MASSIFCAPITAL

AFRICA OIL (TSX:AOI)

INVESTMENT REVIEW | DEEP VALUE

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MASSIF CAPITAL, LLC | CHARLOTTE, NC

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Thesis: Africa Oil is an asset-rich, Africa focused E&P that has just acquired a positive cash-flow interest in fields producing roughly 10% of all of Nigeria's oil. Cash-flow from the Nigerian asset acquisition will be used by management to develop the first large scale oil and gas field in Kenya. Management has also acquired strategic interests in three E&P's focused on Africa and Guyana. Prior to the Nigerian asset transaction, which closed on January 14th, 2020, the firm was selling for less than the value of the cash and equity interests. We believe the Nigerian Assets (the acquisition was completed on January 14th) are worth CAD 1.70 per share vs. a current share price of CAD 1.41. The potential Kenyan development is worth an additional CAD 2.10 a share, with cash and equity worth roughly 0.74 per share.

In total, Africa Oil is worth roughly 4.54 CAD @ $60 oil (oil price sensitivities presented below).

Valuation and Asset Discussion: There are three assets to think about when it comes to AOI. The ability of management to convert these three assets into productive cash flowing assets or outright cash will determine the end return of investment of AOI. We view AOI as being an asset-rich resource conversion play; the balance sheet is lightly encumbered by liabilities, and the asset side of the balance sheet is a mix of mispriced tangible assets and liquid assets.

At a very high level, an investment in AOI is a purchase of 94.7 million barrels of Nigerian Bonny Light Crude in the ground, with the assets necessary for production at a price of 6.56 CAD per barrel. In addition, you get three lottery tickets in the form of investments in three intriguing Africa and Guyana focused E&Ps and a potential first of its kind oil development in Kenya.

The Nigerian asset acquisition was completed on January 14th of this year. The three fields in the two license interests acquired by AOI are all giant deep-water fields, located over 100 km offshore Nigeria, and are some of the largest and highest quality fields in Africa. All three fields have high-quality reservoirs, produce light, sweet crude oil, and have exploration upside with existing FPSO's. Additionally, the three fields combined have an average oil lifting cost of $7 a barrel.

Two of these fields, Agbami (operated by Chevron) and Akpo (operated by Total), have been in production since 2009. The third field, Egina is operated by Total, and started production in December 2018 and ramped up to plateau production of approximately 200,000 barrels of oil per day during the first half of 2019.

In addition to the current producing reservoirs, there are several growth opportunities, including exploration targets and one advanced opportunity. The advanced opportunity (which represents unpriced upside) is the Preowei oil discovery, which is being considered as a satellite tie-back to the Egina FPSO. In the first half of 2019, the Field Development Plan for the Preowei field within OML 130 was approved by the Government of Nigeria. Preowei is not currently included in the Company's reserves estimates, but we expect there to be further news about the field this year.

The originally negotiated transaction price for 50% interest in POGBV that AOI purchased from Petrobras was $1.53 billion, with a lockbox date set at the time of negotiation. The lockbox date was in 2017/2018. Since the deal was negotiated, POGBV has paid out roughly $1 billion in dividends, reducing the cost of the transaction to AOI by the dividend amount. AOI paid a total of $519 million for their 50% stake in POGBV, of which $250 million was paid via debt, and the rest was paid out of cash on the balance sheet.

Our base valuation of the Nigerian assets is based on a $60 price of oil, a 10% discount rate, and stable production at the 2019 level through 2028. At present, the POGBV has a reserve-based lending facility

that is fully drawn at $1.8 billion. Our valuation assumes this loan is paid down in equal installments of $88 million and then in a bullet in 2028. We don't view this as a terribly likely scenario though. The reason is that we assume that production in these license blocks does not continue beyond 2028 which seems highly improbable. Furthermore, we know, based on conversations with management, that POGBV is already renegotiating the reserve-based lending facility with several lenders interested in extending it.

The oil price sensitivity of our valuation of POGBV to AOI is presented below. At the current time, Nigerian Bonny Light Crude is selling for roughly $55 a barrel.

Oil Price Sensativity (Per Share Value of POGBV to AOI)					
Oil Price	50	55	60	65	70
Per Share Value (CAD)	0.8	1.2	1.7	2.1	2.5

AOI has also already been paid its first dividend from POGBV, all of which they directed towards paying down the debt the firm took on to buy the 50% stake in POGBV. The dividend paid was $62.5 million, or 13% of AOI's current market cap. At the current time, it is not clear how many dividends will be paid by POGBV to AOI, but further clarity will be provided on February 28th.

Kenyan assets are more speculative then the producing and cash flowing Nigerian assets but are advancing briskly, and there is a high probability that they will be developed. The Kenyan assets are jointly held with Total and Tullow Oil, with Tullow Oil owning the largest share at 50%. Currently, the Kenyan field (South Lokichar) is in production as part of a test phase and is producing no more then ~2,000 barrels a day that is being trucked to the Lamu Port, which is in North Eastern Kenya. A final investment decision was originally expected to come this year but given the recent struggles at Tullow Oil was expect the FID to be delayed until 2021 with the first production in 2024/2025 and life of field of roughly 25 years.

Our valuation of the Kenyan assets includes the capital expenditures associated with the pipeline that needs to be produced to tap the fields potentials fully. It also assumes $60 oil and a 20% discount rate. We have chosen to use a particularly high discount rate due to both the lack of an FID, the difficulties at Tullow, and various operating/execution risks. Based on conversations with management, there does appear a possibility that Tullow sells down its 50% stake, likely to a 25% stake, and brings in another major to operate the project and asset.

The oil price sensitivity of our valuation of POGBV to AOI is presented below.

Oil Price Sensativity (Per Share Value of Kenyan Project to AOI)					
Oil Price	50	55	60	65	70
Per Share Value (CAD)	1.3	1.7	2.1	2.6	3.0

Equity investments include:

1) A 35% stake in Africa Energy: Africa Energy (AFE:CN) is an E&P focused on offshore South African fields. Africa Energy is planning on drilling three wells in 2020 to further evaluate its Brulpadda field and begin planning development. The Brulpadda field is co-owned with Impact Oil and Gas and Total. AOI also has 2 seats on the board.

2) An 18% stake in Eco Atlantic: Eco Atlantic (EOG:CM) is an E&P focused on offshore Africa and offshore Guyana. The firm's most highly prospective discovery in offshore Guyana and is located near the current Exxon Mobil developments. There are questions about the quality of the oil in the discovery, with some indications, it is heavier than ideal in the current operating environment. AOI has 2 board seats.

3) A 30% stake in Impact Oil and Gas: Impact Oil and Gas is a privately held producer focused on offshore South African fields. Its primary discovery is the Brulpadda field, which the firm shares with Africa Energy and Total. At the current time, the Brulpadda field is too young a discovery to have a good idea of what the 2P reserves are. Estimates range from 250 million barrels to a billion barrels. Economically feasible production is expected to require at least 350 million barrels.

Risks

Kenya Project Risk

- We view a failure to move forward with the Kenyan project as the most likely risk to upset our outlook.
- This may (depending on whether it is delayed or canceled) result in the company writing down the asset value of the tangible assets on the book.
- We would still be buying the shares at a discount to liquid assets if the Kenyan assets were written down to zero tomorrow.
- Should the Kenyan project not move forward, the Nigerian Assets, which have historically paid out roughly their FCF in dividends every year, would accumulate as cash on the balance sheet quickly, this could be used for capital return or to acquire other assets. Nigerian dividends could accumulate on the balance sheet at a rate of $200 million or so a year.

Kenya Political Risk – We view the Kenyan political risk as modest, the relationships with key stakeholders are strong, and the government appears very interested in advancing the project. Given it is the first large scale oil development in the country, we believe interests are reasonably aligned.

Kenyan SWOT Analysis

Strengths

- The Kenyan state boasts relatively well-established institutions compared with regional peers, with multiparty electoral democracy now entrenched as the norm.
- Large elements of the population are keen participants in the civil society movement, maintaining pressure on the government to sustain the pace of anti-corruption reform.

Weaknesses

- Widespread perceptions of corruption tarnish the government's image both domestically and abroad.
- Sharp ethnic divisions, often supported by political leaders, create a persistent threat of political instability, particularly around elections.
- Weak, inefficient security services struggle to contain the threat of terrorism stemming from the Somalia-based al-Shabaab militant group.
- The government is prone to bouts of populism when looking to increase its support among the electorate.

Opportunities

- Government efforts to combat corruption could bolster investor perceptions in the coming years.

- Success in combating al-Shabaab and stabilizing Somalia could bolster Kenya's position as a regional powerbroker and increase its clout in the international arena.

Threats

- Given its involvement in the African Union Mission in Somalia, Kenya is vulnerable to terrorist attacks by al-Shabaab.
- Tensions between Muslims and Christians have increased since the onset of the Kenyan military operations in Somalia and could escalate.

Nigeria Political Risk – Given the projects are offshore and run by long-time Nigerian operators with significant relationships dating back decades; we view the political risk as low. Furthermore, given the offshore nature of the assets, we view many of the security/social risks that often come with Nigeran investments as low also as the oil is directly transported off the FPSO's to tankers and never touches Nigeria proper.

Nigeran SWOT Analysis

Strengths

- Constitutional limitations on presidential powers and an unwritten rule whereby the presidency rotates between Muslim (northern) and Christian (southern) politicians, in theory, prevent individuals or ethnic, religious, geographical groupings from dominating power.
- An active and fairly free media play a key role in the democratization process.

Weaknesses

- Ethnic, political, and economic divisions have meant historical disunity among the population.
- High levels of corruption (Transparency International ranks Nigeria 144th out of 180 countries in its 2018 Corruption Perceptions Index) make policy implementation difficult.
- The Christian-Muslim population split (thought to be around 50-50) continues to be a source of tension, and also serves to exacerbate conflict between herders and pastoralists in the Middle Belt region.

Opportunities

- Election tribunals have overturned the results of several state governors in the ruling party, further strengthening the country's democratic mores.
- The corruption record is improving slowly: Nigeria's ranking in Transparency International's index has climbed in recent years, while Muhammudu Buhari, re-elected in February 2019, has made tackling corruption a key electoral pledge.

Threats

- High oil revenues have not fed through to the population, and around 90.0% of Nigerians are living on less than USD2.0 a day. Poverty, high levels of unemployment and a rapidly growing population create the conditions for civil unrest.
- The government's ceasefire with the Niger Delta Avengers insurgency is strained, and hostilities could easily resume before a stronger peace-agreement is reached.
- Strife between Fulani herdsmen and pastoralists will cause tension in the Middle Belt region.

Environmental Impact and Economic Importance

The environmental impact and economic importance of an investment is extremely relevant to its long-term return potential. Economic importance can be assessed based on the scale of stakeholders impacted, the criticality of the business to local, regional, and global value chains and the likely duration of that criticality. The environmental impact can be assessed in terms of the scale of stakeholder's

impacted, the depth of the effect of the business on environmental concerns, and the duration of the effect of that impact. An ideal investment has both significant economic importance and a significant environmental impact.

For obvious reasons, oil and natural gas investments do not rank highly in our assessment of environmental impact, but they rank very highly on economic importance. In a somewhat counter-intuitive way, the economic importance of oil and natural gas is so high as to make the environmental impact less an absolute question and more of a relative question. What we mean is that the criticality of energy to the economy, and the degree to which our economy cannot operate without it, combined with current environmental concerns globally, means the focus must not be on divestment but rather on investment in low carbon oil and natural gas. If we cannot operate our economy without oil and gas, and we cannot yet replace it altogether, we must prioritize investment in the lowest carbon footprint oil and gas projects available.

There are two benefits to this approach; the first is that we avoid counter-productive divestment (which risks increasing energy scarcity and thus creating a negative economic feedback look that will threaten the ability to transition the economy to a low carbon one), and the second is reduced stranded asset risk. Low carbon footprint oil and gas projects have reduced stranded asset risk because they will survive the longest in any environment with increasingly stringent climate change policies.

We asses oil and gas carbon footprints based on a well-to-combustion estimation of GHG emissions, this analysis cannot be conducted on every single field globally due to availability of the relevant information, but it can be conducted broadly enough to have a sampling of multiple fields in any producing country. Based on our analysis the most carbon-intensive oil comes from the Indonesian Duri Field, this field, operated by Chevron, produces oil that has well to combustion GHG emissions of roughly 644 kilograms of CO_2 per barrel. The most carbon-efficient field in our ranking is the Eagle Ford, with well to combustion GHG emissions of 451 kg C02 per barrel (please note that we have not updated our analysis since 2017, several fields have now come online that are producing at lower GHG emissions levels). The Nigerian fields that AOI now owns operating stakes in have GHG emissions of roughly 482 kg CO_2 per barrel. On average, US-produced oil and natural gas, which is also refined in the US, has well to combustion GHG emissions of 510 kg CO_2 per barrel or roughly 6% higher than offshore Nigeria.

Given the large production capacity of the fields that AOI has invested in (the fields produce about ½ of 1% of daily global oil demand, which, if they were one field, would make them one of the twenty largest fields in the world), combined with the low carbon footprint, makes these assets globally critical to the economy, and environmentally sound on a relative basis.

To date, we have not been able to assess the carbon footprint of Kenyan produced oil and gas, but believe, in the fullness of time, that information will be available.

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