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FEATURE**Analysts: Mixed Bag for Refiners in Q4 2011**

If oil refiners could paint a portrait of fourth-quarter earnings, it would be a mixed palette of green and red.

After a mixed fourth quarter (Q4) in which U.S. refiners and producers more than doubled their earnings versus the fourth quarter of 2010, their annual net income rose 32% on a year-to-year basis in an industry survey of 47 refinery companies.

However, 19 of those 47 companies did see a decline in refinery earnings on the downstream side for the quarter.

Analysts point to higher prices for West Texas Intermediate Crude as a primary downward driver of refinery margins for those firms. Per barrel prices are hovering around the US\$106 mark – up \$11 since December 15, 2011.

The culprit: substantially falling Gulf Coast refining margins due to the price rises in the U.S. benchmark West Texas Intermediate (WTI) crude, which cut into the margins downstream oil companies can earn from refinery products.

The quarter saw a rebound for big downstream names. Valero Energy Corp. posted Q4 earnings of \$45 million against losses of \$438 million in 2011. Valero, the largest independent oil refiner in the U.S., says it's well prepared to meet growing distillate demand, which the company says should rise by 2%, while global demand for gasoline will climb 1% for 2012.

Zacks Research says Valero is the “most diversified refinery base” in the downstream market, but the company, like most downstream outfits, faces an uphill climb for 2012, analysts say.

A good look at Valero reveals a glimpse into the issues challenging most big refiners going deeper in to 2012. Valero saw a decrease in operating income due to a \$1.84 drop in refining throughput margin in the last quarter, especially in the Gulf Coast market, where margins fell by \$4.21 per barrel, again due to lower margins for gasoline and petrochemical feedstocks.

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For its part, Valero is taking a glass half-full approach coming out of the gate in 2012.

“Although the fourth quarter clearly showed the volatility of the refining business, 2011 was a great year for Valero,” said Valero Chairman and CEO Bill Klesse. “We had the highest annual earnings since 2008, acquired the Pembroke and Meraux refineries and related assets, completed several of our major capital projects and paid off over \$775 million in debt. We also increased our cash returned to shareholders by tripling the common stock dividend and conducting stock buybacks in the third and fourth quarters.

“So far in 2012, product margins have improved versus the fourth quarter of 2011,” Klesse added. “The macro view for refining in 2012 looks promising given the combination of positive economic trends in the U.S., expectations of global demand growth and continuing capacity rationalization in the industry, particularly in Europe, the U.S. East Coast and the Caribbean.”

Other big refiners took some medicine of their own for the quarter.

Chevron’s refining margins fell from 24% in Q3, 2011, to 11.8% in Q4, although it doesn’t seem to have had a direct impact on the company’s stocks, which is trading near its 52-week highs.

Then there’s Tesoro Corp., which operates seven refineries handling capacity levels of up to 665,000 barrels per day. The company, like Valero and Chevron, saw falling refinery margins contribute to Q4 quarter earnings, where the company posted a loss of \$124 million in Q4 (or 89¢ per share).

The downstream giant did post a net income gain of \$546 million for 2011, a big run-up from the \$29 million it lost in

2010, which may be a big reason why Tesoro, like Valero, has analysts bumping up earnings estimates for the remainder of 2012, as refinery margins start fattening up again.

One of the brighter stories for Q4 is Western Refining, which operates two refineries that have a refining capacity of approximately 151,000 barrels per day. The El Paso, Texas-based downstream company earned \$48.6 million in net income for Q4, compared to a loss of \$3.5 million from the same quarter in 2010. Net income for all of 2011 rose to \$318 million, leading to a further sense of optimism for Western Refining in 2012 – at least, that’s the sentiment from company executives.

“We established an aggressive strategic plan at the beginning of the year, and we delivered against that plan,” said Jeff Stevens, Western’s CEO. “The company took advantage of a strong margin environment, generated cash, reduced debt and implemented a crack spread hedging strategy that locked in margins on a portion of our 2012-14 production. These actions positioned us well and give us significantly more financial flexibility in 2012.”

That pretty much sums up the outlook for downstream oil companies after a tough fourth quarter.

Refiners are coming out of a “tough love phase” in Q4, but with margins re-evaluated, debt burdens reduced and short-term challenges that negatively impacted earnings results fading in the rear-view mirror, downstream companies are more decidedly bullish coming out of the fourth quarter than they were going into it.

But that doesn’t mean there won’t be a lot of crossed fingers in six weeks or so when the first quarter, 2012 numbers hit the street. – **Brian O’Connell**

PUBLIC POLICY

U.S. Senate Defeats Biodiesel Tax Incentives

On March 13, the U.S. Senate voted down two amendments that would have extended biodiesel tax incentives through the end of the year.

An amendment offered by Senator Debbie Stabenow (D-Mich.) would have extended a variety of incentives, including the Cellulosic Biofuels Producer Tax Credit, the Accelerated Depreciation Allowance for Cellulosic Biofuel Plant Property, the Alternative Fuel Infrastructure Tax Credit available to blender pumps and other ethanol fueling infrastructure and the Production Tax Credit for wind and grants in lieu of tax credits to eligible solar projects.

“Unfortunately the Senate missed an opportunity to put to bed the pressing need to extend expiring tax incentives

for cellulosic biofuels and other sources of domestically produced clean energy,” Brooke Coleman, Advanced Ethanol Council executive director, said. “Echoing the 49 U.S. senators who voted for the Stabenow amendment today, we cannot afford to miss any more opportunities to get this done.”

The measure would have also extended the US\$1 per-gallon biodiesel tax incentive, which expired at the end of last year, through the end of this year. Another amendment offered by Senator Pat Roberts that would have extended the biodiesel tax credit was also defeated.

MARGINS & ECONOMICS

Crude Futures Retreat US\$1.92 on Demand Concerns

NYMEX light, sweet crude for May delivery ended at US\$105.35 per barrel (/bbl), down \$1.92 on March 22, in response to released economic data showing a contraction in manufacturing activity in China and in Europe.

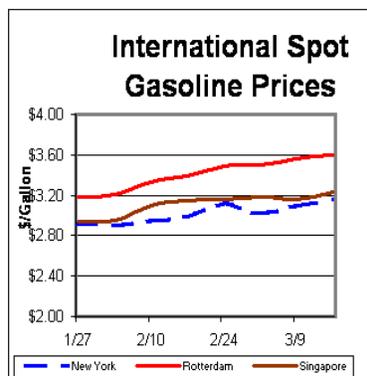
West Texas Intermediate (WTI) for May fell 1.8 1.1% versus the previous day's settle.

A pessimistic outlook for energy demand also rattled other commodities – sending stock markets down – and the euro shifted lower against the dollar.

May WTI established an intra-day low of \$104.50/bbl, down \$2.77, before rebounding ahead of the closing bell.

A somewhat upbeat report showing a drop in U.S. unemployment claims to the lowest level since February 2008 was overshadowed by the sell-off across the energy complex.

ICE Brent for May delivery bottomed out at \$122.30/bbl, down \$1.90, before finishing at \$123.14/bbl, down \$1.06. The negative trans-Atlantic arb widened into a minus \$17.79 value. Refined product prices trended lower. April RBOB slipped 2¢ to \$3.34 per gallon (/gal). April ULSD relinquished 3¢, settling at \$3.22/gal.



U.S. natural gas futures ended lower on Thursday after a government report showed that gas inventories climbed last week for the first time this year, as a near-record mild winter triggered an early start to the stock-building season.

The U.S. Energy Information Administration report showed total domestic gas inventories for the week ended March 16 rose 11 billion cubic feet to 2.380 trillion cubic feet.

Natural gas for April delivery at Henry Hub slid 9.1¢, or 3.4%, to \$2.269 per British thermal units (/Btu), after trading between \$2.25/Btu and \$2.38/Btu.

OPEC pegged the value of its reference daily basket of 12 crudes at \$122.91, down 12¢ from a day earlier.

– Kristie Sotolongo

FUELS & PROCESSING

India's Essar Commissions More Refinery Units at Vadinar

Essar Oil Ltd. (EOL) on March 22 commissioned a new vacuum gas oil hydrotreating unit (VGOHDT) and a sulfur recovery unit (SRU) at its 300,000 barrel-per-day (b/d) refinery at Vadinar, Gujarat, India.

With that milestone, a delayed coking unit (DCU) is the only expansion unit that remains to be commissioned as part of EOL's Rs 8,300-crore Phase-I expansion project, according to an EOL announcement.

The entire project is "now just days away" from being fully completed, which will expand the capacity of the refinery to 18 million metric tonnes per annum (mmtpa) (375,000 b/d) and enhance the plant's complexity to 11.8 (from 6.1 currently) – among the highest in the world, according to Essar.

The SRU will help the refinery recover 99.9% of sulphur in acid gases generated from the amine regeneration unit (ARU) and the sour water stripper (SWS) – two units that have already been commissioned, EOL said.

The SRU plays a key role in helping the refinery meet the latest emission standards, the company noted. Addition of a new SRU to the refinery configuration will also enable EOL to process sour and opportunity crudes.

C. Manoharan, head of the Vadinar refinery, commented: "The VGOHDT unit will ensure that the refinery is able to achieve a throughput capacity of 18 mmtpa. With a capacity of 6.5 mmtpa, the VGOHDT at the Vadinar refinery is among the largest units of its kind.

"It will help the refinery produce low sulfur, high-octane gasoline (petrol)," Manoharan added. "The unit is also capable of producing naphtha, kerosene and gas oil (diesel)."

With this commissioning, Essar Oil's capital expenditure program is beginning to taper off. The company will see substantial pick up in revenue and profitability going forward.

Essar Oil has also commissioned a state-of-the-art effluent treatment plant (ETP) with a capacity of 540 cubic meters per hour.

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The ETP consists of primary, biological and tertiary treatment sections to recover the oil and remove pollutants from the effluent water streams generated at different process units – while meeting the latest emission requirements, according to EOL.

Shell, BP Score Highest in Biofuels Ranking

Colorado-based Pike Research announced March 20 that Royal Dutch Shell plc and BP plc scored the highest among oil majors in its study comparing relative efforts to advance the commercialization of advanced biofuels.

In order, the top 10 oil majors advancing biofuels are: Shell, BP, Total, Petrobras, Chevron, Statoil, PetroChina, ConocoPhillips, Eni and ExxonMobil, according to Pike.

“Biofuels are expected to play an increasingly important role over the next decade due in part to mandates imposed in at least 31 countries worldwide,” according to Pike. “Contrary to popular perception, the growth of the biofuels industry is not adverse to the interests of Big Oil.

“In fact, with ‘easy oil’ increasingly difficult to source and with an obvious stake in the future of the US\$2 trillion transportation fuel market, the world’s largest oil companies have begun charting strategies to bring biofuels to market at scale.

“At the same time, with the cost of meeting emerging mandates over the next decade estimated at \$336 billion, access to the oil industry’s capital and expertise will be critical to scaling up biofuels production.

“The oil majors best positioned to drive and profit from the growth of biofuels are Shell and BP.

Turkey’s Oil, Gas Imports Could Hit US\$68 Billion in 2012

Turkey’s oil and gas imports could rise to US\$68 billion this year because of the high level of uncertainty regarding global oil prices, according to a March 21 report from Industrial Info Resources (IIR), citing Fatih Birol, chief economist for the International Energy Agency (IEA).

This is having a significant impact on Europe. “Higher prices from lower supply resulting from Middle East tensions could rapidly accelerate the oil and gas imports to Europe to \$500 billion for the current year,” Birol was quoted as saying.

“In the foreseeable future, oil prices will stay above \$120 per barrel this year. This may result a mild recession in Europe and also a sharp drop in the Turkish growth rate,” Birol told IIR.

In addition to the Phase-1 expansion, an optimization project is also underway at the facility to increase further the Vadinar refinery’s capacity to 20 mmtpa (405,000 b/d) by September 2012, Essar also noted.

According to Pike senior analyst Mackinnon Lawrence, “Shell and BP both have advantageous near-term positions for ethanol production from sugarcane and strong commitments to commercializing advanced biofuel pathways.”

Both Shell and BP are “pursuing strategies based on rapid scale-up in Brazil, whose efficient sugarcane market represents one of the most attractive biofuels markets over the next decade, with potential to supply sugar for advanced conversion technologies producing ‘drop-in’ fuels as well,” according to Pike.

“Shell scored slightly higher than BP in the Pike Pulse assessment thanks largely to its \$12 billion venture with Cosan, one of the world’s leading producers of ethanol from sugarcane.

“An early pioneer in the pursuit of advanced biofuels among oil majors, BP has made multiple investments across a number of potentially breakthrough feedstocks, participates actively in R&D efforts, and has built a strong portfolio of early-stage investments.

“Third-ranked Total has charted out a similar strategy to Shell and BP, but its commitment to building out a delivery supply chain for biofuels, especially in Brazil, has to date been more conservative,” according to Pike.

Turkey’s oil and natural gas imports totaled \$54.1 billion in 2011 – representing 22% of the country’s total imports, according to the report.

Vulnerabilities to oil are very significant, said Timothy Ash, the head of emerging market research for the Royal Bank of Scotland.

In a March 19 research note, Ash said that the each \$10 per-barrel increase in the oil price adds \$5 billion in terms of energy import costs, which feeds through to the current account deficit, IIR reported.

In its mid-term economic program, the Turkish government predicts 4% growth for this year. The Central Bank of Turkey predicts an average oil price of \$105 per barrel, according to the report.

VW, Amyris, Solazyme Team Up on 'Renewable Diesel' Fuel Testing

Volkswagen of America announced March 21 that it's partnering with biofuel developers Amyris and Solazyme to "evaluate emissions reductions and demonstrate the performance of 'TDI' clean-diesel technology when powered by advanced biodiesel and renewable diesel fuel."

Under the deals, VW will supply a 2012 "Passat" TDI and a 2012 "Jetta" TDI "in order to closely examine the effects that the fuels produced by Amyris and Solazyme will have on Volkswagen clean diesel technology and the environment."

Amyris converts plant-sourced sugars into renewable hydrocarbons for fuel and chemical applications, while Solazyme has developed a technology that harnesses the oil-producing ability of microalgae to develop renewable oil products.

The 12-month test evaluation period will "equip Volkswagen engineers with valuable data that will aid in the ongoing enhancement of TDI clean-diesel technology and help the brand to develop more efficient, cleaner burning diesel powertrains for future products," according to VW.

Jurgen Leohold, head of VW group research, added that "in order to achieve our long-term desire of bringing CO₂-neutral [carbon-dioxide-neutral] mobility to the market, advanced gasoline and diesel engines-like TDI clean diesel technology-must play a major role; and renewable energies to power these advanced powertrains are needed on a large scale"

Biomethane Project to Fuel Oslo City Buses Next Year

The Research Council of Norway announced March 19 that Norway-based Cambi AS won a contract to build a plant that will convert food waste into biomethane, which will fuel Oslo city transit buses next year.

"The plant will be able to process 50,000 tonnes of food waste annually, converting it to environment-friendly fuel for 135 municipal buses as well as enough biofertilizer for roughly 100 medium-sized local farms," according to the Council.

"The biogas production processes were developed through long-term Norwegian research with funding from the Research Council of Norway," according to the Council

Biomethane (also known as biogas) is a "CO₂-neutral [carbon-dioxide-neutral] fuel produced from biological material such as food waste, sewage sludge and manure," according to the Council.

"Already, 65 Oslo buses are powered by biogas produced from sludge from the city's sewage treatment plant.

According to VW, "initial analysis indicates that while advanced biofuels are comparable to standard diesel blends in terms of performance, there are tremendous opportunities to reduce vehicle emissions."

Amyris chief operating officer Mario Portela added that "Amyris' renewable diesel's proven superior cold weather performance, high cetane and comparable energy density to petroleum diesel have enabled us to obtain one of the highest blending registrations certified by the U.S. Environmental Protection Agency.

"Our partnership with Volkswagen, like our work in Brazil, where nearly 200 buses are running on various blends of Amyris diesel, is another important milestone in expanding OEM acceptance by showing our fuels eliminate the performance challenges of first generation biofuels while still enabling significant reductions in greenhouse gas and tailpipe emissions."

Solazyme chief commercialization officer Rogerio Manso added that "Solazyme's 100% drop-in renewable diesel is compatible with existing infrastructure and vehicles, and provides the world-class engine manufacturer with an advanced diesel replacement that drives significant greenhouse gases as well as ground-level emission reductions."

When the new biogas plant reaches its full capacity in 2013, the local bus company will have enough biogas for at least 200 buses," according to the Council.

"The new plant will produce biogas using a method known as thermal hydrolysis, whereby raw materials such as waste or sewage sludge are boiled under both high temperatures and pressure. Cambi has worked out a hydrolysis process that yields substantially more biogas compared to conventional facilities.

"So far, the company has designed and delivered 28 plants for converting biodegradable material into renewable energy. Their plants are processing waste and sludge from a total of 23 million people in the U.S., Australia, Chile, Japan, Dubai and many European countries," according to the Council.

ELECTRIC POWER

Eagle Valley Clean Energy to Build Colorado Biomass Power Plant

Eagle Valley Clean Energy LLC plans to build a biomass power plant in Gypsum, Colo., according to the *Eagle Valley Enterprise*. The plant will be built on 16 acres and is expected to be operational by the end of 2013.

If constructed, the facility would be Colorado's first commercial-grade biomass power plant.

Huaneng Power 2011 Profits Drop 64.7%

China-based Huaneng Power International on March 20 announced that its 2011 net income fell 64.7% year-over-year, to RMB1.18 billion (US\$187 million).

Operating revenues in 2011, however, rose 27.9% year-over-year, to US\$21.1 billion, according to the company.

"In 2011, the company attained new progress on many aspects including power generation, energy saving and environmental protection, project development and overseas operation," according to Huaneng. However, the company cited "unfavorable conditions from sustained increases in fuel prices and Renminbi lending rates" in China for the 2011 profit decline.

As for its overseas operations, "the operating results of Tuas Power in Singapore in 2011 improved significantly, thus making important contributions to the overall profit of the company," according to Huaneng.

"In 2011, total power generated by the company's operating power plants in China amounted to 313.554 billion kilowatt-hours, representing an increase of 22.03% over 2010.

Huaneng Power is one of China's largest listed power producers with controlled generation capacity of 60.37 gigawatts and equity-based generation capacity of 55.35 gigawatts.

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TRANSPORTATION & LOGISTICS

U.S. DOE Offers US\$10-Million Grants for Electric-Powered Cargo Transport Vehicles

The U.S. Department of Energy (DOE) on March 20 announced it will make available 50% cost-share grants of up to US\$10 million to “demonstrate and deploy electric transportation technologies for cargo vehicles, such as trucks and forklifts.”

“Electrifying cargo transportation vehicles and infrastructure will slash petroleum use, carbon emissions, and air

pollution at transportation hubs, such as ports,” according to the DOE.

Applicants for grants, open to local governments and private companies, would “demonstrate cost-effective zero emission cargo transport systems and collect detailed performance and cost data to analyze the benefits and viability of this approach to freight transportation,” according to the DOE.

Frito-Lay Launches EV Pilot Test

California-based Electric Vehicles International (EVI) on March 20 announced the launch of an electric-vehicle pilot test with Frito-Lay North America, the U.S.’s seventh-largest privately owned commercial fleet.

“EVI’s signature all-electric powertrain is seamlessly integrated into an industry standard Daimler Freightliner ‘M2’ business-class chassis providing customers with significant fuel and maintenance savings,” according to EVI.

“The EVI-MD is the most versatile and flexible class 6 electric vehicle on the market, boasting a 90-mile range, top speed of 65 miles per hour and a 99 kilowatt-hours, lithium phosphate battery system from Valence Technology.”

After completing a test of the all-electric EVI Medium-Duty (EVI-MD) on a delivery route in Alameda, California, Frito-Lay has “committed to purchase five additional EVI-MD vehicles to be used in northern California,” according to EVI.

“Frito-Lay and its parent PepsiCo are regularly evaluating innovative and industry leading approaches and tech-

nologies to improve the performance of the fleet, while also trying to minimize the environmental impact,” said Mike O’Connell, senior director of fleets at Frito-Lay North America. “The EVI electric vehicles give Frito-Lay another promising option to help meet our long term goal of being the greenest fleet in North America.”

Asked about cost and return-on-investment with electric trucks, EVI spokesperson Nicole Allen told Hart Energy that an electric truck costs about twice as much as a comparable diesel or gasoline-powered truck.

“You do save significantly on fuel and maintenance” with an electric truck, but the actual payback will vary with the type of fleet operation, she added.

Government subsidies or tax credits will help. In the case of Frito-Lay, the fleet received financial support from the California Air Resources Board and the San Joaquin Valley Air Pollution Control District, she said.

