within the first four years, the majority generated in marine.

Company description: A substitute for heavy fuel oil

Quadrise Fuels International plc (QFI) is an AIM-listed UK oil service company specialising in the application of technology for both the upstream and downstream oil sectors. Its major focus is on the development and commercial supply of a “multiphase superfine atomised residue” (MSAR) (ie an oil-in-water fuel emulsion), which the company has developed through an alliance with AkzoNobel, a Dutch chemical conglomerate. QFI has identified MSAR’s major potential as being the marine bunker fuel oil market, as well as supplying oil refineries and power utilities, initially for the Saudi Arabian and the Mexican domestic markets. In addition, QFI owns minority stakes in several Canadian enterprises, including Quadrise Canada Corporation (QCC).

Orimulsion to MSAR

Two of QFI’s senior management were involved with the Venezuelan national oil company in developing Orimulsion, a water-in-oil heavy oil emulsion, from Orinoco basin bitumen. Circumstances unrelated to the performance of the product led to the Venezuelans ending production in 2006, having by then supplied over 60Mt into the global market. This expertise has formed the bedrock for the development, production and marketing of MSAR as an environmentally-friendly and low-cost alternative to traditional heavy fuels manufactured from the bituminous residue of oil refining. In 2004, a long-term alliance was established between QFI and AkzoNobel for the supply (under a life-of-project licence) of the chemicals and surfactants crucial to the MSAR production process.

MSAR, key strategic business, carried out via QIL subsidiary

In 2010, the group was restructured into its MSAR “directly managed” interests and its “non-managed” interests. The directly managed business comprises the MSAR fuel oil business carried out in conjunction with industry project partners through its wholly owned subsidiary, Quadrise International Ltd (QIL). This is the key strategic business for QFI.

Canadian assets non-core, enhanced oil recovery

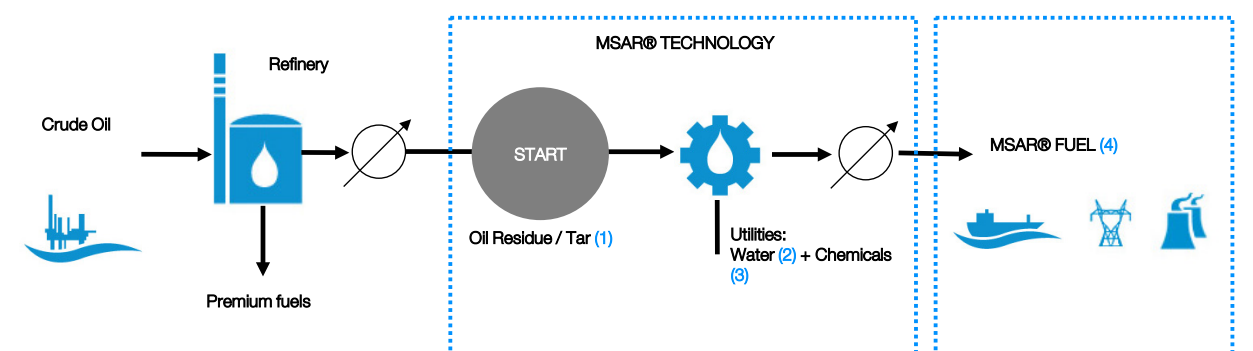
The non-managed interests comprise minority holdings in four companies associated with emulsion and related technologies, and with enhanced oil recovery. These companies are Quadrise Canada Corporation (20.4% stake), Optimal resources Inc. (9.6%), Paxton (3.8%) and Porient (16.9%). While offering scope for growth in their relative markets, these are non-core businesses for QFI.

MSAR: A viable alternative to heavy fuel oils

MSAR is a technically proven substitute for traditional heavy fuel oil (HFO) used in marine engines and in power generation. There are four significant advantages worth outlining. First, MSAR is not only more economical than traditional HFO, but its combustion is also more environmentally friendly. Second, obviating the need to use expensive diesel as a diluents improves refinery economics. Third, while the cost advantages are a real incentive to the customer, it is the environmental advantages that, in the long term, are likely to provide an active impetus to the global marketing of MSAR as environmental agencies begin to focus more on NO_x and soot, as significant “undesirable” by-products from marine engines. A fourth advantage to the end-user is that no retro-fitting of equipment or re-tuning of the combustion units is required.

Exhibit 1: How it works – the MSAR production process

Note: 1) Oil residues are taken from refinery rundowns and cooled to under 200°C to achieve the required viscosity (typically 300-500 cSt); 2) Water, which can be derived from several utility or waste-water sources, is added to the residue stream; 3) Special surfactants and chemicals are added to stabilise the emulsion for long-term storage and transport, and to promote complete combustion; 4) The mixture is processed in a proprietary MMU to a high hydrocarbon content (typically 70%) oil-water emulsion.



Source: Quadris Fuels International

MSAR's surfactant-based technology is supplied under licence by AkzoNobel. QFI's long-term alliance with AkzoNobel enables a regular exchange of commercial and marketing information and joint development of specific projects for MSAR production. This agreement applies to every country other than members of the North American Free Trade Agreement, Japan and China; business development in these countries is on a case-by-case basis.

AkzoNobel provides expertise in emulsion formulations and manufacturing, while QFI brings the overall technical and commercial expertise for MSAR through the alignment of a producer (ie the oil refiner) and the consumer (ie marine operator or power generator). AkzoNobel has also contributed to development costs, as laid down in its alliance agreement.

MSAR as a substitute for HFO

Oil refinery margins are shaped by feedstock, power, transport and efficiency costs. A refinery's range and ratios of output products are by-and-large dependent and pre-determined by the physical and chemical characteristics of the original crude feedstock mixture. To be able to positively influence the margins and costs of this mature and sophisticated aspect of the petroleum industry is no small feat; nevertheless, this is what QFI with its MSAR set out to do. Today, performance evaluation projects have proved the technology, and the move to full commercialisation is now the final step in bringing this product to a global market.

In an average oil refinery, the feedstock is (after cracking) reduced into two parts in almost equal volumes: 50% is high-value distillates (aviation fuel, gasoline, etc) and the other 50% is a heavy fuel oil (comprising 30% residue and 20% diesel). To enable this bottom-barrel heavy residue to be used, it must be diluted (or "cut") with some of the high-value product (usually diesel) in a ratio of 60% residue:40% diesel. However, this product, although now a fuel oil that can be combusted in ships boilers or in power plants, has used "valuable" diesel to produce a pumpable commodity.

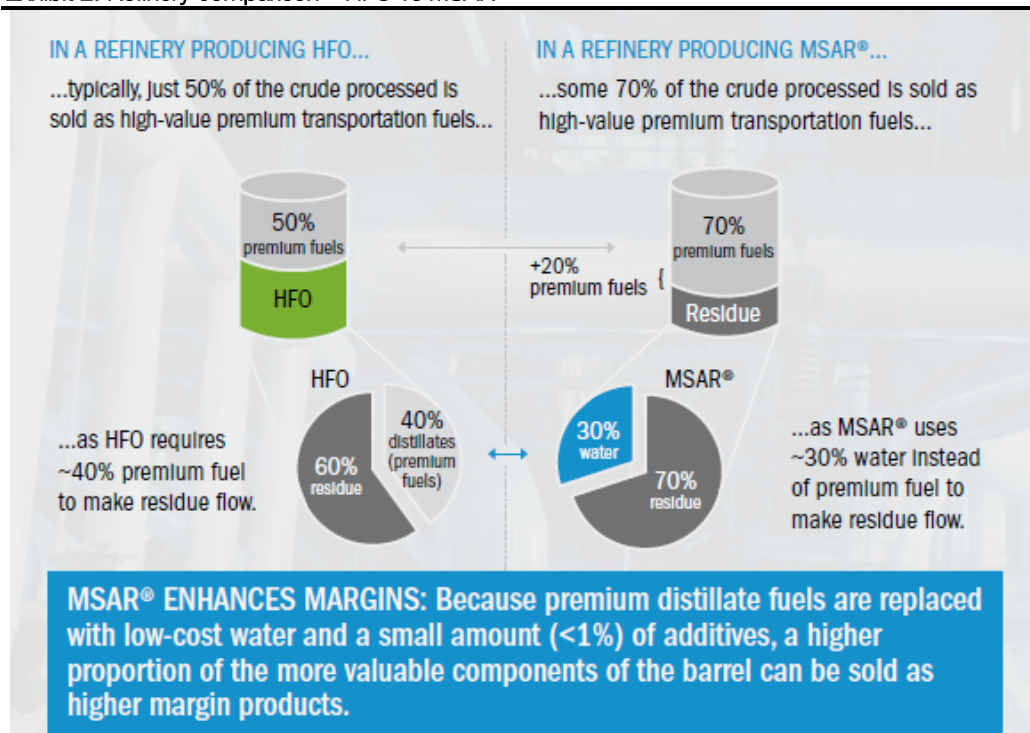
In an MSAR manufacturing unit, the highly viscous hydrocarbon residue is mechanically milled into ultrafine particles (approximately five microns in size), mixed with water and an appropriate quantity of surfactants and stabilisers, to render the 70% oil-in-30% water emulsion stable, pumpable and combustible.

HFO is a lower value product from oil refining, the global market for which is around 600Mtpa. Around one-third of HFO is used in marine markets as bunker fuel oil (powering ships' engines).

Other key uses lie within the originating oil refineries where, while being part of the output of an oil refinery, it is used within refineries for energy or steam generation, as well as being the fuel for oil-fired power generation. In its familiar viscous form it is applied as bitumen or asphalt for road surfacing; Quadrise is not involved in this market. Since MSAR offers significant efficiency and environmental benefits, and does not require high price distillates, it provides substantial economic benefits to users and refining owners/operators alike.

This MSAR cocktail can be sold at a discount to traditional HFOs. The two-fold financial advantages to the refinery are real and immediate: no diesel is used, and the refinery therefore retains *all* its high-value distillates to sell. The combustion of MSAR achieves the same thermal quantity as that of conventional fuel oil. However, not only is the combustion of the carbon absolutely total, (thereby eliminating soot), but it also produces less NO_x.

Exhibit 2: Refinery comparison – HFO vs MSAR



Source: Quadrise Fuels International

MSAR and its environmental benefits

One of the major drivers for changes in the HFO/MSAR market is that associated with environmental quality standards and emission compliance issues for sulphur, NO_x and black soot (ie unburnt airborne carbon). While these standards and regulations affect every potential user of HFO/MSAR, the manner in which they affect the marine industry (as one of the significant users) illustrates the growing demand for a viable and sustainable alternative to traditional fuels.

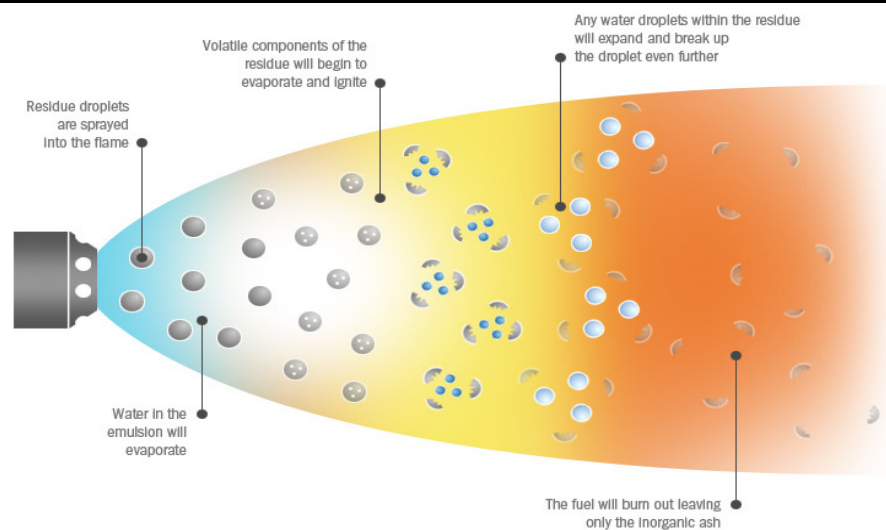
Sulphur. New regulations are being imposed progressively from 2012, which require a reduction in HFO's sulphur content, heralding a potentially substantial increase in the costs to marine fleets that would otherwise be forced to purchase high volumes of more expensive low sulphur distillates and diesel fuel. The use of MSAR (as a substitute for bunker oil) with on board emission scrubbers offers a lower-cost solution.

The sulphur content of refinery residue is by-and-large pre-determined by that of the original crude oil feedstock. As a result, the only way to meet sulphur standards in emission control areas (ECAs) is for ships to burn low-sulphur diesel fuels in these ECAs, and traditional HFOs outside these ECAs. With diesel costing approximately \$900/t compared to traditional marine fuel oils at \$600/t, this costly mismatch can be rebalanced by using an MSAR marine fuel that is sold at a discount to traditional HFOs, and then using the difference to “subsidise” the capital and running costs for on-board sulphur scrubbing modules. This makes for exceptionally cheap environmental compliance. (NB Scrubbers are the only way, other than fuel substitution, to reduce sulphur emissions.)

Soot. Until now, soot emission has not been directly evaluated by shipping industry regulators, but the International Maritime Organisation (IMO) has taken the first step to address this. Due to the size of carbon particles (after milling) in MSAR and the fact that they burn completely, there is zero black soot, unlike traditional HFOs. Soot is the second greatest contributor to global warming, after carbon dioxide, (source: 242nd National Meeting & Exposition of the American Chemical Society [ACS], Mark Z. Jacobson, Ph.D, August 2011), and is attracting considerable regulatory attention.

NO_x. It has been known for some time that by adding small proportions of water to fuel oil, NO_x emissions are reduced materially. MSAR achieves at least a 20% reduction in NO_x emissions in a straight switch from HFO to MSAR combustion. This significant reduction is due to the fact that total burn is achieved at lower flame temperature.

Exhibit 3: Reducing NO_x emissions



Source: Quadris Fuels International

Quadris's business strategy

QFI's business strategy has largely been dictated by the nature of both the refineries (as “owners” of the crude feedstock), and the clients (as high-volume users of a high-value product). Not presently capitalised to finance the purchase (however short-term that might be) of the feedstock for MSAR, QFI has embarked upon a dual commercial strategy: toll or licence. In the “licence” model the refinery acquires an MSAR manufacturing unit and is licensed to use it with chemicals supplied by AkzoNobel. This is the proposed model for Saudi Arabia. In the toll model, which is intended to be used in Mexico, the refinery pays a “toll” corresponding to the quantity of crude being treated and the resulting quantity of MSAR being produced.

Three-way reward system

In terms of current marketing activity (and the MSAR advantages to refineries and consumers alike), QFI has estimated that a 200,000b/d refinery with \$80/bbl crude feedstock containing an average spread of distillates and producing MSAR, would save approximately \$100m pa for the refinery by not having to use diesel to “cut” the fuel oil. The value-add is shared between the refinery, the customer and the Quadris group.

High class patronage: AkzoNobel and Maersk alliances

QFI has overcome many of the technical issues associated with creating a cost-effective alternative to HFO. However, bringing this product to market has thrown up its own challenges. Being a small company, QFI needed to engage the interest of much larger companies (refinery owners and operators, shipping lines and power generators) to stand any possibility of commercialising MSAR. QFI has partially achieved this through its tie-ins with Maersk and AkzoNobel, whose financial contributions have significantly reduced QFI’s burn rate. These tie-ins will go a long way towards allowing QFI to achieve its commercial aspirations. Additionally, through these tie-ins, QFI has acquired an enviable degree of credibility, which, like goodwill, is hard to quantify in monetary terms, but is nevertheless a serious fillip.

Marine market is key strategic target for Quadris

One of the significant factors that has changed QFI’s business focus over the past 12 months is the realisation that the supply of marine fuel has emerged as its primary market. It is estimated that the global marine fuel market is approximately 600Mtpa (equivalent to approximately \$65bn per annum), and therefore securing even a modest share of this market would provide substantial underpinning of the future value of QFI.

QFI has a joint development agreement with Maersk, the biggest shipping company in the world, which accounts for 10Mt of the annual fuel oil market (for marine, power generation and utilities) of 200Mt. The marine market is the only fuel oil market that is expanding; the others are shrinking primarily due to fuel substitution. As the world’s largest shipper, Maersk is often seen as having the lead-steer regarding setting standards and practices within the shipping business.

While Maersk does not have a share in QFI, it is expected to be its largest client in the short to medium term. Possibly QFI’s unique marketing advantages are its joint agreements with Maersk.

QFI’s first production trial commenced with the installation of a 500t (3,100bbl) per day MSAR manufacturing unit at the 200,000b/d Orlen Lietuva refinery in Mazeikiai, Lithuania. The resulting initial volume of MSAR marine fuel has been transferred to a nominated vessel for combustion trials and evaluation. The results of this programme are expected during H112.

Meanwhile, future plans beyond this initial evaluation of sea performance depend on third-party verification and approvals, and the conclusion of commercial agreements with suitable oil refineries.

QFI intends to supply further commercial volumes of MSAR to Maersk in 2012, which it will use to test in a representative sample (across their fleet’s engine types). Following the successful completion of this test, Maersk is expected to roll out MSAR to its other vessels, with the commercial limitations being on the volume of MSAR that QFI can supply, rather than the quantity that Maersk (as the owner of 200 vessels), could use. QFI has estimated that using MSAR can save container vessel owners \$1m/vessel/year in fuel costs.

MSAR in Saudi Arabia and Mexico

Several years ago, QFI identified both Saudi Arabia and Mexico as possible clients for MSAR. Both are oil-producing economies that burn HFO and diesel in large quantities to generate power, and will continue to do so. Additionally, both countries export HFO in large quantities and import large quantities of diesel fuel. Therefore, for every 10 tonnes of HFO they are exporting, this includes four tonnes of diesel needed to render the fuel oil pumpable. This volume of “exported” diesel is then added to the total volume that they then need to import. If they can export an MSAR-type of fuel oil instead, for every 10t of hydrocarbon exported, they can subtract 4t from their current import requirements.

QFI’s MSAR agreement with Mexico’s national oil company, PEMEX, is currently before the lawyers. Once ratified, QFI proposes initiating an early demonstration installation at a large domestic refinery. It is expected that from initiation of trials to full production MSAR takeoff will be about 12 months. In Saudi Arabia, QFI’s MSAR agreement is likewise moving through the legal channels.

These two sets of contracts, currently with the relevant national authorities, are expected to be signed and initiated shortly. Although the Saudi Arabian and Mexican initiatives involve existing refineries, the potential for QFI/MSAR to be involved with a new-build refinery elsewhere should not be ignored.

Medium-term validation of the business model

Oil companies and their refining units are conservative by nature. The introduction of new fuels into major mature markets is a significant undertaking. Success in the medium term is dependent on competitive economics, customer satisfaction and the highest standards of quality control in early conversion applications.

The company believes that it could service the majority of the global marine fuel oil market on an 80:20 basis (ie 20% of the refining capacity supplying 80% of the demand) from five existing major global bunker hubs.

QFI believes that any of its three current programmes (Marine-MSAR, Saudi Arabia or Mexico) is a “company maker”. Nevertheless, there are also other opportunities where a refinery feeding a power plant would be suitable for utilising the MSAR initiative. These projects were studied several years ago; QFI plans to revisit this in the near future.

Management steeped in oil-and-emulsion expertise

QFI’s management team and board possesses an unprecedented level of global experience in commercial emulsions, marine fuels, oil refining, power generation and industrial fuel consumers.

Ian Williams (chairman) spent 27 years at Shell, mostly in the downstream business, leaving the group in 1996. His last Shell position was head of strategy & consulting (downstream) for Shell International in London.

Hemant Thanawala (finance director) has over 25 years’ experience as a chartered account and was formerly the Finance Director of Nautical Petroleum. He qualified and practiced with what is now KPMG.

Jason Miles (independent non-executive director) spent 12 years developing emulsion fuel projects, initially as a process engineer with BP and subsequently as business development manager for PDVSA, where he implemented various Orimulsion projects.

Laurie Mutch (independent non-executive director) spent 25 years with Shell and was on the board of Shell International Gas & Power, as executive director for business development in the eastern hemisphere. From 1994-96 Mutch was finance director in Shell International Gas, and principle executive to the International Energy Agency's Coal Industry Advisory Board. Prior roles included senior management positions in Shell's coal and chemical divisions.

Michael Ian Duckels (independent non-executive director) has extensive experience in senior roles spanning refining technology and management, to global strategic planning and international M&A. His last post was with BP as chairman of the BP Texaco JV Refinery in Rotterdam.

Simon Craige (technical director) has specialist knowledge of emulsion science combined with detailed commercial and technical experience of power generation technology and related engineering. Craige was part of the BP team developing the Orimulsion technology.

Lance Christie (vice-president engineering) has over 20 years' experience of process, detail engineering and project management with Foster Wheeler in the oil, gas, LPG, petrochemical, refining and power industries.

Dilip Shah (independent non-executive director) has over 25 years of commercial experience in trading, finance, manufacturing and distribution. Dilip has most recently been involved in trading and manufacturing in West Africa with a focus on Nigeria, DRC and Ghana.

Sensitivities

Key sensitivities for QFI lie in MSAR being accepted as a marketable and economic substitute for HFO. We do not believe that any of the sensitivities (listed below) are likely to have a significant impact upon either the roll-out or the long-term financial attractiveness of QFI.

Fuel oil spreads: The value-add of MSAR is a function of the inter-product value spreads (fuel oil vs crude oil vs diesel), which will vary between wide and narrow. A potential client can hedge against this by taking a position against crude prices.

Not applicable to all refineries: About 25% of refineries are currently producing residue suitable for MSAR feedstock. However, this still offers substantial scope for MSAR uptake.

Environmental. Changes in environmental restrictions on marine engine emission characteristics play to the advantage of MSAR as a marine fuel. However, environmental and supply concerns may mean that increasing numbers of oil consuming power stations switch to gas.

Client risk: As lead client, Maersk could decide to disengage from its ongoing relationship with QFI.

Ability to produce: AkzoNobel's surfactants are used to make MSAR by licence and continuity of the relationship is key. Successful scale-up of MSAR is of benefit to AkzoNobel.

MSAR as commercial collateral: The majority of fuel oil is financed by bankers through cash or collateral to cover working capital. QFI is not in a position to cash-guarantee any residue purchases hence its current working model is based upon toll/licensing.

Saudi agreement: The potential MSAR tie-in may not be as imminent as management hopes it is.

Shift in focus: Between 2008 and now, QFI's business focus has shifted towards a realisation that the marine market is the most likely to bring commercial success in the short to medium term.

Valuation

There are no useful peer group comparators to Quadrise, being neither directly an energy company nor an industrial manufacturer. An added complexity lies in its cash flow streams being derived from a mix of licence and toll revenues, with net offs to equity partners. This means that in reviewing the economics of each division, we have to take into account the tax and royalties relating to the three segments – MSAR-Marine, Saudi Arabia and Mexico. In our forecast model, we thus have deducted tax at the segment level as a cash outflow, which is therefore not visible in our group cash flow forecast as shown in Exhibit 6.

At this early stage, the business is non-capital intensive; our model incorporates no future group capital expenditure other than around £16m planned in Mexico over the 2013 to 2019 period. This may change in the future if the group succeeds in scale-up and moves into direct production. The three segments are also at different stages, reflected in our differentiating the discount rate applied in our NPV calculation. The largest business and lowest risk (by virtue of the partnership with Maersk in place and physical sea trials already being underway) is marine, accounting for around 45% of next year's group cash flow, rising to around 60% over the 10-year period of our NPV valuation. Our model allows for first cash flows from Saudi Arabia in 2012, and for these over the 10-year period to be around one-third of the total. Mexico accounts for the balance, with first revenues in 2013. The latter two businesses are yet to raise significant customer uptake so we apply a higher risk factor, in line with management's assessment of the relative risk.

Allowing for these variations in risk, we apply a blended 10-year discount factor of 12% (base 2013), giving an NPV of £84m, or 11.6p per share. This includes end June 2011 cash of £3.9m and the end June 2011 £8.3m value of the Canadian assets.

Exhibit 5: Quadrise valuation – Sensitivity of NPV to a range of discount rates (10 year, 2013 base)

Discount rate	10%	11%	12%	13%	14%	15%
NAV (£m)	92.9	88.1	83.6	79.5	75.7	72.2
NAV/Share (p)	12.8	12.2	11.6	11.0	10.5	10.0

Source: Edison Investment Research

Financials

Quadrise entered 2011 with net cash of £1.6m. The operating loss before impairments and amortisation (£4.8m) was £1.8m, and there was minimal absorption of cash for working capital and capital outlays. In the year to June 2011, the company raised £4.45m net via two equity funding programmes, leaving end June 2011 net cash just below £4m.

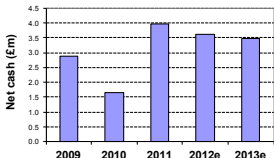
Quadrise is at a potential turning point where successful sea trials with Maersk for the substituted use of MSAR for HFO could open the route to larger-scale offtake (particularly in marine), commercialisation and validation of its product, and, in the longer term, the prospect of eventual volume scale-up. Meanwhile, the requirement for capital outlays in the near term is modest, with current balance sheet cash sufficient to carry the company through to early revenues in 2012 without recourse to debt funding. The business model currently being developed comprises revenues generated via a mix of licence fees and toll/royalty streams (netting out opex and licence

costs). We expect first revenues in 2013 of around £2m, rising and surpassing the £10m mark within the first four years, the majority generated in marine. However, should the business scale up to the degree that Quadris could directly produce and sell product (still within the AkzoNobel licence agreement), this would move the group into a larger business arena, whereby a commercially and market-priced product could lead to the potential scale up of production, with attendant capital outlays and funding requirements.

Exhibit 6: Financial model

Year end 30 June	£'000s	2009 IFRS	2010 IFRS	2011 IFRS	2012e IFRS	2013e IFRS
PROFIT & LOSS						
Revenue		3,537	0	0	3	1,448
Cost of Sales		1,196	67	25	(10)	0
Gross Profit		4,733	67	25	(7)	1,448
EBITDA		(610)	(1,047)	(1,815)	(1,397)	(52)
Operating Profit (before amort. and except.)		(630)	(1,047)	(1,815)	(1,397)	(52)
Intangible Amortisation		(2,970)	(2,637)	(1,368)	(1,400)	(1,400)
Exceptionals		(1,489)	(176)	(3,421)	0	0
Other		0	0	0	0	0
Operating Profit		(5,089)	(3,860)	(6,604)	(2,797)	(1,452)
Net Interest		(18.0)	42.0	(38.0)	0.0	50.0
Profit Before Tax (norm)		(648)	(1,005)	(1,853)	(1,397)	(2)
Profit Before Tax (FRS 3)		(5,107)	(3,818)	(6,642)	(2,797)	(1,402)
Tax		135	(131)	51	0	0
Profit After Tax (norm)		(513)	(1,136)	(1,802)	(1,397)	(2)
Profit After Tax (FRS 3)		(4,972)	(3,949)	(6,591)	(2,797)	(1,402)
Average Number of Shares Outstanding (m)		461.7	461.7	553.1	720.9	722.5
EPS - normalised (p)		(0.1)	(0.2)	(0.3)	(0.2)	(0.0)
EPS - normalised and fully diluted (p)		(0.1)	(0.2)	(0.3)	(0.2)	(0.0)
EPS - (IFRS) (p)		(1.1)	(0.9)	(1.2)	(0.4)	(0.2)
Dividend per share (p)		0.0	0.0	0.0	0.0	0.0
Gross Margin (%)		133.8	N/A	N/A	N/A	100.0
EBITDA Margin (%)		N/A	N/A	N/A	N/A	N/A
Operating Margin (before GW and except.) (%)		N/A	N/A	N/A	N/A	N/A
BALANCE SHEET						
Fixed Assets		18,092	20,101	15,026	13,626	12,226
Intangible Assets		11,645	8,832	6,748	5,348	3,948
Tangible Assets		0	0	9	9	9
Investments		6,447	11,269	8,269	8,269	8,269
Current Assets		3,225	1,876	4,202	3,670	3,597
Stocks		0	0	0	0	0
Debtors		317	212	195	0	79
Cash		2,878	1,634	3,962	3,625	3,473
Other		30	30	45	45	45
Current Liabilities		(315)	(127)	(148)	(148)	(148)
Creditors		(315)	(127)	(148)	(148)	(148)
Short term borrowings		0	0	0	0	0
Long Term Liabilities		0	0	0	0	0
Long term borrowings		0	0	0	0	0
Other long term liabilities		0	0	0	0	0
Net Assets		21,002	21,850	19,080	17,148	15,675
CASH FLOW						
Operating Cash Flow		(846)	(1,286)	(1,793)	(1,212)	(202)
Net Interest		(18)	42	(38)	0	50
Tax		135	0	51	0	0
Capex		0	0	(9)	0	0
Acquisitions/disposals		0	0	(637)	0	0
Financing		0	0	4,754	875	0
Dividends		0	0	0	0	0
Net Cash Flow		(729)	(1,244)	2,328	(337)	(152)
Opening net debt/(cash)		(3,607)	(2,878)	(1,634)	(3,962)	(3,625)
HP finance leases initiated		0	0	0	0	0
Other		(0)	0	0	(0)	0
Closing net debt/(cash)		(2,878)	(1,634)	(3,962)	(3,625)	(3,473)

Source: Company, Edison Investment Research

Growth	Profitability	Balance sheet strength	Sensitivities evaluation	
N/A	N/A		Litigation/regulatory	○
			Pensions	○
			Currency	●
			Stock overhang	○
			Interest rates	○
			Oil/commodity prices	●

Growth metrics	%	Profitability metrics	%	Balance sheet metrics		Company details	
EPS CAGR 09-13e	N/A	ROCE 12e	N/A	Gearing 12e	N/A	Address:	
EPS CAGR 11-13e	N/A	Avg ROCE 09-13e	N/A	Interest cover 12e	N/A	Parnell House, 25 Wilton Road, London SW1V 1YD	
EBITDA CAGR 09-13e	N/A	ROE 12e	N/A	CA/CL 12e	N/A		
EBITDA CAGR 11-13e	N/A	Gross margin 12e	N/A	Stock turn 12e	N/A	Phone	020 7550 4930
Sales CAGR 09-13e	N/A	Operating margin 12e	N/A	Debtor days 12e	N/A	Fax	020 7550 4946
Sales CAGR 11-13e	N/A	Gr mgn / Op mgn 12e	N/A	Creditor days 12e	N/A	www.quadrisefuels.com	

Principal shareholders		%	Management team
International Energy Group AG		37.7	Chairman: Ian Williams (1.48% shareholding) Williams spent over 27 years with Shell in various positions including MD and deputy chairman of Shell South Africa, vice president (downstream) of Shell Philippines and most recently as head of strategy & consulting (downstream) at Shell International.
Zenita Enterprise Ltd		17.0	
Anthony Lowrie		6.43	
Extrix of Anthony Davies (Deceased)		3.55	
			Finance director: Hemant Thanawala (1.47%)
			Thanawala is a Chartered Accountant with over 25 years' professional and commercial experience. Thanawala was responsible for the AIM listing of Nautical Petroleum plc, operating as finance director from 2005-08. Thanawala also served for eight years as the finance director of the Rostel Group, and before that he practiced and qualified in accounting for KMG Thomson McLintock (now KPMG).
Forthcoming announcements/catalysts	Date		
AGM	12 Dec 2011		
Investor day	N/A		
Trading update	N/A		
Interim results	End Feb 2012*		Independent non-exec director: Jason Miles (0.1%)
			Miles spent 12 years of his career developing emulsified fuel projects, initially as a process engineer for BP and subsequently for PDVSA as business development manager where he implemented numerous Orimulsion projects globally. Prior to joining QFI in 2006, Miles spent two years as a senior oil consultant for OpenLink. Miles has an honour's degree in chemical engineering and an executive MBA.
<i>Note: * = estimated</i>			
Companies named in this report			
Maersk, AkzoNobel, PEMEX, Quadrise Canada Corporation (QCC)			

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