BEHIND
THE NUMBERS
Quality of Earnings Analysis

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LyondellBasell Industries NV (LYB)

We primarily look for accounting issues that may be problematic. We do come across companies where the accounting looks clean, there is good growth potential via selling more volumes, there are barriers to entry, shareholders are receiving growing dividends, and the businesses are self-funding with sizeable cash flow. The market is often caught up with minor issues such as next week's pricing levels and often mislabeling the company as a cyclical. We plan to write a series of short Thursday Thoughts summaries on these companies that we believe offer real volume growth potential with large cash flow to investors. We would urge readers to review our past work on these companies for more information.

Summary

At $107, LYB is paying a 4.2% dividend yield that grew 8% last year. The company routinely buys back its stock. It began repurchasing shares in 2013 and has retired 44.9% of shares outstanding since that time. More importantly, it is not overpaying for shares. Most purchases occur at prices of $80-$100 with the company only paying about 6-7x EBITDA and 6-9x EPS.

- Today, Free Cash Flow Yield net of sustaining capital spending is 23% on its market cap for 1Q22. With net debt at only 1.05x EBITDA, it does not see the need to deleverage more. That should mean more cash flow returned to shareholders.
- Share repurchases lead to dividend growth per share, with total outlay remaining almost flat while cash flow rises. The dividend coverage is improving.
- Current Valuation at $107 is 4.9x EBITDA of $9.1 billion and 5.6x EPS of $19.01

Accounting Issues Are Minor in Our View

There are only two issues that both impact inventory. The first also impacts earnings. LYB is dealing with several petrochemicals in its inventory and it marks them every quarter to the Lower of Cost or Market. When costs are rising, this is seldom much of an issue. However, when they are falling, they lower GAAP earnings and that in turn lowers reported EBITDA. LYB will report earnings and EBITDA with and without the LCM adjustment. In some years, it will result in a charge one quarter that will reverse out in future quarters. In 2016, 1Q saw a $68 million LCM

charge and in 2Q it reversed. Overall, these have been very minor adjustments, except when oil fell in 2014:

- In 2014, the LCM was $760 million and 2015, $548 million
- Since then, it was zero in 2017, 2018, and 2021 with only $29 million in 2016, $33 million in 2019, and $16 million in 2020.
- There is some incremental inflation in oil and gas from the Russian/Ukraine situation, which if resolved could see prices decline $10-$20 a barrel. That would likely lead to an LCM markdown in a future quarter.

The bigger issue is inventory looks too low and it could consume some cash flow to rebuild it. Historically, LYB has carried about 55 days of inventory. Demand has been so strong since late 2021 that LYB has seen inventories drawn down:

	1Q22	4Q21	3Q21	2Q21	1Q21
DSIs	40.8	40.9	45.0	50.9	55.1

Inventory in dollar terms is up to $5.0 billion from about $4.5 billion pre-Covid, so inflation is already evident. Adding 5 days of inventory would consume about $600 million in cash at this point. LYB could probably get by with $600 million - $1 billion in higher cash outlay and the rate of inflation in petroleum slowing would curb some of this cost. But, that is still a material figure and it would be cash.

Free Cash Flow – Growth Investments and Shareholders

While the focus of many conference calls is on “what is the price of ethane vs. the price of propylene” as it certainly does change all the time. However, we think the focus should be on what is the long trend of LYB regardless of these price/cost moves in relation to its cash generation?

Covid in 2020 certainly led to prices for commodities that make up plastic declining and certainly less demand for fuel and LYB does sell chemicals that are added to transportation fuel. Yet, LYB has always been out-earning its cash needs of maintenance capital spending and its dividend – even during Covid. Plus, it has been able to fund a strong growth investment program too and retire more shares:

Free Cash Flow	TTM 3/22	2021	2020	2019	2018	2017
Cash from Opers	$8,626	$7,695	$3,404	$4,961	$5,471	$5,206
Maint. Cap Ex	$865	$758	$793	$1,024	$1,052	$1,019
Free Cash Flow	$7,761	$6,937	$2,611	$3,937	$4,419	$4,187
Growth Cap Ex	$1,200	$1,201	$1,154	$1,670	$1,053	$528
Acquisitions	$106	$106	$2,440	$0	$1,776	$0
Dividends	$1,505	$1,486	$1,405	$1,462	$1,554	$1,415
Share Repurchases	$680	$463	$4	$3,752	$1,854	$866
Cash Left	$4,270	$3,681	-$2,392	-$2,947	-$1,818	$1,378
Change in Debt	-$3,594	-$3,925	$3,498	$3,031	$416	-$503
Working Cap on CFO	-$356	-$960	$311	-$13	$93	-$593

A few things to highlight here:

- Acquisitions are adding more production at plants already operating – there are no delays in adding new supply to the market. Integrating those deals also has generally led to improvements in removing bottlenecks in supply and production and improved cash flow too.

- The growth capital spending has led to LYB adding more capacity and several plants have turned on in recent years with more in 2023 coming

- The company defined its mid-cycle EBITDA as $7 billion per year in 2017 (not a banner year but not Covid either and without LCM described in the accounting section). All this steady growth investment has the company's mid-cycle EBITDA over $8 billion now and should be about $8.5 billion in 2023.

- Using the mid-cycle EBITDA as a base figure – LYB is still trading for only 5.25x that EBITDA figure and debt is 1.12x it. And, it is unlikely to stop growing in 2023. If it did, it would repurchase even more shares and still create EPS growth.

- Notice also that even though the dividend per share is rising, the dividend outlay is almost flat due to the share repurchases. It has much more room to grow.

- Often debt rises to make a large deal or a large share repurchase and then is paid down after that.

- Looking at working capital changes over time, LYB has seen working capital hurt cash from operations due to inflation in 2017 and 2021 and produce cash flow in 2020. Those

changes are included in the first line of the table – Cash from Operations. As noted earlier, unit inventory levels may still require more cash investment in the near term.

LYB Is Not a Cyclical to the Degree Many Think – Long Term Demand and a Lower Cost Edge Are in Place

- Plastics are used in making and packaging products for food, hygiene, healthcare, and consumer items.

- Demand growth did not dip for plastics in the recessions of 1990-91 or 2001, dipped slightly for 2009, and took off again quickly in 2010. It never dropped during Covid.

- Large populations in SE Asia, NE Asia, and India still have a per-capita plastic consumption about 1/3rd less than Europe and a greater discount to North America.

- Asia is the marginal producer – The US is the lowest cost producer via cheap natural gas liquids and natural gas which powers the chemical plants. High profitability is seen when operating rates are above 90% for chemical plants. That gives pricing power.

- In drilling natural gas or oil in the US, many wells produce multiple NGLs (Natural Gas Liquids – ethane, propane, butane), which are byproducts and can be refined into feedstocks for plastic chemicals like ethylene and propylene. In much of the world, these feedstocks come from refined oil products called naphtha. High oil prices lead to more oil drilling and more NGL production and less cost increase in NGLs while the cost for naphtha rises more with oil.

- Since US shale drilling, the old relationship of oil trading for 6.0-6.2x US gas (based on equivalent energy content) has blown up and US gas now trades on its own supply and demand. That ratio has been as high as 40:1 and is often in the teens vs 6:1. Right now it is about 15:1. While there are several products/chemicals in this relationship – LYB and other US chemical plants are the lowest cost plants when the relationship between oil to gas is 8:1 or higher. That is the case if oil is $110 and gas is $6 (18:1), or if oil is $40 and gas is $3 (13:1). The higher-cost plants elsewhere in the world are still much more cyclical and are forced to cut back on production if demand growth slows.

- All chemical plants still require regular maintenance and are offline while some of this is being done. In some years, 10%-15% of plants may be offline for several months during maintenance and LYB has years where it has more maintenance projects than others too. That reduces total capacity for chemical plants below the listed amount of all plants.

- Rising demand is driving the need for more chemical plants. However, many of the same issues impacting the world on steel, computer chips, and other supply chain issues are slowing construction. Also, permitting and government issues also delay projects and construction takes longer than planned.

- Plus, the supply chain issues and remaining lockdown threats are still making some demand hard to fill – sectors in autos, aerospace, machinery, and infrastructure are all scrambling for supplies and all use plastic. We would argue that there remains considerable pent-up demand after Covid that still needs to be filled.

Explanation of EQ Rating Scale

6- (Exceptionally Strong)- Indicates uncommonly conservative accounting policies to the point that revenue and earnings are essentially understated relative to the company's peers. Higher possibility of reporting positive earnings surprises

5 (Strong)- Indicates the company has no areas of concern with its reported results and we see very little risk of the company disappointing due to recent results being overstated from aggressive reporting in recent periods.

4 (Acceptable)- Indicates the company may have exhibited a minor "red flag", but the severity of the issue is not yet a concern. Minimal risk of an earnings disappointment resulting from previous earnings or cash flow overstatement

3 (Minor Concern)- Indicates the company has exhibited either a larger number of or more serious warning signs than companies receiving a 4. The likelihood of an immediate earnings or cash flow disappointment is not considered to be high, but the signs mentioned deserve a higher degree of attention in the future.

2 (Weak) Indicates the company's recently reported results have benefitted materially from aggressive accounting. Follow up work should be performed to determine the nature and extent of the problem. There is a possibility that upcoming results could disappoint as the impact of unsustainable benefits disappears.

1 (Strong Concern)- Indicates that the company's recent results are significantly overstated and that we view a disappointment in upcoming quarters is highly likely

In addition to the numerical rating, the EQ Review Rating also include either a minus or plus sign. A minus sign indicates that our analysis shows the overall earnings quality of the company has worsened since the last review and there is a possibility the numerical rating will fall should the problem continue into upcoming quarters. Likewise, a positive sign indicates that the overall earnings quality is improving, and the company may see an upgrade in its numerical rating should the trend continue.

Key Points to Understand About the EQ Score

The EQ Review Rating is much more than a blind, quantitative scoring method. While we utilize proprietary adjustments, ratios, and methods developed over decades of earnings quality analysis, the foundation of all of our analysis is reading recent SEC filings, press releases, conference call transcripts and in some cases, conversations with managements.

The EQ Review Rating is not comparable to a traditional buy/sell rating. The Rating is intended to specifically convey the extent to which reported earnings may be over/understated. Fundamental factors such as forecasts for future growth, increasing competition, and valuation are not reflected in the rating. Therefore, a high score does not in itself indicate a company is a buy but rather indicates that recent results are a good indication of the underlying earnings and cash generation capacity of the company. A low score (1-2) will likely result in us performing a more thorough review of fundamental factors to determine if the company warrants a full-blown sell recommendation.

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