Event ID: 139716427470 Event Name: Half Year 2020 Johnson Matthey PLC Earnings Presentation Event Date: 2019-11-21T09:30:00 UTC C: Anna Manz; Johnson Matthey Plc; CFO & Executive Director C: Jane E. Toogood; Johnson Matthey Plc; Sector Chief Executive of Efficient Natural Resources C: Joan A. Braca; Johnson Matthey Plc; Sector Chief Executive of Clean Air C: John F. Walker; Johnson Matthey Plc; Sector Chief Executive of Clean Air & Executive Director C: Robert J. MacLeod; Johnson Matthey Plc; CEO & Executive Director C: Unidentified Company Representative;; P: Andrew Gregory Stott; UBS Investment Bank, Research Division; MD and Research Analyst P: Charles Bentley; Crédit Suisse AG, Research Division; Research Analyst P: Charles L. Webb; Morgan Stanley, Research Division; Equity Analyst P: Chetan Udeshi; JP Morgan Chase & Co, Research Division; Research Analyst P: Jean-Baptiste Henri Rolland; BofA Merrill Lynch, Research Division; Associate P: Neil Christopher Tyler; Redburn (Europe) Limited, Research Division; Research Analyst P: Sanjay Jha; Panmure Gordon (UK) Limited, Research Division; Capital Goods Analyst P: Sebastian Christian Bray; Joh. Berenberg, Gossler & Co. KG, Research Division; Analyst P: Thomas P Wrigglesworth; Citigroup Inc, Research Division; Director and Chemicals and Basic Materials Analyst +++ presentation

Unidentified Company Representative[^] Documented half year results presentation this morning. We're going to have the usual format, so it will consist of a presentation from our Chief Executive, Robert MacLeod; followed by our Chief Financial Officer, Anna Manz; and then plenty of time for Q&A.

Just in advance of the presentation, can I ask that you turn off mobile devices? The presentation is webcast this morning.

And with that, I will hand over to Robert.

Robert J. MacLeod[^] Thank you, Martin, and good morning, everybody, and welcome to our first half results presentation.

At our recent Capital Markets Day, we provided an update on our strategy and long-term growth opportunities. This growth is underpinned by use of our world-class science to address challenges posed by key global mega trends. And in doing so, we will help to make the world cleaner and healthier.

In the first half, we continued to execute our strategy, and I was pleased that we delivered operating performance in line with expectations, despite facing a number of challenges. In the half, underlying operating profit was down 5%, impacted by some one-off costs in Clean Air. Our return on invested capital declined to 15%, driven primarily by higher precious metal prices, and therefore, working capital.

Looking forward, we expect a stronger second half, principally as a result of the absence of one-off costs and further progress in efficient natural resources. This means that for the full year, we expect to deliver operating performance in line with market expectations. And given our confidence in the group's future prospects, the Board approved a 5% increase in the interim dividend.

Now let me hand over to Anna to talk you through the financials.

Anna Manz[^] Thanks, Robert. Good morning, everyone. Overall, for the half, performance was in line with our expectations and we continue to execute on the strategy that we laid out at our Capital Markets Day.

Looking at sales, we saw good growth across the majority of our sectors, largely driven by Clean Air, and I'll go into each sector in more detail shortly. Overall, underlying operating profit was slightly down with a mixed performance across the sectors driven by some one-off costs in the first half.

In Clean Air, we incurred around GBP 15 million of additional expense because of one-off costs related to inefficiencies within our manufacturing footprint. And in New Markets, as we developed our technology faster than we anticipated, we took the decision to move directly to our first eLNO commercial plant and recognised an impairment in relation to our demo plant.

In Clean Air, we saw sales growth of 4%, driven by European Light Duty business. In gasoline, growth was significantly ahead of the market, driven by new platforms in production and regulation driving increased fitment of gasoline particulate filters. And in Light Duty Diesel, we benefited from the annualisation of share gains as we maintained our strong market share of 65%. We're also beginning to see increasing numbers of gasoline particulate filters coming through in Light Duty Asia business, driven by the China 6 legislation.

In Heavy Duty Diesel, whilst we saw good performance in Americas due to the strength in the Class 8 truck cycle, it was more than offset by a weaker performance in Asia and Europe due to phasing. The Class 8 truck cycle peaked towards the end of the half and has now rolled over.

Operating profit declined impacted by one-off costs. The new business we won during the prior year and the performance of certain platforms has put pressure on our capacity. This resulted in some one-off expenses which included expedited freight costs and inefficiencies as we worked to absorb the volume. We've now rebalanced this new business across our existing plants to relieve the pressure. And with our new plant in Poland coming onstream, they won't repeat in the second half. The absence of these costs and growth in gasoline particulate filters, both in Asia and in Europe, will more than offset a weaker Class 8 truck market supporting our outlook for the second half. For the full year, we expect operating performance to be below the prior year.

In Efficient Natural Resources, sales grew 4% driven by growth in PGM Services and licensing. Catalyst Technologies was broadly flat. We saw good growth in our licensing business as we began to recognise the revenue from our recent plant wins, including the mono ethylene glycol license we won last year. We had 3 new license wins in the half with income from these recognized over the period that we built the plant. This was partly offset by lower sales of copper zeolites to Clean Air.

PGM Services grew double digit, driven by our refinery and trading business due to higher and more volatile average PGM prices. We saw a significant increase in PGM prices over the period, particularly palladium and rhodium, delivering a benefit of GBP 14 million.

Operating profit increased 6% and margin improved due to higher metal prices and benefits from restructuring, partly offset by lapping a oneoff GBP 5 million efficiency gain in the prior year. In 19/20, we expect sales growth and operating profit growth to be second half weighted in Catalyst Technologies. This is reflecting normal seasonality and the timing of orders and efficiency gains in PGMS weighted to the second half. If we continue to see sustained high metal prices, we will again benefit from this in the second half.

In Health, sales declined 9%. In Generics, sales of controlled active pharmaceutical ingredients were flat, with growth in specialty opiates offset by lower sales of ADHD ingredients as they move through their natural life cycle. Sales of noncontrolled APIs declined reflecting continual lowered sales of dofetilide, as new competitors for our customer entered the market.

Our Innovator business performed well with sales up 11%. We had increasing sales from several APIs, where our customers are moving into late-stage testing ahead of commercialization.

Operating profit grew double digit, up 21%, and margin increased 4.1 percentage points, principally driven by the net benefits from our recent footprint optimisation.

Since our Capital Markets Day, we've seen some short-term uncertainty as a result of developments in the opioid addiction therapy space impacting the full year. This has resulted in lower demand in the short-term for a single active pharmaceutical ingredient. As a consequence, we expect operating performance in the second half to be broadly in line with the first half. Robert will cover this in more detail later on. And although we will see some effect in the shorter term, longer term, we see little impact and the value of our product pipeline is unaffected.

In New Markets, we saw sales growth of 5%, driven by the alternative powertrain which includes battery systems, fuel cells as well as LFP and eLNO cathode materials. Alternative powertrain sales were driven by strong growth in fuel cells where sales grew 62% in the half, and demand for non-automotive battery systems such as e-bikes. In the year, operating profit declined largely driven by the GBP 8 million impairment of the demo plant that I mentioned earlier. Looking forward to the full year, we expect new markets to deliver both sales and operating profit growth.

Now let me take you further down the P&L, starting with finance charges. Finance charges were significantly up in the period because of higher precious metal funding costs associated with the higher levels of working capital which I'll describe shortly. If we see sustained higher metal prices, finance charges will remain elevated. Our underlying tax charge increased as we recognised a specific tax provision of GBP 12 million, which relates to prior years. Excluding this tax provision, the full year tax rate remains unchanged at 16%. Underlying earnings per share was down 12%.

Now to my 3 focus areas, starting with efficiencies. Within the half, we recognized a further GBP 21 million of efficiency savings, taking cumulative savings to-date to GBP 88 million. In procurement, we're targeting annualised benefits of GBP 100 million phased over 5 years to 22/23. Here, we achieved a GBP 15 million benefit in the half, of which GBP 13 million benefited the income statement. We've also delivered the final savings from our restructuring and Riverside closure programs with around GBP 45 million of annualised savings in total. As always, we'll continue to identify opportunities to run our business more efficiently, enabling us to reinvest and strengthen our platform for future growth.

Free cash flow was an outflow of GBP 382 million, primarily driven by net working capital outflow of GBP 467 million, the bulk of which relates to precious metal working capital. I'm focused on disciplined management of working capital and over the next 2 slides I'll talk you through it. Also, we're seeing higher levels of strategic CapEx as we invest for future growth.

Starting with precious metal working capital, which has increased by GBP 352 million since the full year, there's 2 big drivers here: our business and the choices that we are making; and the impact of increasing metal prices on our business. Looking firstly at our business choices, we have higher working capital to support business growth and we've intentionally built levels of stock across the business. For example, to support the rollout of our global ERP system and as we prepare for the U.K.'s exit from the European Union. We continue to work hard and are reducing our refinery backlogs and have taken out just over 100 million of metal in the half. We're on track to return to more normalized levels by 2020/2021. And based on today's prices, we would take out an additional GBP 250 million. Looking forward, we are taking further action to improve the efficiency of our refineries, investing GBP 100 million over the next 3 years. Once complete, this investment will remove at least another GBP 100 million of precious metal working capital.

Secondly, the impact of higher precious metal prices on our business. This is not something which is under our control. Here, we see a direct impact and we also see an indirect impact as our customers act to take advantage of higher prices and remove metal, which normally benefits our working capital. Overall, when I look at the challenges with precious metal working capital, we've been here before and we know how to deal with it. It will normalize as price stabilizes.

We've continued to focus on non-precious metal working capital and running the business as efficiently as possible every day. We measure success as maintaining non-precious metal working capital between 50 and 60 days throughout the year and not just at points in the cycle. In the half, we were pleased that our average working capital days was stable at 61 despite some of the specific factors I've mentioned. And we will continue to drive an underlying improvement.

Let me remind you of those opportunities that are driving growth and why we're seeing elevated levels of CapEx. In the half, CapEx was GBP 184 million. And in the full year, we maintain our CapEx guidance of being up to GBP 500 million. In Clean Air, we're investing in 3 plants to support growth and increase efficiency. All 3 will come on stream in 2020. And inclusive of this year, investing a further GBP 200 million. We've won platforms to fill this capacity, and once fully ramped up, returns will be at a similar level as the rest of Clean Air.

In Efficient Natural Resources, as I've mentioned, we're upgrading the safety, efficiency and resilience of our PGM refineries for a total of GBP 100 million. This will improve our working capital and will be returns neutral.

In Battery Materials, we're investing to get ourselves to the point of commercialisation. This initial investment won't meet our returns criteria. However, at scale, this business should have a 20% return. We only invest in strategic projects if they meet our disciplined investment criteria.

On to the balance sheet. Our net debt-to-EBITDA target range is 1.5x to 2x which allows us to continue to invest through the precious metal cycle. We're currently at the upper end of this range.

For the half, our annualized return on invested capital was 15% compared with 16.7% last year, impacted by capital expenditure and the movement in precious metal working capital. Every GBP 100 million of excess precious metal working capital impacts our return on invested capital by roughly 0.5 percentage point. The action that we're taking to reduce backlogs and improve refinery efficiency will significantly reduce our sensitivity to metal price movements as we'll see the benefits in the P&L but the working capital impact is reduced.

The path to achieve our target of 20% return on invested capital over the medium term is unchanged from what I described at our Capital Markets Day. We expect to deliver full year group operating performance in line with current market expectations, and let me explain to you why I'm so confident in the second half. The one-off costs we saw in Clean Air due to capacity constraints and in new markets due to the impairment are contained in the first half and will not repeat, nor will the pension credit. This give us a net benefit of around GBP 13 million. Seasonality in Catalyst Technologies and efficiency gains in PGMS are further

supporting an acceleration in the second half. And in Clean Air, the impact of the Class 8 truck cycle in the second half is more than offset by growth across Europe and Asia. Average working capital days, excluding precious metal, will be within our range of 50 to 60 days at the yearend. And as I mentioned, we continue to expect CapEx to be up to GBP 500 million as we invest in a number of strategic projects.

I'll now you hand you back to Robert, who'll take you through our strategic progress.

Robert J. MacLeod[^] Thank you, Anna. You've seen our performance in the first half, so now let me touch on how we're progressing with our strategy for sustained growth and value creation. And I'll start with a reminder of the key takeaways from our recent Capital Markets Day.

Our strategy is about applying our science to areas of the market in which we have a competitive advantage and can create value for our customers. In using our science, we're attacking the world's most challenging and ever-changing problems, and this is creating a huge amount of opportunity for us in the long term across all of our sectors, as I'll talk to over the next few slides. This will deliver in Clean Air sustained growth for the next decade, driven by legislation. In Efficient Natural Resources, we're working on a number of exciting growth opportunities, and this gave us the confidence to recently upgrade our medium-term guidance. In Health and Battery Materials, we are focused on delivering breakout growth. And our strategy is also underpinned by the strong foundations that we've put in place to drive efficiency as well as the ongoing investment in the business. And of course, we're absolutely committed to using our science and technology to deliver a cleaner, healthier world.

As we move through different phases of our strategy, I am building the management team with the right mix of skills, experience and diversity to deliver on our ambitions, and I'm delighted to formally introduce and welcome 3 new members of our senior team: Joan Braca; and Christian Gunther, who you may have met back in September, have now joined as Chief Executives of Clean Air and Battery Materials, respectively. And Maurits von Tol is our new Chief Technology Officer, who's previously been at Borealis and DSM. Joan, Christian and Maurits bring a wealth of experience to Johnson Matthey and are all in the audience today, so please do take the opportunity to speak to them.

In Clean Air, we see sustained growth for the next decade through timing emissions legislation globally. Our global leadership in technology is helping our customers meet these new legislations. And having delivered very strong growth in Europe in recent years, the next leg of growth will come from Asia.

To remind you of our key outcomes to 2025, our Asian business will more than double. Our European business will maintain its size despite the anticipated decline in diesel cars. Americas will continue to be driven by GDP growth. And of course, we are focused on driving efficiency to maintain margins and our strong return on capital. As Anna talked about earlier, we've seen some short-term capacity challenges, but these are now behind us. I'm therefore confident that we will deliver better performance in the second half.

Looking to the longer term, in Asia, we're seeing new legislation in China and India which will drive significant value uplifts for us. The bigger value driver comes from heavy duty, where we will see a tripling of value with the implementation of China VI and Bharat VI in India. And in light duty, we've seen some fitment of gasoline particulate filters, ahead of the new China 6 legislation, and fitment will accelerate as we reach the second phase of this legislation in July 2023. The use of gasoline particulate filters drives a doubling of value to us.

In Europe light duty, we retained our 65% share of the diesel market. And in gasoline, we have recently won a couple of new platforms to satisfy the latest Euro 6D legislation, and I'm pleased to see early returns from the reallocation of R&D to gasoline that we started a year or so ago.

Looking now at Americas, having seen very strong growth in heavy duty over the last couple of years, we're now through the peak of the U.S. Class 8 truck cycle. And I'm pleased that we managed to navigate this without adding any new capacity. Production peaks at around 320,000 Class 8 trucks per year. And if we look at history, the average trough sees production fall to around 220,000 trucks per year, i.e., a decline from top to bottom of around 30%. Of course, we don't know how this current cycle will evolve, but we're used to managing through the peaks and troughs and we'll continue to do so. And do bear in mind, of course, that around 75% of our costs in Clean Air are variable, so we have the ability to flex things relatively easily.

Finally, to support our growth over the next decade, we're building a global efficient manufacturing footprint. Not only are we driving efficiencies on our existing assets, but as John spoke to you about very passionately at the Capital Markets Day a couple of months ago, we are building 3 new world-class manufacturing assets. These plants are essential to delivering the growth we have outlined, and they will also enable us to drive further efficiencies in the longer term. So for Clean Air overall to 2025, we're well and truly on track to deliver mid-single-digit growth in operating performance.

In Efficient Natural Resources, we've made significant progress in delivering on our refreshed strategy. We are now operating more efficiently, creating value from our core business and, at the same time, investing in new technology to drive further growth. I'm excited about the opportunities within this sector. And as previously announced, we now expect mid- to high single-digit growth in operating performance to 2025. We will deliver this through our continued focus on higher growth segments and continue to evolve our existing strengths.

In addition, to support our long-term growth, we're investing in new technologies and have also identified a number of efficiency initiatives. In the first half, our key catalyst markets, which, as you know, are primarily associated with our leading Syngas Catalyst Technologies, grew in line with expectations and we have maintained our leadership

positions. Beyond these, we saw very strong growth in formaldehyde, particularly in China, where the market is in a period of transition as smaller plants based on silver technology are being shut down and replaced with much more efficient larger plants using an oxide process. We developed this oxide process and have a leading position.

We brought a new formaldehyde range to the market, which gives better efficiency using unique turbocharger technology in combination with a catalyst that is easier to recycle. This is an area where our process engineering complements our catalyst production capabilities and we can bring these together for our customers under one roof.

In licensing, our existing business continues to offer growth. We won 3 new licenses in the period, 1 of which was an oxo alcohol license, which is the first one in a number of years, and these are some of our larger revenue opportunities.

Looking longer term, new technologies will be crucial to our future success, and we're continuing to advance other technologies. For example, battery materials recycling, where Mark Bedford, who some of you will know from PGM Services, is now leading our efforts to develop a business. And as a market leader in hydrogen catalysis, we have developed processes to produce hydrogen from natural gas in the most efficient way. Hydrogen has the potential to be an essential energy vector if the world is to meet its CO2 targets, and we are well placed.

As well as our investments in technology, we are also focused on developing our operations. And we have 2 new plant expansions which are due to start up over the next 12 months, an increase in the capacity of our additives plant in the U.S. and the ramp-up of our PGM catalyst plant in Germany, which will allow us to further participate in the petrochemicals market.

Also, obviously, our operating results from the PGM services business have benefited from higher PGM prices in the first half. But looking further out, you've already heard from Anna about how we're investing in the business to enhance the robustness and efficiency of those plants. This investment is long overdue and will position us very well in the future.

So overall, there's lots of activity in this business, all of which will support our future growth ambitions.

Moving on now to Health. In Health, we are making progress on operational improvements, and in the first half, we began to see evidence of this as we delivered a double-digit operating profit growth. Overall, in the medium term, we will benefit from the commercialisation of our new pipeline of generic and innovator products. And the changes we made to improve our manufacturing footprint and increase our efficiency will enable us to deliver the breakout growth we've outlined.

Our 3 main outcomes to 2025 are to enhance the performance of our base business, deliver growth from our new product pipeline and build capabilities to better support our customers. But looking more near term, since our Capital Markets Day, the further political and regulatory focus on opioid addiction, largely in the U.S., has created uncertainty in the market for opioid addiction therapies. In the U.S., we are not a supplier of opiate products. But instead, we use our science to develop and manufacture complex APIs that are used in the treatment of opioid addiction, with one of the main end products being Suboxone. This market is an attractive and growing one in which we have a strong presence. There is, though, now uncertainty about how the market will develop following Teva's recent proposal for a settlement framework in the U.S., which will be made with free issue opioid addiction medication. And it is this uncertainty that has meant that our customers have lowered their expectations for the second half. As a result, this short-term hiatus will impact our second half, but we're well placed for the long term.

Importantly, our new product pipeline of both generic and innovator products is unaffected. We remain focused on delivering the value from this pipeline which now includes 75 molecules across the generic and innovator portfolio and you'll find the usual slide in the appendix with all the detail. Overall, 3 molecules have launched so far, 10 generic products are awaiting regulatory approval, and we have 4 products in the late stage of regulatory approval with Innovator customers. In fact, it's with our Innovator customers that we have chosen to accelerate new opportunities as we see significant potential here including with Immunomedics for a new immunotherapy-targeted triple-negative breast cancer.

Overall, we're making progress notwithstanding the short-term uncertainty in the opioid addiction therapy market. And I remain confident that we will drive breakout growth in the medium term.

In Battery Materials, we're now well and truly in the commercialisation phase of this business. We've maintained our technology leadership and continue to enhance our portfolio of leading ultra-high energy density cathode materials, which we call eLNO. As the battery electric vehicle industry evolves, OEMs are demanding the best cathode materials to satisfy a range of customer demands. And to meet those demands, it's going to require greater customisation of the battery materials for each customer. Our ability to customise is and will remain key to delivering value from our technology. And to support our customisation efforts, we're now fitting out our second U.K. application center.

As we progress towards customisation, we continue to receive positive feedback from our customers, both OEMs and cell manufacturers, and recently progressed to full cell testing with 2 customers. This essentially means these customers have selected eLNO as one of only a few potential suppliers, and we're putting in more investment to further develop, formulate and test it. This was a really important milestone for us and further evidence around the progress we're making, which gives us the confidence to continue to invest in assets for commercialisation.

The development of our first commercial plant, which will be in Poland, is on track and we expect to break ground in the near future. Importantly, the site gives us the potential to expand our eLNO manufacturing capacity to up to 100,000 tonnes per annum. And as we

talked about previously, further expansion will be phased in line with market demand.

So to conclude, we delivered a first half in line with expectations. We continue to execute well against our strategy, particularly in light of the current market environment, and we are confident about our future growth prospects across all of our sectors. Our ability to deliver as planned is underpinned by the changes we made to the business in recent years and has been a huge focus on making sure we put the right foundations in place to position us for future success. And as we drive towards our vision to create a cleaner, healthier world, we remain confident in delivering mid- to high single-digit growth in earnings per share over the medium term.

And that concludes our presentation, so thank you for listening this morning. And with that, we'll pause and take your questions.

+++ q-and-a

Robert J. MacLeod[^] I'm sorry, I'm just having a drink. Should we go first?

Sebastian Christian Bray[^] Sebastian Bray of Berenberg Bank. I would have 2 questions, please. The first is that Johnson Matthey, it is not alone in this amongst the auto catalyst suppliers, have seen very good growth in Asian light duty in excess of end markets in 2019. And I was wondering, we had a similar discussion around European emissions legislation, but how much of the opportunity is being consumed by front running? And how much of -- how would you expect the Asian sales to ramp between, let's say, 2020 and 2022 and 2022 onwards? That's my first question.

And the second one is a simple one. The eLNO facility will be finished in 2022. Why is there a 1-year gap between starting up the plant and potentially being on platform?

Robert J. MacLeod[^] Okay. I'll start with the first one, then, John, maybe you want to answer the second one on Clean Air and Asia. So eLNO, so yes, the plant will be ready in 2022, but then it's a part of the validation process which is very similar to the Clean Air validation process. You have to actually run the asset and produce the, in this case, the cathode materials from the actual manufacturing plant that you're going to be manufacturing it from. And that puts in that delay before you can then be actually on the full platform and running at commercial quantities. But it's part of the sort of the stages of the validation process, and it's a very normal thing. We're very used to it within Clean Air. But obviously, for us, with our first platform in Battery Materials, that's why we have that bit of a delay.

John, do you want to answer? Is the mic on?

John F. Walker[^] So I think you've heard me talk about the ramp-up of legislation before. The Asian legislation is coming in, in 2 tranches. So it typically takes up to 1.5 years or so to fully ramp up the volumes. So

the beginning of the Asian ramp is starting now for the first part of the legislation. Small right now but that will continue to grow and that will continue as the new legislation comes in, China 6b in 2023. So we've got another 1.5 years to be able to ramp that up. So actually, this growth will continue over quite a long period of time for the Asian legislation. And to comment on Europe, you're kind of seeing the same thing. We have lots of new gasoline products that are starting to come in, and these are the higher-value gasoline products.

Robert J. MacLeod[^] Okay. So next, Andrew. There's a microphone over there.

Andrew Gregory Stott^ Andrew Stott, UBS. Two questions, just a clarification, really. Anna, on the GBP 350 million of unwind on working cap, did you say over a 12-month period if spot prices for metals stayed the same or was it slightly longer? I didn't quite catch that. Diesel, you're still making progress year-on-year in the first half. What's your thinking for the second half and beyond? Is all of that market share now behind us or have we got more to come?

Robert J. MacLeod^ Anna, do you want to go first?

Anna Manz[^] Yes. So that GBP 350 million is split into 2 parts: a GBP 250 million backlog reduction, which will occur through the second half of this year and through next year, so 18 months. The further GBP 100 million comes at the point that we finish the investment in our refineries, and that will be 2023.

Robert J. MacLeod[^] Okay. And diesel, yes, we're essentially -- we now have essentially our 65% market share and that we expect to maintain for several years to come now. So we're now at that level, and we'll just hold that for as long as we possibly can. And obviously, the team are focused on maintaining that for as long as they possibly can, as I say.

Okay, thanks. Sorry, another microphone in the middle.

Thomas P Wrigglesworth[^] Tom Wrigglesworth at Citi. Two questions, if I may. Firstly, I think it was yesterday you announced that you had acquired some anode technology. Can you talk a little bit about the strategy there and how that fits into your broader Battery Materials platform?

And secondly, on the Clean Air business, are you seeing any stocking effects? I mean, we've heard about -- obviously, you got platinum prices rising. Does that create a desire for people to buy ahead of time or -- at the same time, I guess, on the other side, we've heard of auto companies destocking their chains. Are they trying to destock their auto cats ahead of time? Any stocking comments would be helpful.

Robert J. MacLeod[^] Okay. So on the silicon alloy IP that we bought yesterday, look, we buy IP all the time and it's all about having a longterm strategy for R&D investment. So look, this is not going to distract Christian and his team in the short run. This is just all about protecting and thinking about that long-term opportunity and what that could be, 10 years plus, sort of 5 to 10 years away. So it's just very much a sort of R&D investment that we're going to look at. If you want to have a chat with Maurits afterwards, have a chat with Maurits after this and he can give you a bit more color on that.

On the stocking point, John, any comments you'd like to say on the stocking point?

John F. Walker^ I think maybe Joan is more open up-to-date on the recent stock acquisitions.

Robert J. MacLeod[^] Okay.

Joan A. Braca[^] So no. Look, I was actually over the last 6 weeks talking to the bigger customers, i.e., the industry is slowing, there's no doubt about that. We haven't seen any real effect on that on our side because although auto production is slowing, the fitment of parts is continuing to grow. So -- and many of them have raised the question on metal pricing and what's our guidance and what we do about it, but they're not making any moves on it. So I don't see so far any change in stocking on either side.

Robert J. MacLeod[^] Thanks, Joan. So we've got a question in the middle.

Sanjay Jha[^] Sanjay Jha from Panmure Gordon. Just a couple of questions, please. Obviously, growth this year, you've said in clean air, was slightly below presumably what you had expected. And obviously, the --I'm guessing this was because mainly of the Class 8 and sort of other things. What I'm trying to understand is if you're -- is everything based on you expecting growth to come back in next year? Because when I look at your projections, you're saying mid single-digit growth. But if car sales don't grow next year and if heavy duty sales continue to fall next year, is that sort of -- is your working capital requirement sort of -- it does seem a little bit too high to me. I'm seeing that you are planning for growth, but it's not very clear where the growth is going to come from. That's kind of my first question.

And secondly, can I get a feeling for how is the gasoline filter? How does it affect your overall sort of sales? I mean, I know it's high value. Just can you give me some sort of idea of how we sort of model it?

Robert J. MacLeod[^] Well, the gasoline particulate filters is a doubling of content per vehicle.

Sanjay Jha[^] So is it just a value per car?

Robert J. MacLeod[^] Yes, value per car for a gasoline car essentially that has a filter on will double. The content for us will double for every car that has a gasoline particulate filter fitted. It's very straightforward. And actually, that's what we said in Europe and it's the same in Asia, where we're getting that same doubling because you're putting another system on and that -- whereas before you didn't need a filter. You're now putting a filter on and you get double the value. So very straightforward on that. Anna, do you want to comment on the guidance and the sort of projections?

Anna Manz[^] Yes. So there's 3 things impacting Clean Air this year. The first is the one-off manufacturing inefficiencies we saw in the first half. The second is going into the year, we thought we would see the China 6 HDD legislation impacting and benefiting this year. But actually, as OEMs look to move to roll that out, the supply chain wasn't ready and so it's been pushed back 12 months. And so we'll see that benefit coming through next year. The thing that's made us slightly more careful with our guidance is that we're seeing the Class 8 truck market slow, and we've got a considerable decline built into our second half. We would expect to see that continue through to next year. So as you look forward, we've got the benefit of heavy duty China legislation coming in, in next year, ongoing GPF fitment, which is benefiting both Europe and Asia. But of course, the Class 8 truck will go against us.

And on your working capital question, we're not building stock ahead of growth. What you're seeing in our working capital movements is movements in the value of our accounts receivable predominantly. This is not a stock build ahead of growth.

Sanjay Jha' So this is receivables as opposed to -- okay.

Anna Manz^ Yes.

Robert J. MacLeod[^] Okay. So go -- I think your hand was up first. Sorry, we'll come back. There's 3 down there in the 1, 2, 3. So if you just pass the phone forward, if you can, that would -- not the phone, microphone.

Charles Bentley^ So Charley Bentley, Crédit Suisse. So just on the -- on that receivables point. So I mean, it's such a significant build in receivables. You mentioned something around the changing customer behavior in whether they take the metal or whether they leave it with you. Can you just explain a little bit more about that and whether we can expect that to change significantly in the second half? And then also, just looking at your planning assumptions for heavy duty diesel, if I look in the back of the report -- in the back of the presentation, you've got U.S. down 20% and Europe flat. I mean, is that -- if we look at kind of what Volvo is saying for Europe next year, it's kind of talking down teens. Can you just let us know a bit more around your planning assumptions there?

Robert J. MacLeod[^] So I think I'll -- so the first one, look, you're looking at slides on heavy duty diesel. You're looking at Slide 35. That's LMC Automotive's guidance. That's not -- we look at a number of -for our internal planning assumptions, we look at a number of different external parties and speak to our customers. We thought, just for you, collectively, it would be useful to have something that everybody can look at for those people that don't follow this very -- on a daily basis, but we have our own assumptions and we don't give those out, I'm afraid, personally. On the second point, which was around the AR and the model, do you want to talk about that one, Anna?

Anna Manz[^] Yes. So accounts receivable, we sell things. The cost of what we're selling is increased because the metal is higher. That's as simple as what we're talking about in Clean Air. My comment about the impact of metal price increases, there are 2. One is everything gets more expensive in our working capital. The second is in our refining business, our customers often need metal with us and that benefits our working capital for a period. In periods of high price, as we're currently at, the metal is removed and it causes an extra challenge to our working capital. Where we are today, there isn't that much further impact that we can see because prices are high and so folks aren't leaving too much metal with us at the moment. So I can't guide on the full year because it will depend on what does happen with metal prices. If they continue to go up, that will continue to put pressure on our cash flow, but it will be what it will be.

Robert J. MacLeod^ Okay. If we move next.

Charles L. Webb[^] Charlie Webb, Morgan Stanley. Just a couple. You mentioned fuel cells is doing very well. I think you talked up 60% in the half. What should we expect from that business looking forward? What is the type of engagement you're having on that topic? And you also mentioned hydrogen catalysts in ENR. So again there, what type of engagement, what type of opportunity are we talking about? And how should we think about that growth if there is -- if it is to come?

And then secondly, just on the licensing. Just what should we expect second half and looking out? You've obviously seen a bit of a pickup in licenses in the first half. Help us just understand which technologies and where that's coming from. I saw, I think, a headline this morning talking about bioaviation fuel as being another area where you're seeing growth. So just a bit of a better understanding of where that's going.

Robert J. MacLeod^ Okay. Jane, I'll ask you to answer that question about licensing, about what licenses you might expect in the second half, which is not the question about income statement because I think that's a different thing. You're asking more -- I believe you're asking more about the future and license wins that we could see. So that's, Jane, if you can answer that in a second. But fuel cells and hydrogen, yes, we're seeing a lot of engagement with fuel cell companies, both automotive and non-automotive applications. Lots of enthusiasm in China and Japan, Korea, but also parts of Europe. And it's very much a lot of engagement now. And we're doing a lot of research, and we've got a lot of good connections. And we're now starting to see sales, particularly in China at the moment. The ramp-up in sales in the first half is all pretty much all China. As we -- and that's why we're expanding in our business. We're doubling the footprint in -- or the capacity, I should say, of our fuel cell business with the investment we're making. So it's still very small. I mean, 62%, I think, was the growth in sales, but off a relatively small number. So it's not material yet to you as a shareholder community. But the opportunity is looking much more exciting as it is for the Hydrogen Catalysis business like Jane -- a part of Jane's business as hydrogen, as I said, becomes potentially a new energy vector going forward. So again, lots of talk on that at the moment and we're working with a number of people, but not yet seeing that coming through with projects yet. But the opportunity is definitely there.

Jane, do you want to answer around licensing?

Jane E. Toogood Thank you. I don't know who I'm talking to, actually, yes. So on the licenses, there were 3 licenses in the first half, oxo, methanol and syngas. And when you're asking about the Fischer Tropsch, which is the technology, which is the waste to jet fuel, it's a really interesting bit of technology. The first plant is currently being built at the moment. And of course, that will be a reference plant. So there is interest, of course, from other parties in the technology. But usually, we expect to see the reference plant built and then these things come afterwards. So it's not something that will be a short-term impact, but it's an exciting prospect for the future.

Chetan Udeshi[^] Chetan from JPMorgan. A couple of questions. Firstly, on new markets guidance of earnings growth or EBIT growth for full year, is that including the GBP 8 million impairment? Because that suggests a massive ramp-up in second half. So what is driving that? That would be useful.

And the second question is coming back to this point on metal working capital. Is the -- do you think is there a room to maybe change your commercial terms in this business so that you don't have such a big delta in working capital from time to time? Because it just feels like you've got GBP 14 million of earnings benefit from higher prices, but to get to that GBP 14 million, we've had to invest a lot more money.

Robert J. MacLeod[^] Anna, do you want to take certainly the guidance question?

Anna Manz[^] So new market guidance, it does include the GBP 8 million impairment and yes new markets are having a stronger second half. There's a collection of businesses there. And for different reasons, they've got a very strong order book in the second half. It's the natural phasing of some of those businesses. And yes, they're going to perform strongly.

Robert J. MacLeod[^] And as far as the sort of working capital is concerned and the sort of -- look, we're running at too high working capital at the moment in our backlogs, and we talked to you before about the strategy to bring those backlogs down. Once we get our backlogs back to a more normalised level, then I'd be comfortable with the model that we have. It's just that at the moment, we're running with too high backlogs. Because of the plant downtime we had, it's about 18 months ago when we had the plant downtime. We're still recovering from that. But from a model point of view, very comfortable.

Next in the middle.

Jean-Baptiste Henri Rolland[^] Jean-Baptiste Rolland, Bank of America Merrill Lynch. Just one question from me, please. The pricing in China -- pricing benefit from China 6a, I think, is supposed to come -- the 2 legislation is supposed to come into force next July for all new vehicles. And the timing of this implementation is not too dissimilar to the China 6 HDD truck legislation. So I'm wondering, what sort of benefits? Are you expecting any benefits from this legislation as well in LDV and how much -- spread over how many years?

Robert J. MacLeod[^] Well, I think that's the China 6 legislation, which requires gasoline particulate filters on vehicles, which, as we said, is a doubling of content per vehicle, and it gets phased through the next 5 years, really, because you've got some which require fitment now under the 2020 legislation. But when you get to 2023 and real-world driving comes in, then you'll get more cars which will require gasoline particulate filters. So it will ramp up over time, but it's a doubling of content per vehicle for us.

Jean-Baptiste Henri Rolland[^] But why is the -- I just don't understand why the phasing is taking so long. Because I remember that you guided for an 80% phasing -- sorry, fitment, right, by 2023. And I'm just wondering why is that given that the legislation is coming into force for all new vehicles in next July.

Robert J. MacLeod[^] So I think we're crossing continents here, I think. Our comment about the fitment rates, about the 80% of vehicles which we said would be gasoline direct injection vehicles and around 60% of those would be -- would require a filter, i.e., roughly 50% of the gasoline fleet would require. So 60 times 80 is 48%, so roughly 50%, of new cars. That was a European comment rather than a China comment. And it's just how the Chinese regulations are coming through and it's not done nationally all in one. It's done sort of big cities, regions and then into the outer regions. And so it's just how the regulation builds up over time, which is why it's like that. Is that helpful?

Jean-Baptiste Henri Rolland^ That is.

Robert J. MacLeod[^] Okay. I think we have another question, Neil at the back.

Neil Christopher Tyler[^] It's Neil Tyler from Redburn. Two questions, please. One, just, firstly, on clarification. On return on capital slide, Anna, the bridge that you provided, there's another block. I wonder if you could help me understand what the moving parts in that are.

Second question on the Health business. The channel disruption that's ensued from the Teva settlement, is it right to think of you as being relatively sort of agnostic over -- if we think 4 to 21 as things -- as the channel settles down, you provide the API to both forms of treatment, and therefore, irrespective of who takes share in the opioid addiction treatment market, your business should normalize. Is that the right way, Robert, to think about that?

Robert J. MacLeod[^] Short answer to that question, yes, okay. And the first question, Anna, on return on capital.

Anna Manz^ I've got an accounting team that will be so happy that you asked that question. The answer, however, is a bit long and complicated because there's 5 or 6 small things all adding up. So maybe it's one that we pick up afterwards.

Robert J. MacLeod[^] Any other questions? No? No more questions. Well then, thank you very much for coming.

But before everybody goes, I would just like to make one comment. You know John Walker. John Walker has been in our business for 35 years. John retires on the 31st of March. So this is the last time -- last results presentation you'll see John Walker at.

You know our Clean Air business is a world-leading business and John has built that business up for many, many years. And I would just like to publicly thank him for everything he has done and give you the opportunity as well to show your appreciation to John on what he's achieved over the last 35 years. But in particular, the last decade running this business.

So thank you very much, and we'll see you again in 6 months' time.