

Half year results for the six months ended 30th September 2022

23rd November 2022

Catalysing the net zero transition to drive value creation

Strong foundations and increasing confidence in growth opportunities

- Results in line with expectations
- Transformation progressing across the group
- Good progress on execution of strategy and on track with all milestones
- Significant increase in demand for sustainable technology to address energy crisis and climate change

		Reported results			Underlying results (continuing) ^{1,2}			
		Half year ended 30 th September		%	Half year ended 30 th September		%	% change, constant FX rates
		2022	2021 ²	change	2022	2021 ²	change	
Revenue	£m	7,328	8,503	-14				
Sales excluding precious metals ⁴	£m				2,045	1,856	+10	+5
Operating profit	£m	211	24	n/a	222	297	-25	-30
Profit / (loss) before tax (continuing)	£m	188	(4)	n/a	201	269	-25	
Profit / (loss) after tax (continuing)	£m	150	(24)	n/a	161	226	-29	
Basic earnings / (loss) per share (continuing)	pence	82.0	(12.4)	n/a	88.2	117.1	-25	
Interim dividend per share	pence	22.0	22.0	-				

Underlying performance – continuing operations^{1,2,3}

- Sales of £2.0 billion, up 5%, with higher prices to partially recover cost inflation, partly offset by lower average PGM prices
- Underlying operating profit of £222 million, down 30%, reflecting supply chain constraints in Clean Air, lower average PGM prices and a lag in recovering cost inflation
- Underlying earnings per share of 88.2p, down 25% due to lower underlying operating profit
- Free cash flow of £133 million, compared to £190 million in the prior year largely reflecting lower underlying operating profit and working capital movements
- Strong balance sheet with net debt of £963 million; net debt to EBITDA of 1.5 times

Reported results²

- Revenue down 14%, driven by lower average PGM prices
- Operating profit of £211 million, up materially, largely due to the absence of a one-off impairment in the prior period relating to Battery Materials
- Profit before tax of £188 million, compared to a loss of £4 million in the prior period, reflecting higher operating profit due to the absence of the Battery Materials impairment
- Reported earnings per share (continuing) of 82.0 pence
- Cash inflow from operating activities of £145 million (1H 2021/22: £412 million)
- Interim dividend of 22.0 pence per share stable year-on-year

Liam Condon, Chief Executive, commented:

We are focused on effectively navigating the near-term macroeconomic challenges affecting our business, including significant cost inflation which we partially recovered in the half. We are confident of delivering a stronger performance in the second half as we apply the enhanced commercial focus and efficiencies that I outlined back in May.

Over the past six months, there have been further positive developments in the transition to net zero. Legislation such as the Inflation Reduction Act in the US, as well as the urgent need for sources of clean energy in Europe, are driving demand for sustainable technology solutions. We are in a strong position to benefit and enable our customers to decarbonise and meet their net zero goals.

As we move to a faster paced, more customer focused culture, we are already making good progress in achieving our strategic milestones. You can expect to see further progress in the coming months and I am more convinced than ever of the tremendous opportunities ahead for Johnson Matthey.

Outlook for the year ending 31st March 2023

The external environment is challenging, with continued political and economic uncertainty. We currently expect operating performance for the full year to be within the consensus range⁵. The outlook is based upon current foreign exchange rates prevailing for the rest of 2022/23⁶.

In Clean Air, supply chain disruption has eased through the first half and, whilst there is still uncertainty, we expect that automotive production volumes will improve further through the second half. For the year 2022/23, external data⁷ currently suggests auto production will be 4% higher than 2021/22, with volumes in the second half expected to be 4% higher than the first half. There is a lag in negotiating inflation claims with OEMs, which affected our first half profits. We are focused on further recovery of cost inflation, which we expect to benefit the second half, supported by benefits from our transformation programme. With continued volume recovery, we expect Clean Air operating performance in the second half to be above the first half.

PGM Services performance is driven by precious metals prices, both the absolute level and volatility, along with recycling volumes. Whilst precious metals prices are high relative to historic levels, they remain lower than the prior year. If they were to remain at their current level⁸ for the rest of this year, we would expect the adverse impact on full year operating performance to be c.£40 million⁹ compared with the prior year. At current metal prices, and with increased efficiencies and further measures to recover cost inflation, we expect PGM Services operating performance in the second half to be stronger than the first.

In Catalyst Technologies, whilst cost inflation was not fully recovered in the first half, we are focused on further increasing prices. As reported previously, the profit impact of lost business with Russia is mainly in Catalyst Technologies and in 2022/23 we expect this to be c.£10 million. This is expected to be one-off and compensated by new business from next year but will result in full year operating performance for Catalyst Technologies being lower than the prior year.

In Hydrogen Technologies we are investing to scale the business, to capture the significant opportunities that the rapidly growing hydrogen market presents. Consequently, we continue to expect a larger operating loss in 2022/23 than the prior year.

Longer term, we are already seeing signs that geopolitical developments are driving a significant acceleration towards a net zero carbon economy, and we are investing to capture the growth opportunities from our sustainable technology portfolio.

Dividend

The board approved an interim dividend of 22.0 pence per share, maintained at the same level as the prior year (1H 2021/22: 22.0 pence per share). The interim dividend will be paid on 1st February 2023, with an ex-dividend date of 8th December 2022, to shareholders on the register on 9th December 2022.

Enquiries:

Investor Relations

Martin Dunwoodie	Director of Investor Relations	+44 20 7269 8241
Louise Curran	Senior Investor Relations Manager	+44 20 7269 8235
Carla Fabiano	Senior Investor Relations Manager	+44 20 7269 8004

Media

Barney Wyld	Group Corporate Affairs Director	+44 20 7269 8001
Harry Cameron	Tulchan Communications	+44 7799 152148

Notes:

1. Underlying is before profit or loss on disposal of businesses, gain or loss on significant legal proceedings together with associated legal costs, amortisation of acquired intangibles, share of profits or losses from non-strategic equity investments, major impairment and restructuring charges and, where relevant, related tax effects. For definitions and reconciliations of other non-GAAP measures, see pages 47 to 52.
2. 1H 2021/22 is restated to reflect the group's new reporting structure as well as the classification of Health as a discontinued operation.
3. Unless otherwise stated, sales and operating profit commentary refers to performance at constant exchange rates. Growth at constant rates excludes the translation impact of foreign exchange movements, with 1H 2021/22 results converted at 1H 2022/23 average rates. In 1H 2022/23, the translational impact of exchange rates on group sales and underlying operating profit was a benefit of £97 million and £18 million respectively.
4. Revenue excluding sales of precious metals to customers and the precious metal content of products sold to customers.
5. Vara consensus for full year group underlying operating profit in 2022/23 was £487 million (range: £458 million to £516 million) as at 21st November 2022. 2021/22 group underlying operating profit on an adjusted basis was £553 million (adjusted for disposal of Health).
6. At current foreign exchange rates (£:US\$ 1.16, £:€ 1.15, £:RMB 8.35) translational foreign exchange movements for the year ending 31st March 2023 are expected to benefit underlying operating profit by around c.£40 million, which is included in the outlook on page 3.
7. As forecast by external consultants – IHS (November 2022).
8. Based on average precious metal prices in November 2022 (month to date).
9. c.£40 million adverse impact represents a gross PGM price impact before any foreign exchange movement. A US\$100 change in the average annual platinum, palladium and rhodium metal prices each have an impact of approximately £1 million, £1.5 million and £1 million respectively on full year underlying operating profit. This assumes no foreign exchange movement.

Chief Executive update

In May we published our strategy to drive value creation centred around a more focused product portfolio enabled by our core competencies. These comprise our expertise in platinum group metal (PGM) chemistry, catalysis, and process technology. We are executing our strategy to exploit our market leading technologies, with a strengthened commercial focus and a leaner, faster paced, more agile organisation.

Since outlining our strategy the macroeconomic environment has deteriorated. Against this backdrop, cost inflation – particularly energy, raw materials and labour – has been challenging and impacted our first half results. We experienced c.£80 million cost inflation, of which c.£40 million was recovered in the period from customers. We have been working hard to mitigate inflation through our sharpened commercial focus and actions to increase efficiency. Whilst we have made some early progress through the first half, there is a lag in recovering costs and we expect further progress through the second half. Our business has strong foundations, underpinned by our strong balance sheet and, in combination with the actions we are taking, we are confident we will navigate these cyclical challenges.

Growth markets accelerating and opportunities more tangible

Recent geopolitical events are accelerating and expanding our key growth markets, creating significant opportunities for our decarbonisation solutions. In the US, the Inflation Reduction Act enacted in August is the largest climate package in US history changing the landscape for clean energy. The Act includes c.US\$400 billion of incentives that will reduce the cost of clean energy projects, increasing investment and demand. This will benefit our Hydrogen Technologies business in particular, but is also highly relevant for our Catalyst Technologies and PGM Services businesses. Russia's invasion of Ukraine and other macroeconomic pressures have highlighted threats to energy security and the dependency on fossil fuels, driving an urgent need to accelerate the energy transition. In China, we are seeing significant growth in the demand for fuel cells, driven by the country's ambition to reach net zero emissions.

Good progress on executing our strategy

We have made good progress against our strategic milestones set out in May:

Customers:

- In advanced talks to secure large scale strategic partnerships in Hydrogen Technologies
- Euro 7 business wins well on track. On track to £4bn+ cash¹ for Clean Air
- Won 3 additional large scale projects in Catalyst Technologies (targeting >10 across Catalyst Technologies and Hydrogen Technologies by 2023/24)

Investments:

- Progressing PGM Services refining capacity expansion in China
- Construction of Hydrogen Technologies CCM plant in the UK² on time and on budget
- Targeted capacity expansion (fuel cells catalyst, formaldehyde catalyst) on track
- Continuing to divest non-core assets – agreed divestment of Piezo Products within Medical Device Components (Value Businesses)

People: Stronger link between performance and compensation

Sustainability:

- On track for reduction in scope 1+2 CO₂e (carbon dioxide equivalent) emissions from a 2019/20 baseline (target c.10%)
- Helped customers reduce CO₂e emissions by 678,000 tonnes p.a. through use of our products (target >1mt p.a.)

1. At least £4 billion of cash under our range of scenarios from 1st April 2021 to 31st March 2031. Cash target pre-tax and post restructuring costs. 2. To expand total capacity from 2GW to 5GW.

1. Customers: winning new business to drive growth

Clean Air – We are continuing to develop world leading catalysts to support our customers as tighter emission regulations come into force across the world. Earlier this month the EU Commission submitted its Euro 7 proposal to the European Parliament. It proposes tighter emission regulations, particularly in heavy duty, while the use of wider real world driving conditions will also benefit light duty diesel and gasoline. We expect these emission standards to be implemented from 2025 for light duty and 2027 for heavy duty, which will drive an uplift in value for our emission control catalysts.

We are winning business linked to Euro 7 and equivalent legislation globally. We are well on track with our targeted Euro 7 business, including securing all of Mercedes Benz's light duty diesel business in Europe. We remain on track to deliver our cash generation target of at least £4 billion to 2030/31.

Catalyst Technologies – Our Catalyst Technologies business is strengthening its focus on the syngas value chain, growing the existing business alongside newer opportunities in low carbon hydrogen, sustainable fuels and low carbon solutions. These growth opportunities will transform the scale of our business.

In these new growth areas, we recently secured three project wins in North America which are expected to generate sales of c.£75 million over five years, subject to project completion. The projects include the first large scale low carbon hydrogen project in North America, with our technology enabling the capture of over 95% of the produced carbon. We also won two sustainable fuels projects. These new business wins are in the context of Catalyst Technologies sales of c.£450 million in 2021/22 and a pipeline of more than 100 projects in new growth markets.

PGM Services – In October, we signed our first fuel cell recycling contract in China with Unilia, one of the world's leading providers of fuel cell stack technology, to refine and recycle the PGM content from Unilia's automotive fuel cells.

Hydrogen Technologies – In Hydrogen Technologies we aim to be the market leader in high value performance components for fuel cells, and PEM (proton exchange membrane) and AEM (anion exchange membrane) electrolysers, creating very significant growth in the medium-longer term. We have strong competitive advantage and long-standing experience. Our customers have told us they value our technology leadership and PGM expertise, particularly our ability to access, supply and recycle these critical metals needed in our products. We also have existing manufacturing capacity today and, underpinned by our strong balance sheet, we have plans to scale quickly to meet increasing customer demand. This makes us a partner of choice, and we are in advanced talks to secure strategic partnerships and expect to announce further progress in the coming months.

In August we signed a Memorandum of Understanding (MoU) with Sinopec Capital, the largest oil and petrochemical products supplier and second largest oil and gas producer in China. The agreement aims to explore joint possibilities across low carbon hydrogen, electrolysers, fuel cells, other decarbonisation technologies and a circular economy in China.

2. Investments: scaling to capture future growth

We are committed to investing for growth and generating attractive returns. As part of our plans to invest £1 billion in capital expenditure over the next three years to 2024/25, we announced in July an £80 million gigafactory in the UK to scale up the manufacture of hydrogen fuel cell components. This investment, which is backed by the UK government, is

customer-backed and will have 3GW capacity. The plant is currently on time and on budget, and we expect to commence production in the first half of calendar 2024. Our investment supports our target of generating more than £200 million in sales in Hydrogen Technologies by the end of 2024/25.

In PGM Services, our refineries need significant investment which will set them up for decades of operation and substantial cash generation. This investment will increase the resilience, efficiency and long-term sustainability of our assets and allow us to maintain our competitive advantage. We are investing in our refining capacity in China to build a full refinery offering, ensuring we are well positioned as the market evolves. We expect our capacity expansion in China to be operational by the end of 2022/23. We are also investing in the UK to upgrade our refining assets. Alongside this, we are expanding our fuel cells catalyst capacity to support our Hydrogen Technologies business as it scales up.

To further simplify our portfolio, we are continuing to divest non-core assets. Today, we announce the agreement to sell Piezo Products, part of Medical Device Components within Value Businesses. The business will be sold to Hoerbiger with completion expected by the end of 2022/23. In addition, following our announcement to exit Battery Materials last year we have taken the decision to cease work on battery materials recycling.

3. People

In line with the pillars of our strategy – **focus, simplify, execute** – we are developing a stronger performance culture that is disciplined in the execution of our strategy and delivers consistent results. The successful delivery of our strategy depends heavily on our talented people and we are proud of their commitment to JM and our ambitions.

We have continued to focus our portfolio and alongside this we are reducing complexity across the organisation, from which we are targeting at least £150 million in annualised cost savings by 2024/25. Associated costs to deliver the programme are around £100 million, all of which are cash. As part of our transformation, we are finalising our target operating model and streamlining our group functions. We are also reducing management layers, targeting a c.15% reduction in senior management headcount. In combination with other measures, we expect to deliver c.£35 million of savings in 2022/23.

As we strive for better execution, we are strengthening performance management and incentivisation across the organisation with appropriate evaluation, compensation and grading systems. In parallel, we are also keeping close track of our employee engagement scores.

4. Sustainability

Sustainability is an integral part of JM and embedded within our strategy. We are committed to achieving net zero by 2040, underpinned by a series of 2030 targets categorised under three key pillars: 1) products and services, 2) operations and 3) people.

Within operations, we aim to reduce our Scope 1 and 2 GHG emissions by 33% by 2030, against a 2019/20 baseline. As part of our strategy update in May, we committed to a 10% reduction in our Scope 1 and 2 GHG emissions by the end of 2023/24 and we are on track. We are also helping customers reduce their own GHG emissions by more than 1 million tonnes per annum through the use of our products by the end of 2023/24. As at 30th September, our customers have avoided 678,000 tonnes p.a. of GHG emissions using our products and solutions.

Summary of underlying operating results from continuing operations

Unless otherwise stated, commentary refers to performance at constant rates¹. Percentage changes in the tables are calculated on rounded numbers.

Sales (£ million)	Half year ended 30 th September		% change	% change, constant FX rates
	2022	2021 ²		
Clean Air	1,278	1,196	+7	+2
PGM Services	282	300	-6	-11
Catalyst Technologies	275	223	+23	+18
Hydrogen Technologies	23	10	+130	+130
Value Businesses ^{3,4}	235	181	+30	+26
Eliminations	(48)	(54)		
Sales (continuing)	2,045	1,856	+10	+5

Underlying operating profit (£ million)	Half year ended 30 th September		% change	% change, constant FX rates
	2022	2021 ²		
Clean Air	108	150	-28	-32
PGM Services	125	167	-25	-29
Catalyst Technologies	21	30	-30	-32
Hydrogen Technologies	(24)	(12)	n/a	n/a
Value Businesses ^{3,5}	21	1	n/a	n/a
Corporate	(29)	(39)		
Underlying operating profit (continuing)	222	297	-25	-30

Reconciliation of underlying operating profit to operating profit (£ million)	Half year ended 30 th September	
	2022	2021 ²
Underlying operating profit (continuing)	222	297
Amortisation of acquired intangibles	(2)	(3)
Major impairment and restructuring charges ⁶	(9)	(314)
Gain on significant legal proceedings	-	44
Operating profit (continuing)	211	24

Notes:

- Growth at constant rates excludes the translation impact of foreign exchange movements, with 1H 2021/22 results converted at 1H 2022/23 average rates. In 1H 2022/23, the translational impact of exchange rates on group sales and underlying operating profit was a benefit of £97 million and £18 million respectively.
- 1H 2021/22 is restated to reflect the group's new reporting structure as well as the classification of Health as a discontinued operation.
- Includes Battery Systems, Medical Device Components, Diagnostic Services, Battery Materials (divestment agreed) and Advanced Glass Technologies (divestment completed).
- Sales relating to divestments: Advanced Glass Technologies (1H 2021/22: £37 million, 1H 2022/23: £7 million) and Battery Materials (1H 2021/22: £6 million, 1H 2022/23: £13 million).
- Operating profit or loss related to divestments: Advanced Glass Technologies (1H 2021/22: £10 million, 1H 2022/23: nil) and Battery Materials (1H 2021/22: -£17 million, 1H 2022/23: nil).
- For further detail on these items please see page 17.

Operating results by sector

Clean Air

Sales slightly up. Operating profit impacted by partial recovery of cost inflation

- Sales were up 2% with better pricing offsetting a marginal decline in volumes, which were impacted by supply chain constraints mainly due to COVID lockdowns in China, the ongoing semi-conductor chip shortage and disruption from the war in Ukraine.
- Experienced a quarter-on-quarter improvement through the first half
- Underlying operating profit decreased 32% and margins declined by 4 percentage points primarily reflecting increased input costs (principally energy) which were only partially recovered in the half

	Half year ended 30 th September		% change	% change, constant FX rates
	2022	2021		
	£ million	£ million		
Sales				
Light duty diesel	515	498	+3	+1
Light duty gasoline	299	270	+11	+3
Heavy duty diesel	464	428	+8	+1
Total sales	1,278	1,196	+7	+2
Underlying operating profit	108	150	-28	-32
Underlying margin	8.5%	12.5%		
Reported operating profit	109	149		

Clean Air provides catalysts for emission control after-treatment systems used in light and heavy duty vehicles powered by internal combustion engines.

Sales were up 2%, with better pricing offsetting a decline in volumes. Volumes were marginally lower reflecting supply chain disruption mainly due to COVID lockdowns in China which impacted heavy duty production, whilst auto production was constrained by semiconductor chip shortages and disruption from the war in Ukraine. These disruptions eased through the period, and we experienced a quarter-on-quarter improvement.

Light duty catalysts – diesel and gasoline

Light duty diesel

In light duty diesel sales were broadly flat, in line with the overall market. In the Americas we benefited from both a strong underlying market and good customer performance. This was offset by a decline in Europe, which represents around 60% of our total light duty diesel sales. We experienced lower platform performance in this region due to semi-conductor chip supply constraints, as some automotive OEMs prioritised commercial vehicles over the passenger car platforms that we serve.

Light duty gasoline

Sales of light duty gasoline were up 3% in the period, underperforming the overall global market. Our growth was driven by a stronger market in the Americas as well as good growth in Asia partly following COVID lockdowns in the prior year in Malaysia. In Europe, sales were broadly flat held back by previous platform losses in the region.

Heavy duty diesel catalysts

Heavy duty diesel sales were up 1%, strongly outperforming the global market. We saw good performance in Europe and America offset by a decline in Asia. In Europe, there was strong market growth due to pent up demand and we outperformed the market due to our customers' good platform performance. In the Americas, heavy duty sales continue to benefit from the cyclical recovery in the US Class 8 truck cycle. Sales in Asia were materially down, due to lower vehicle production in China as a result of COVID lockdowns, especially during the first quarter.

Underlying operating profit

Underlying operating profit declined 32% to £108 million and margins decreased to 8.5%. Whilst the business benefited from better pricing and efficiency savings, it was impacted by significant cost inflation (principally energy) which was not fully recovered in the period. There is a lag in negotiating inflation claims with automotive OEMs resulting in Clean Air's first half profit and margin being significantly below last year. We are focused on further recovery of cost inflation, which we expect to benefit the second half, alongside benefits from our transformation programme.

On track to deliver at least £4 billion of cash in the decade to 2030/31

We are on track to deliver on our cash generation target of at least £4 billion by 2030/31¹, having delivered £800 million in the first year of this guidance (2021/22). We expect lower cashflow this year versus last, which benefited from a working capital unwind due to COVID lockdowns in China as well as metal price tailwinds.

Notes:

1. At least £4 billion of cash under our range of scenarios from 1st April 2021 to 31st March 2031. Cash target pre-tax and post restructuring costs.

PGM Services

Performance impacted by lower average PGM prices and reduced refinery volumes

- Sales performance reflects lower average PGM prices and reduced refinery volumes due to lower auto scrap levels as a result of a buoyant used car market
- Underlying operating profit was down driven by lower average PGM prices and reduced refinery volumes, as well as increased energy costs

	Half year ended 30 th September		% change	% change, constant FX rates
	2022	2021		
	£ million	£ million		
Sales				
PGM Services	282	300	-6	-11
Underlying operating profit	125	167	-25	-29
Underlying margin	44.3%	55.7%		
Reported operating profit	125	167		

PGM Services is the world's largest secondary recycler of platinum group metals (PGMs). This business has an important role in enabling the energy transition through providing circular solutions as demand for scarce critical materials increases. PGM Services provides a strategic service to the group, supporting Clean Air, Catalyst Technologies and Hydrogen Technologies with security of metal supply in a volatile market, and manufactures value added PGM products

In PGM Services, sales declined 11% against a strong prior period. This was primarily due to lower average PGM prices, particularly rhodium where the average price declined c.30% compared to the same period last year. In our refineries, intake volumes were down because of lower auto scrap levels resulting from a buoyant used car market. Our metals trading service performed well although sales in the half were lower due to reduced market volatility.

PGM Services' product sales were down, primarily due to phasing of customer orders and the COVID lockdown in China.

Underlying operating profit

Underlying operating profit declined 29% impacted by lower average PGM prices (c.£30 million impact¹) and reduced refining volumes, as well as increased energy costs.

Notes:

1. Gross PGM price impact was c.£30 million, which was partly offset by foreign exchange benefits. Foreign exchange benefit reflects the pricing of PGMs in US dollars.

Catalyst Technologies

High growth in sales but cost inflation impacted profits

- Sales up 18% driven by growth in catalyst refills and licensing income
- Strong period for licensing, with 7 new licences won, 2 of which are within sustainable solutions. Secured additional licence win in sustainable fuels in November.
- Underlying operating profit declined 32%, impacted by the loss of business in Russia and cost inflation, which was only partially recovered in the period

	Half year ended 30 th September		% change	% change, constant FX rates
	2022	2021		
	£ million	£ million		
Sales				
Catalyst Technologies	275	223	+23	+18
Underlying operating profit	21	30	-30	-32
Underlying margin	7.6%	13.5%		
Reported operating profit	17	72		

Catalyst Technologies is focused on enabling the decarbonisation of chemical and fuels value chains and we have leading positions in syngas: methanol, ammonia, hydrogen and formaldehyde. Catalyst Technologies has three key segments: industrial and consumer, traditional fuels and sustainable solutions that help catalyse the transition to net zero. Our revenue streams comprise licensing and engineering income, first fill and refill catalysts.

Industrial and Consumer: strong growth in refill catalysts and licensing

Industrial and consumer includes our methanol, ammonia and formaldehyde offerings as well as the majority of our licensing business.

We experienced double digit sales growth, mainly driven by catalyst refills and licensing. Refills grew supported by both higher volumes and pricing in response to cost inflation. Ammonia was weaker, reflecting lower demand due to higher natural gas prices. This was a strong half for licensing. We continue to benefit from our leading technologies with good growth in income and five additional licences won in the segment.

Following the ongoing war in Ukraine, we exited our activities in Russia resulting in the loss of catalyst sales and higher margin licensing income in the region.

Traditional fuels: good growth in gas purification

Traditional fuels includes our refining additives, hydrogen and natural gas purification offerings. Growth in this segment was driven by natural gas purification. There was strong demand across all regions supported by higher natural gas prices.

Sustainable solutions: growing pipeline

We are unlocking new, growth markets with our technology in low carbon hydrogen, sustainable fuels and low carbon solutions. In the first half we won two licences which include the first large scale low carbon hydrogen licence granted in North America and a commercial scale sustainable fuel project also in North America. In addition, we secured a further sustainable fuel project win in November with Strategic Biofuels.

Underlying operating profit

Underlying operating profit declined 32% to £21 million and the margin contracted 5.9 percentage points. This was impacted by the loss of business in Russia of c.£5 million and a lag in pricing to recover cost inflation.

Hydrogen Technologies

Strong sales growth and continued investment to meet customer demand

- Sales more than doubled driven by higher commercial production for new and existing customers in fuel cells, early sales in electrolysers and increased volumes as manufacturing constraints eased
- Underlying operating loss reflects the continued investment in scale up, customer trials and business development, partly offset by benefits from increased sales volumes

	Half year ended 30 th September		% change	% change, constant FX rates
	2022	2021		
	£ million	£ million		
Sales				
Hydrogen Technologies	23	10	+130	+130
Underlying operating loss	(24)	(12)	n/a	n/a
Underlying margin	n/a	n/a		
Reported operating loss	(24)	(12)		

In Hydrogen Technologies, we provide catalyst coated membranes that are a critical component of fuel cells and electrolysers.

In Hydrogen Technologies, sales in the half more than doubled to £23 million primarily driven by growth in fuel cells where we delivered higher commercial volumes for new and existing fuel cell customers. In electrolysers, we are commercialising new products and generated early sales from samples and pilot projects through testing of key components with leading electrolyser manufacturers. Sales also benefited from higher manufacturing output, as constraints eased following the greater use of capacity in the prior period to qualify new customer products.

As we focus on scale up, work is ongoing to expand our manufacturing capacity in the UK. In the UK, construction of our 3GW plant in Royston is on time and on budget with production expected to commence in the first half of calendar year 2024. This investment supports our target of more than £200 million sales in Hydrogen Technologies by the end of 2024/25.

Underlying operating loss

Underlying operating loss of £24 million primarily reflects increased investment in scale up, customer trials and business development, partly offset by benefits from increased sales volumes.

Value Businesses

Strong sales and profit growth – driving value from non-core business

- Strong sales and profit growth driven by good business performance from better underlying activity, and actions taken to improve performance and drive value
- Agreed sale of Piezo Products, part of Medical Device Components, with completion expected by the end of 2022/23

	Half year ended 30 th September		% change	% change, constant FX rates
	2022	2021		
	£ million	£ million		
Sales				
Value Businesses ¹	235	181	+30	+26
Underlying operating profit²	21	1	n/a	n/a
Underlying margin	8.9%	0.6%		
Reported operating profit / (loss)	15	(313)		

Value Businesses is managed to drive shareholder value from activities considered to be non-core to JM, and comprises Battery Systems, Medical Device Components and Diagnostic Services. Our reported financial results in the prior year also include Battery Materials (divestment agreed) and Advanced Glass Technologies (divestment completed).

Overall, sales in Value Businesses were up 26% in the period. Excluding the impact of Advanced Glass Technologies and Battery Materials, sales were up 52%. We saw strong sales performance in Battery Systems driven by e-bike applications largely due to increased volumes and sales of higher value products following significant project wins. Medical Device Components also performed well, driven by project wins as well as higher effective production capacity following investments to upgrade assets and drive efficiency. Diagnostic Services continued to benefit from a recovery in demand as COVID-related travel disruption eased and a higher oil price drove increased customer activity.

Underlying operating profit

Underlying operating profit of £21 million, an improvement of £20 million on the prior year, reflects good business performance from better underlying activity, and actions taken to improve performance and drive value.

Excluding the results of Advanced Glass Technologies and Battery Materials from the prior year, underlying operating profit was £21 million², an improvement of £13 million on a like-for-like basis.

Corporate

Corporate costs were £29 million, a decrease of £10 million from the prior period, largely reflecting lower pension charges as well as some functional efficiencies.

Notes:

1. Sales relating to divestments: Advanced Glass Technologies (1H 2021/22: £37 million, 1H 2022/23: £7 million) and Battery Materials (1H 2021/22: £6 million, 1H 2022/23: £13 million).
2. Operating profit or loss related to divestments: Advanced Glass Technologies (1H 2021/22: £10 million, 1H 2022/23: nil) and Battery Materials (1H 2021/22: -£17 million, 1H 2022/23: nil).

Financial review – continuing operations

Research and development (R&D)

R&D spend was £106 million in the half. This was broadly in line with the prior year spend of £103 million and represents c.5% of sales excluding precious metals. As we simplify our portfolio, we have re-focused spend to support our growth areas such as Hydrogen Technologies.

Foreign exchange

The calculation of growth at constant rates excludes the impact of foreign exchange movements arising from the translation of overseas subsidiaries' profit into sterling. The group does not hedge the impact of translation effects on the income statement. The principal overseas currencies, which represented 76% of the non-sterling denominated underlying operating profit in the half year ended 30th September 2022, were:

	Share of 1H 2022/23 non-sterling denominated underlying operating profit	Average exchange rate Half year ended 30 th September		% change
		2022	2021	
US dollar	34%	1.21	1.39	-12%
Euro	9%	1.17	1.16	1%
Chinese renminbi	34%	8.18	8.95	-9%

For the half, the impact of exchange rates increased sales by £97 million and underlying operating profit by £18 million.

If current exchange rates (£:US\$ 1.16, £:€ 1.15, £:RMB 8.35) are maintained throughout the year ending 31st March 2023, foreign currency translation will have a positive impact of approximately c.£40 million on underlying operating profit. A one cent change in the average US dollar and euro exchange rates and a ten fen change in the average rate of the Chinese renminbi each have an impact of approximately £1 million on full year underlying operating profit.

Efficiency savings

We have now commenced our new group transformation programme as part of which we expect to deliver further efficiencies of at least £150 million by 2024/25. Associated costs to deliver the programme are around £100 million, all of which are cash. In 2022/23, we expect to deliver c.£35 million of savings.

Items outside underlying operating profit

Non-underlying (charge) / income (£ million)	As at 30 th September 2022	As at 30 th September 2021
Amortisation of acquired intangibles	(2)	(3)
Major impairments and restructuring	(9)	(314)
Gain on significant legal proceedings	-	44
Total	(11)	(273)

Major impairment and restructuring costs

The group incurred £5 million in respect of the transformation initiatives announced in May 2022, largely comprising of redundancy costs, and a further £4 million for other business exit related costs.

In the prior period, the group incurred impairment charges of £314 million in relation to the group's decision to pursue the sale of all or parts of Battery Materials, the charge was based on our estimate of the recoverable amount at that time. The process to dispose of the remaining assets in Battery Materials is ongoing.

Finance charges

Net finance charges in the period amounted to £21 million, down from £28 million in the first half of 2021/22. This reflects higher interest income, a lower average cost of borrowing and reduced metal leases during the period.

Taxation

The tax charge on underlying profit before tax for the half year ended 30th September 2022 was £40 million, an effective underlying tax rate of 19.9%, up from 16.0% in the first half of 2021/22.

The effective tax rate on reported profit for the half year ended 30th September 2022 was 20.3%. This represents a tax charge of £38 million, compared with £20 million in the prior period, largely reduced because of the tax effect of impairments to the Battery Materials business.

We currently expect the effective tax rate on underlying profit for the year ending 31st March 2023 to be around 19%.

Post-employment benefits

IFRS – accounting basis

At 30th September 2022, the group's net post-employment benefit position, was a surplus of £172 million.

The cost of providing post-employment benefits in the period was £16 million, down from £24 million in the same period last year.

Capital expenditure

Capital expenditure was £130 million in the half, 1.4 times depreciation and amortisation (excluding amortisation of acquired intangibles). In the period, key projects included:

- Hydrogen Technologies – investing to increase manufacturing capacity in the UK
- PGM Services – investing in the resilience, efficiency and long-term sustainability of our refinery assets

Strong balance sheet

Net debt as at 30th September 2022 was £963 million, an increase from £856 million at 31st March 2022 and £691 million at 30th September 2021. Net debt is £32 million higher at £995 million when post tax pension deficits are included. The group's net debt (including post tax pension deficits) to EBITDA was 1.5 times (30th September 2021: 0.9 times), in line with our target range of 1.5 to 2.0 times.

We use short-term metal leases as part of our mix of funding for working capital, which are outside the scope of IFRS 16 as they qualify as short-term leases. Precious metal leases amounted to £129 million as at 30th September 2022 (31st March 2022: £140 million, 30th September 2021: £223 million).

Free cash flow and working capital

Free cash flow was £133 million in the half, compared to £190 million in the prior period, largely reflecting lower underlying operating profit, increased working capital and the absence of a legal settlement received in the prior year. This was partly offset by proceeds from disposals.

Excluding precious metal, average working capital days to 30th September 2022 increased to 35 days compared to 30 days to 30th September 2021.

Going concern

The group maintains a strong balance sheet with around £1.7 billion of available cash and undrawn committed facilities. Cash generation was positive during the period with free cash flow of £133 million. Net debt increased since 31st March 2022 to £963 million primarily due to unfavourable foreign exchange retranslation impacts driven by a weaker pound sterling. The directors have reviewed a range of scenario forecasts for the group and have reasonable expectation that there are no material uncertainties that cast doubt about the group's ability to continue operating for at least twelve months from the date of approving these half-yearly accounts. In arriving at this view, the base case scenario was stress tested to a severe but plausible downside case which assumes lower demand across our markets to account for further ongoing disruptions and a deep recession. Additionally, the group considered scenarios including the impact from metal price volatility, higher inflation, energy blackout impacts and increases in the amount of metal that we would have to hold. Under all scenarios, the group has sufficient headroom against committed facilities and key financial covenants are not in breach during the going concern period. The directors are therefore of the opinion that the group has adequate resources to fund its operations for the period of twelve months following the date of this announcement and so determine that it is appropriate to prepare the accounts on a going concern basis.

Risks and uncertainties

JM's principal risk landscape has been updated to reflect our refreshed strategy and the challenges we are facing within the environment in which we operate. Two new risks (2 and 3 below) have been added, highlighting the impact of the geopolitical risks and the level of reliance placed on capital execution to deliver growth expectations. Three risks have been removed from our principal risks due to the progress made in managing these risks to satisfactory levels (namely intellectual property, ethics and compliance, and customer contract liability) and will continue to be monitored as part of business-as-usual processes.

JM continues to make improvements to its risk management approach and insights used to support various business decisions.

1. Commoditisation of sustainable technology – Failure to correctly anticipate market trends driving commoditisation of sustainable technology. With shifts being slower or faster than anticipated, we may fail to make the right and timely decision to respond to these shifts. This risk, combined with a failure to identify other new markets relevant for JM, may adversely impact revenue, cash flow and profitability, including our position as technology and cost leader.

2. Lack of preparedness to respond to specific geopolitical events impacting JM's operations – Due to the nature of JM's global footprint, there is a risk that we may face disruption in operations, supply chain and/or customer markets due to geopolitical events such as conflicts, trade disputes, sanctions, pandemics, inflation and economic recession in specific countries or regions where we operate or where our supply chains are reliant.

3. Inefficient delivery of strategic capex – Inability to meet operational growth expectations due to inefficient execution of capital investment projects, driven mainly by lack of specialist resources and failures in change management.

4. Development and/or production of non-competitive products – Inability to meet customers' evolving needs, at least as effectively and profitably as our competitors, could reduce our brand value. Performance failure or quality defects could harm consumers or result in liability claims, which could lead to loss of future business and/or our licence to operate as well as reputational damage.

5. A significant work related EHS incident Failure to operate safely, resulting in injury or breach to applicable laws/regulations, which could lead to negative effects on our people, our reputation and/or the environment. This could also mean the loss of production time as well as attracting negative interest from the media and regulators, leading to significant fines and penalties.

6. Disruption to inbound (non-platinum group metals) goods or services As a manufacturing business, we are dependent on global suppliers to provide key resources and services. Given the types of products, there are limited suppliers from which we can source certain critical raw materials. If there was a significant disruption in their supply, we would be unable to manufacture our products and satisfy customer demand. There is also a growing risk regarding energy, and we are not immune to the risk of energy shortages in the geographies in which we operate, which could impact gas or electricity supplies to our sites and indirectly through our suppliers.

7. Inability to attract and or retain talent – As a result of the continued uncertain macroeconomic environment, with ongoing workforce disruption and changing workforce dynamics in light of COVID, there is a risk that we may not attract and/or retain the critical skills and capabilities which could adversely impact our ability to deliver our strategic objectives.

8. Significant disruption to platinum group metals value chain – There is a risk that we have insufficient metal available for our manufacturing businesses and customer metal commitments. Metal price volatility affects how much our trading business earns. Our refining business earnings also depend on metal prices; a fall in these prices reduces revenue and operating profit. In addition, a failure of our security management systems may result in a loss of or theft of precious metal, which could lead to financial loss and / or failure to satisfy our customers. This could reduce customer confidence or result in legal action.

9. Failure in one or more of our critical operational assets – A failure in a critical asset at our sites may have a material effect on our supply chain, performance, share value and reputation. Also, more frequent extreme weather events and natural disasters may disrupt our operations and increase our costs

10. Unsuccessful delivery of key business transformation programmes – If we fail to deliver key business changes, this will damage our ability to effectively execute our strategy. The expected benefits of the transformation programme include long-term operating profit growth, reduced costs, efficiencies while moving to a high performance business culture.

11. Business failure through cyber-attack or other IT incidents – The occurrence of a significant disruption to our IT systems or a major cyber/data security incident may adversely affect our operations, financial position, harm our reputation and could lead to regulatory penalties.

Responsibility statement of the Directors in respect of the half yearly report

The half yearly report is the responsibility of the directors. Each of the directors as at the date of this responsibility statement, whose names and functions are set out below, confirms that to the best of their knowledge:

- the condensed consolidated accounts have been prepared in accordance with UK adopted International Accounting Standard (IAS) 34 – ‘*Interim Financial Reporting*’; and
- the interim management report included in the Half-Yearly Report includes a fair review of the information required by:
 - a) DTR 4.2.7R of the Financial Conduct Authority’s Disclosure Guidance and Transparency Rules, being an indication of important events that have occurred during the first six months of the financial year and their impact on the condensed consolidated accounts; and a description of the principal risks and uncertainties for the remaining six months of the financial year; and
 - b) DTR 4.2.8R of the Financial Conduct Authority’s Disclosure Guidance and Transparency Rules, being related party transactions that have taken place in the first six months of the current financial year and that have materially affected the financial position or performance of the company during that period; and any changes in the related party transactions described in the last annual report that could do so.

The names and functions of the directors of Johnson Matthey Plc are as follows:

Patrick Thomas	Chair of the Board and of the Nomination Committee
Liam Condon	Chief Executive
Stephen Oxley	Chief Financial Officer
John O’Higgins	Senior Independent Non-Executive Director
Rita Forst	Non-Executive Director
Jane Griffiths	Non-Executive Director and Chair of Societal Value Committee
Xiaozhi Liu	Non-Executive Director
Chris Mottershead	Non-Executive Director and Chair of the Remuneration Committee
Doug Webb	Non-Executive Director and Chair of the Audit Committee

The responsibility statement was approved by the Board of Directors on 23rd November 2022 and is signed on its behalf by:

Patrick Thomas
Chair

Independent Review Report

to Johnson Matthey Plc

Report on the condensed consolidated accounts

Our conclusion

We have reviewed Johnson Matthey Plc's condensed consolidated accounts (the "interim financial statements") in the half year results of Johnson Matthey Plc for the 6 month period ended 30 September 2022 (the "period").

Based on our review, nothing has come to our attention that causes us to believe that the interim financial statements are not prepared, in all material respects, in accordance with UK adopted International Accounting Standard 34, 'Interim Financial Reporting' and the Disclosure Guidance and Transparency Rules sourcebook of the United Kingdom's Financial Conduct Authority.

The interim financial statements comprise:

- the Condensed Consolidated Balance Sheet as at 30th September 2022;
- the Condensed Consolidated Income Statement and Condensed Consolidated Statement of Total Comprehensive Income for the period then ended;
- the Condensed Consolidated Cash Flow Statement for the period then ended;
- the Condensed Consolidated Statement of Changes in Equity for the period then ended; and
- the explanatory notes to the interim financial statements.

The interim financial statements included in the half year results of Johnson Matthey Plc have been prepared in accordance with UK adopted International Accounting Standard 34, 'Interim Financial Reporting' and the Disclosure Guidance and Transparency Rules sourcebook of the United Kingdom's Financial Conduct Authority.

Basis for conclusion

We conducted our review in accordance with International Standard on Review Engagements (UK) 2410, 'Review of Interim Financial Information Performed by the Independent Auditor of the Entity' issued by the Financial Reporting Council for use in the United Kingdom. A review of interim financial information consists of making enquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures.

A review is substantially less in scope than an audit conducted in accordance with International Standards on Auditing (UK) and, consequently, does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

We have read the other information contained in the half year results and considered whether it contains any apparent misstatements or material inconsistencies with the information in the interim financial statements.

Conclusions relating to going concern

Based on our review procedures, which are less extensive than those performed in an audit as described in the Basis for conclusion section of this report, nothing has come to our attention to suggest that the directors have inappropriately adopted the going concern basis of accounting or that the directors have identified material uncertainties relating to going concern that are not appropriately disclosed. This conclusion is based on the review procedures performed in accordance with this ISRE. However, future events or conditions may cause the group to cease to continue as a going concern.

Responsibilities for the interim financial statements and the review

Our responsibilities and those of the directors

The half year results, including the interim financial statements, is the responsibility of, and has been approved by the directors. The directors are responsible for preparing the half year results in accordance with the Disclosure Guidance and Transparency Rules sourcebook of the United Kingdom's Financial Conduct Authority. In preparing the half year results, including the interim financial statements, the directors are responsible for assessing the group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the group or to cease operations, or have no realistic alternative but to do so.

Our responsibility is to express a conclusion on the interim financial statements in the half year results based on our review. Our conclusion, including our Conclusions relating to going concern, is based on procedures that are less extensive than audit procedures, as described in the Basis for conclusion paragraph of this report. This report, including the conclusion, has been prepared for and only for the company for the purpose of complying with the Disclosure Guidance and Transparency Rules sourcebook of the United Kingdom's Financial Conduct Authority and for no other purpose. We do not, in giving this conclusion, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

PricewaterhouseCoopers LLP
Chartered Accountants
London
23rd November 2022

Condensed Consolidated Income Statement

for the six months ended 30th September 2022

	Notes	Six months ended	
		30.9.22 £ million	30.9.21 £ million*
Revenue	2, 3	7,328	8,503
Cost of sales		(6,841)	(7,969)
Gross profit		487	534
Distribution costs		(57)	(52)
Administrative expenses		(208)	(185)
Amortisation of acquired intangibles	4	(2)	(3)
Gain on significant legal proceedings	4	-	44
Major impairment and restructuring charges	4	(9)	(314)
Operating profit		211	24
Finance costs		(48)	(37)
Finance income		27	9
Share of losses of joint ventures and associates		(2)	-
Profit / (loss) before tax from continuing operations		188	(4)
Tax expense	5	(38)	(20)
Profit / (loss) for the period from continuing operations		150	(24)
Profit / (loss) after tax from discontinued operations	10	10	(4)
Profit / (loss) for the period		160	(28)
		pence	pence
Earnings / (loss) per ordinary share			
Basic	6	87.5	(14.8)
Diluted	6	87.1	(14.8)
		pence	pence
Earnings / (loss) per ordinary share from continuing operations			
Basic	6	82.0	(12.4)
Diluted	6	81.7	(12.4)

* Restated to reflect classification of the Health segment as discontinued operations (see note 10).

Condensed Consolidated Statement of Total Comprehensive Income

for the six months ended 30th September 2022

	Notes	Six months ended	
		30.9.22 £ million	30.9.21 £ million*
Profit / (loss) for the period		160	(28)
Other comprehensive income			
Items that will not be reclassified to the income statement			
Remeasurements of post-employment benefit assets and liabilities	12	(115)	59
Fair value (losses) / gains on equity investments		(4)	1
Tax on items that will not be reclassified to the income statement		28	(5)
		(91)	55
Items that may be reclassified to the income statement:			
Exchange differences on translation of foreign operations		187	36
Exchange differences on translation of discontinued operations	10	(32)	4
Amounts (charged) / credited to hedging reserve		(12)	13
Fair value losses on net investment hedges		(22)	(2)
Tax on items that may be reclassified to the income statement		4	(3)
		125	48
Other comprehensive income for the period		34	103
Total comprehensive income for the period		194	75
Total comprehensive income for the period arises from:			
Continuing operations		216	75
Discontinued operations	10	(22)	-
		194	75

* Restated to reflect classification of the Health segment as discontinued operations (see note 10).

Condensed Consolidated Balance Sheet

as at 30th September 2022

	Notes	30.9.22 £ million	31.3.22 £ million
Assets			
Non-current assets			
Property, plant and equipment	8	1,344	1,238
Right-of-use assets		62	61
Goodwill		379	366
Other intangible assets	9	276	267
Investments in joint ventures and associates		82	2
Investments at fair value through other comprehensive income		58	45
Other receivables		87	42
Interest rate swaps	17	31	11
Deferred tax assets		116	98
Post-employment benefit net assets	12	231	352
Total non-current assets		2,666	2,482
Current assets			
Inventories		1,781	1,549
Current tax assets		19	18
Trade and other receivables		1,881	1,796
Cash and cash equivalents	17	414	391
Interest rate swaps	17	-	1
Other financial assets		52	27
Assets classified as held for sale	10	48	402
Total current assets		4,195	4,184
Total assets		6,861	6,666
Liabilities			
Current liabilities			
Trade and other payables		(2,567)	(2,563)
Lease liabilities	17	(12)	(10)
Current tax liabilities		(86)	(97)
Cash and cash equivalents – bank overdrafts	17	(45)	(37)
Borrowings and related swaps	17	(183)	(265)
Other financial liabilities		(84)	(44)
Provisions		(45)	(56)
Liabilities classified as held for sale	10	(10)	(80)
Total current liabilities		(3,032)	(3,152)
Non-current liabilities			
Borrowings and related swaps	17	(1,113)	(899)
Lease liabilities	17	(41)	(40)
Deferred tax liabilities		(18)	(18)
Interest rate swaps	17	(14)	(2)
Employee benefit obligations	12	(59)	(72)
Other financial liabilities		(3)	(12)
Provisions		(36)	(28)
Other payables		(2)	(2)
Total non-current liabilities		(1,286)	(1,073)
Total liabilities		(4,318)	(4,225)
Net assets		2,543	2,441
Equity			
Share capital		215	218
Share premium		148	148
Shares held in employee share ownership trust (ESOT)		(20)	(24)
Other reserves		174	50
Retained earnings		2,026	2,049
Total equity		2,543	2,441

Condensed Consolidated Cash Flow Statement

for the six months ended 30th September 2022

	Notes	Six months ended	
		30.9.22 £ million*	30.9.21 £ million*
Cash flows from operating activities			
Profit / (loss) before tax from continuing operations		188	(4)
Loss before tax from discontinued operations	10	(5)	(5)
Adjustments for:			
Share of losses of joint ventures and associates		2	-
Depreciation		73	77
Amortisation		16	22
Impairment losses		-	314
Share-based payments		8	9
Increase in inventories		(169)	(179)
Decrease in receivables		41	532
Increase / (decrease) in payables		26	(339)
Decrease in provisions		(8)	(8)
Contributions less than / (in excess of) employee benefit obligations charge		(3)	5
Changes in fair value of financial instruments		(9)	8
Net finance costs		21	29
Income tax paid		(36)	(49)
Net cash inflow from operating activities		145	412
Cash flows from investing activities			
Interest received		11	6
Purchases of property, plant and equipment		(111)	(141)
Purchases of intangible assets		(26)	(43)
Proceeds from sale of non-current assets		-	2
Net proceeds from sale of businesses		166	-
Net cash inflow / (outflow) from investing activities		40	(176)
Cash flows from financing activities			
Purchase of treasury shares		(45)	-
Proceeds from borrowings		272	63
Repayment of borrowings		(259)	-
Dividends paid to equity shareholders	7	(100)	(96)
Interest paid		(38)	(40)
Principal element of lease payments		(6)	(7)
Net cash outflow from financing activities		(176)	(80)
Net increase in cash and cash equivalents		9	156
Exchange differences on cash and cash equivalents		14	3
Cash and cash equivalents at beginning of year		346	545
Cash and cash equivalents at end of period	17	369	704
Cash and deposits		161	223
Money market funds		253	523
Bank overdrafts		(45)	(42)
Cash and cash equivalents	17	369	704

* For cash flows of discontinued operations see note 10.

Condensed Consolidated Statement of Changes in Equity

for the six months ended 30th September 2022

	Share capital £ million	Share premium account £ million	Shares held in ESOT £ million	Other reserves £ million	Retained earnings £ million	Total equity £ million
At 1 st April 2021	221	148	(29)	-	2,345	2,685
Total comprehensive income for the period	-	-	-	49	26	75
Dividends paid (note 7)	-	-	-	-	(96)	(96)
Share-based payments	-	-	-	-	12	12
Cost of shares transferred to employees	-	-	5	-	(8)	(3)
At 30 th September 2021	221	148	(24)	49	2,279	2,673
Total comprehensive (expense) / income for the period	-	-	-	(2)	15	13
Dividends paid (note 7)	-	-	-	-	(43)	(43)
Purchase of treasury shares	(3)	-	-	3	(200)	(200)
Share-based payments	-	-	-	-	3	3
Cost of shares transferred to employees	-	-	-	-	(5)	(5)
At 31 st March 2022	218	148	(24)	50	2,049	2,441
Total comprehensive income for the period	-	-	-	121	73	194
Dividends paid (note 7)	-	-	-	-	(100)	(100)
Purchase of treasury shares	(3)	-	-	3	-	-
Share-based payments	-	-	-	-	12	12
Cost of shares transferred to employees	-	-	4	-	(8)	(4)
At 30th September 2022	215	148	(20)	174	2,026	2,543

Notes to the Accounts

for the six months ended 30th September 2022

1 Basis of preparation and statement of compliance

This condensed consolidated interim financial report for the half-year reporting period ended 30th September 2022 has been prepared in accordance with the UK-adopted International Accounting Standard 34, '*Interim Financial Reporting*' and the Disclosure Guidance and Transparency Rules sourcebook of the UK's Financial Conduct Authority. The accounting policies applied are consistent with the accounting policies applied by the group in its consolidated accounts as at, and for the year ended, 31st March 2022, with the exception of the adoption of amended accounting policies and standards as explained below.

These condensed consolidated accounts do not constitute statutory accounts within the meaning of Section 435 of the Companies Act 2006. The interim report does not include all of the notes of the type normally included in an annual financial report. Accordingly, this report is to be read in conjunction with the annual report for the year ended 31st March 2022, which has been prepared in accordance with UK-adopted International Accounting Standards (IAS) and with the requirements of the Companies Act 2006.

Information in respect of the year ended 31st March 2022 is derived from the company's statutory accounts for that year which have been delivered to the Registrar of Companies. The auditor's report on those statutory accounts was unqualified, did not include a reference to any matters to which the auditor drew attention by way of emphasis without qualifying its report and did not contain any statement under Section 498 (2) or Section 498 (3) of the Companies Act 2006.

The half-yearly accounts are unaudited but have been reviewed by the auditors. They were approved by the board of directors on 22nd November 2022.

Going concern

The directors have reviewed a range of scenario forecasts for the group and have reasonable expectation that there are no material uncertainties that cast doubt about the group's ability to continue operating for at least twelve months from the date of approving these half-yearly accounts.

As at 30th September 2022, the group maintains a strong balance sheet with around £1.7 billion of available cash and undrawn committed facilities. Free cash flow was around £133 million, however net debt increased since 31st March 2022 to £963 million primarily due to unfavourable foreign exchange retranslation impacts driven by a weaker pound sterling. Net debt (including post tax pension deficits) to EBITDA, was at the lower end of our target range at 1.5 times.

Although impacted by the significant headwinds faced in the current macroeconomic environment such as high inflation, the impacts of Russia's war in Ukraine, and many major economies predicted to enter recessions, the group's performance during the period was resilient, both in terms of underlying operating profit and cash flow. For the purposes of assessing going concern, we have revisited our financial projections using the latest forecasts for our base case scenario. The base case scenario was stress tested to a severe but plausible downside case which reflects lower demand across our markets to account for further ongoing disruptions and a deep recession.

Additionally, the group considered scenarios including the impact from metal price volatility, higher inflation, energy blackout impacts and increases in the amount of metal that we would have to hold. Whilst the combined impact would reduce profitability and EBITDA against our latest forecast, our balance sheet remains strong.

The group has a robust funding position comprising a range of long-term debt and a £1 billion five year committed revolving credit facility maturing in March 2027 which was entirely undrawn at 30th September 2022. There was £253 million of cash held in money market funds. Of the existing loans, around £165 million of term debt matures in the period to December 2023 which has been included in our going concern modelling. As a long time, highly rated issuer in the US private placement market and having recently raised a UK Export Financing facility, the group expects to be able to access additional funding in its existing markets should it need to. The group also has a number of additional sources of funding available including uncommitted lease facilities that support precious metal funding. Whilst we would fully expect to be able to utilise the metal lease facilities, they are excluded from our going concern modelling.

Notes to the Accounts

for the six months ended 30th September 2022

1 Basis of preparation and statement of compliance (continued)

Going concern (continued)

Under all scenarios above, the group has sufficient headroom against committed facilities and key financial covenants are not in breach during the going concern period. There remain risks to the group including more extreme economic outcomes. Against these, the group has a range of levers which it could utilise to protect headroom including reducing capital expenditure and future dividend distributions.

The directors are therefore of the opinion that the group has adequate resources to fund its operations for the period of twelve months following the date of this announcement and so determine that it is appropriate to prepare the accounts on a going concern basis.

Non-GAAP measures

The group uses various measures to manage its business which are not defined by generally accepted accounting principles (GAAP). The group's management believes these measures provide valuable additional information to users of the accounts in understanding the group's performance. The group's non-GAAP measures are defined and reconciled to GAAP measures in note 17.

Amended standards adopted by the group

The IASB has issued the following amendments, which have been endorsed by the UK Endorsement Board, for annual periods beginning on or after 1 January 2022:

- Annual improvements to IFRS Standards 2018-2020;
- Amendments to IAS 16, *Property, Plant and Equipment: Proceeds before intended use*;
- Amendments to IAS 37, *Onerous Contracts – Cost of Fulfilling a Contract*, and
- Amendments to IFRS 3, *Reference to the Conceptual Framework*.

These changes have not had a material impact on the group. The group has not early adopted any standard, interpretation or amendment that was issued but is not yet effective.

New significant accounting policies adopted by the group

Investments in joint ventures and associates

A joint venture is a joint arrangement whereby investees are able to exercise joint control of the arrangement.

Associates are entities over which the group exercises significant influence when it has the power to participate in the financial and operating policy decisions of the entity but it does not have the power to control or jointly control the entity.

Investments in joint ventures and associates are accounted for using the equity method of accounting and are initially recognised at cost. Thereafter the investments are adjusted to recognise the group's share of the post-acquisition profits or losses after tax of the investee in the income statement, and the group's share of movements in other comprehensive income of the investee in other comprehensive income. Dividends received or receivable from associates are recognised as a reduction in the carrying amount of the investment. The carrying value of the investments are reviewed for impairment triggers on a regular basis.

Where the group's share of losses in an equity-accounted investment equals or exceeds its interest in the entity, the group does not recognise further losses unless it has incurred obligations to do so.

Unrealised gains and losses on transactions between the group and its associates are eliminated to the extent of the group's interest in these joint ventures and associates.

Notes to the Accounts

for the six months ended 30th September 2022

2 Segmental information

Revenue, sales and underlying operating profit by sector

As announced in our preliminary full year results in May 2022, we have changed our reporting structure for the year ending 31st March 2023. The new reporting structure provides greater transparency and reflects how we manage our business. Efficient Natural Resources was split into two separate segments (PGM Services and Catalyst Technologies), and Hydrogen Technologies and Value Businesses are now separate operating segments (previously included within Other Markets). Excluding Corporate, the group has five reporting segments, aligned to the needs of our customers and the global challenges we are tackling.

Clean Air – provides catalysts for emission control after-treatment systems used in light and heavy duty vehicles powered by internal combustion engines.

PGM Services – enables the energy transition through providing circular solutions as demand for scarce critical materials increases. Provides a strategic service to the group, supporting the other segments with security of metal supply.

Catalyst Technologies – enabling the decarbonisation of chemical value chains.

Hydrogen Technologies – providing catalyst coated membranes that are a critical component for fuel cells and electrolyzers.

Value Businesses – a portfolio of businesses managed to drive shareholder value from activities considered to be non-core to JM. This includes Battery Systems, Medical Device Components, Diagnostic Services and Battery Materials. Refer to note 11 for further information on the disposal of Battery Materials. Advanced Glass Technologies was sold on 31st January 2022 and is included within the prior period balances.

The Group Leadership Team (the chief operating decision maker as defined by IFRS 8, *Operating Segments*) monitors the results of these operating sectors to assess performance and make decisions about the allocation of resources. Each operating sector is represented by a member of the Group Leadership Team. These operating sectors represent the group's reportable segments and their principal activities are described on pages 24 to 27 of the 2022 Annual Report. The performance of the group's operating sectors is assessed on sales and underlying operating profit (see note 17). Sales between segments are made at market prices, taking into account the volumes involved.

Health was sold during the financial period and its results are therefore presented within discontinued operations (see note 10).

Notes to the Accounts

for the six months ended 30th September 2022

2 Segmental information (continued)

Six months ended 30th September 2022

	Clean Air £ million	PGM Services £ million	Catalyst Technologies £ million	Hydrogen Technologies £ million	Value Businesses £ million	Corporate £ million	Eliminations £ million	Total from continuing operations £ million
Revenue from external customers	2,995	3,682	342	27	282	-	-	7,328
Inter-segment revenue	-	1,679	7	-	-	-	(1,686)	-
Revenue	2,995	5,361	349	27	282	-	(1,686)	7,328
External sales ¹	1,278	240	269	23	235	-	-	2,045
Inter-segment sales	-	42	6	-	-	-	(48)	-
Sales¹	1,278	282	275	23	235	-	(48)	2,045
Underlying operating profit¹	108	125	21	(24)	21	(29)	-	222

Six months ended 30th September 2021*

	Clean Air £ million	PGM Services (restated) £ million	Catalyst Technologies (restated) £ million	Hydrogen Technologies (restated) £ million	Value Businesses (restated) £ million	Corporate £ million	Eliminations (restated) £ million	Total from continuing operations (restated) £ million
Revenue from external customers	3,748	4,221	293	12	229	-	-	8,503
Inter-segment revenue	1	2,613	4	-	-	-	(2,618)	-
Revenue	3,749	6,834	297	12	229	-	(2,618)	8,503
External sales ¹	1,195	252	218	10	181	-	-	1,856
Inter-segment sales	1	48	5	-	-	-	(54)	-
Sales¹	1,196	300	223	10	181	-	(54)	1,856
Underlying operating profit¹	150	167	30	(12)	1	(39)	-	297

* The comparative period is restated to reflect the group's updated reporting segments. Also restated to reflect classification of the Health segment as discontinued operations (see note 10).

¹ Sales and underlying operating profit are non-GAAP measures (see note 17 for reconciliation to GAAP measures). Sales excludes the sale of precious metals. Underlying operating profit excludes profit or loss on disposal of businesses, gain or loss on significant legal proceedings, together with associated legal costs, amortisation of acquired intangibles and major impairment and restructuring charges.

Notes to the Accounts

for the six months ended 30th September 2022

2 Segmental information (continued)

Net assets by sector

At 30th September 2022

	Clean Air £ million	PGM Services £ million	Catalyst Technologies £ million	Hydrogen Technologies £ million	Value Businesses £ million	Corporate £ million	Total £ million
Segmental net assets	2,222	(664)	799	70	202	570	3,199
Net debt (see note 17)							(963)
Post-employment benefit net assets and liabilities							172
Deferred tax net assets							98
Provisions and non-current other payables							(83)
Investments in joint ventures and associates							82
Net assets held for sale (see note 10)							38
Net assets							2,543

At 31st March 2022*

	Clean Air £ million	PGM Services (restated) £ million	Catalyst Technologies (restated) £ million	Hydrogen Technologies (restated) £ million	Value Businesses (restated) £ million	Corporate £ million	Total £ million
Segmental net assets	2,108	(702)	743	51	169	330	2,699
Net debt (see note 17)							(856)
Post-employment benefit net assets and liabilities							280
Deferred tax net assets							80
Provisions and non-current other payables							(86)
Investments in joint ventures and associates							2
Net assets held for sale							322
Net assets							2,441

* The comparative period is restated to reflect the group's updated reporting segments. The overall group total is as previously reported.

Notes to the Accounts

for the six months ended 30th September 2022

3 Revenue

Products and services

The group's principal products and services by operating business and sub-business are disclosed in the table below, together with information regarding performance obligations and revenue recognition. Revenue is recognised by the group as contractual performance obligations to customers are completed.

Sub-business	Primary industry	Principal products and services	Performance obligations	Revenue recognition
Clean Air				
Light Duty Catalysts	Automotive	Catalysts for cars and other light duty vehicles	Point in time	On despatch or delivery
Heavy Duty Catalysts	Automotive	Catalysts for trucks, buses and non-road equipment	Point in time	On despatch or delivery
PGM Services				
Platinum Group Metal Services	Various	Platinum Group Metal refining and recycling services	Over time	Based on output
		Other precious metal products	Point in time	On despatch or delivery
		Platinum Group Metal chemical and industrial products	Point in time	On despatch or delivery
		Advanced catalysts	Point in time	On despatch or delivery
Catalyst Technologies				
Catalyst Technologies	Chemicals / oil and gas	Speciality catalysts and additives	Point in time	On despatch or delivery
		Process technology licences	Over time	Based on costs incurred or straight-line over the licence term ¹
Hydrogen Technologies				
Fuel Cells	Automotive	Fuel cell technologies	Point in time	On despatch or delivery
Value Businesses				
Other Markets (excluding Diagnostic Services)	Various	Precious metal pastes and enamels, battery systems and products found in devices used in medical procedures	Point in time	On despatch or delivery
Diagnostic Services	Oil and gas	Detection, diagnostic and measurement solutions	Over time	Based on costs incurred

¹ Revenue recognition depends on whether the licence is distinct in the context of the contract.

Notes to the Accounts

for the six months ended 30th September 2022

3 Revenue (continued)

Revenue from external customers by principal products and services

Six months ended 30th September 2022

	Continuing operations					Total £ million
	Clean Air £ million	PGM Services £ million	Catalyst Technologies £ million	Hydrogen Technologies £ million	Value Businesses £ million	
Metal	1,717	3,442	73	4	47	5,283
Heavy Duty Catalysts	447	-	-	-	-	447
Light Duty Catalysts	814	-	-	-	-	814
Platinum Group Metal Services	-	240	-	-	-	240
Catalyst Technologies	-	-	269	-	-	269
Fuel Cells	-	-	-	23	-	23
Battery Systems	-	-	-	-	135	135
Diagnostic Services	-	-	-	-	34	34
Medical Device Components	-	-	-	-	46	46
Other	17	-	-	-	20	37
Revenue	2,995	3,682	342	27	282	7,328

Six months ended 30th September 2021*

	Continuing operations					Total (restated) £ million
	Clean Air £ million	PGM Services (restated) £ million	Catalyst Technologies (restated) £ million	Hydrogen Technologies (restated) £ million	Value Businesses (restated) £ million	
Metal	2,553	3,969	75	2	48	6,647
Heavy Duty Catalysts	413	-	-	-	-	413
Light Duty Catalysts	768	-	-	-	-	768
Platinum Group Metal Services	-	252	-	-	-	252
Catalyst Technologies	-	-	218	-	-	218
Fuel Cells	-	-	-	10	-	10
Battery Materials	-	-	-	-	6	6
Battery Systems	-	-	-	-	77	77
Advanced Glass Technologies	-	-	-	-	36	36
Diagnostic Services	-	-	-	-	26	26
Medical Device Components	-	-	-	-	36	36
Other	14	-	-	-	-	14
Revenue	3,748	4,221	293	12	229	8,503

* The comparative period is restated to reflect the group's updating reporting segments. Also restated to reflect classification of Health segment as discontinued operations (see note 10).

The contract receivables balance at 30th September 2022 is £75 million (31st March 2022: £88 million).

Notes to the Accounts

for the six months ended 30th September 2022

3 Revenue (continued)

Revenue from external customers by point in time and over time performance obligations

Six months ended 30th September 2022

	Continuing operations					Total £ million
	Clean Air £ million	PGM Services £ million	Catalyst Technologies £ million	Hydrogen Technologies £ million	Value Businesses £ million	
Revenue recognised at a point in time	2,995	3,541	270	27	264	7,097
Revenue recognised over time	-	141	72	-	18	231
Revenue	2,995	3,682	342	27	282	7,328

Six months ended 30th September 2021

	Continuing operations					Total £ million
	Clean Air £ million	PGM Services £ million	Catalyst Technologies £ million	Hydrogen Technologies £ million	Value Businesses £ million	
Revenue recognised at a point in time	3,748	4,073	248	12	222	8,303
Revenue recognised over time	-	148	45	-	7	200
Revenue	3,748	4,221	293	12	229	8,503

Notes to the Accounts

for the six months ended 30th September 2022

4 Operating profit

	Six months ended	
	30.9.22	30.9.21
	£ million	£ million*
Operating profit is arrived at after charging / (crediting):		
Total research and development expenditure	106	103
Less: Development expenditure capitalised	-	(15)
Research and development expenditure charged to the income statement	106	88
Less: External funding received - from governments	(7)	(6)
Net research and development expenditure charged to the income statement	99	82
<i>Depreciation of:</i>		
Property, plant and equipment	67	60
Right-of-use assets	6	6
Depreciation	73	66
<i>Amortisation of:</i>		
Acquired intangibles	2	3
Other intangible assets	14	18
Amortisation	16	21
Gain on significant legal proceedings	-	(44)
<i>Major impairment and restructuring charges:</i>		
Property, plant and equipment	-	216
Right-of-use assets	-	5
Other intangible assets	-	78
Trade and other receivables	-	15
Impairment losses	-	314
Restructuring charges	9	-
Major impairment and restructuring charges	9	314

* Restated to reflect classification of the Health segment as discontinued operations (see note 10).

Major impairment and restructuring charges

Major impairment and restructuring charges are shown separately on the face of the income statement and excluded from underlying operating profit, see note 17.

Restructuring charges - the group incurred £5 million in respect of the transformation initiatives announced in May 2022, largely comprising of redundancy costs, and £4 million for other business exit related costs.

In the prior period, the group incurred impairment charges of £314 million in relation to the group's decision to pursue the sale of all or parts of Battery Materials, the charge was based on our estimate of the recoverable amount at that time. The process to dispose of the remaining assets in Battery Materials is ongoing.

Notes to the Accounts

for the six months ended 30th September 2022

5 Tax expense

The charge for taxation at the half year ended 30th September 2022 is £38 million (1H 2021/22 restated: £20 million), an effective tax rate of 20.3%. The tax charge on underlying profit before tax was £40 million, an effective tax rate of 19.9%, an increase from 16.0% in the half year ended 30th September 2021. The tax rate on underlying profit for the year ending 31st March 2023 is estimated to be 19% (2021/22: 17%). The tax charge for the prior year has been restated above to reflect the classification of the Health business as discontinued operations.

6 Earnings / (loss) per ordinary share

	Six months ended	
	30.9.22	30.9.21
	pence	pence
Basic	87.5	(14.8)
Diluted	87.1	(14.8)
Basic from continuing operations	82.0	(12.4)
Diluted from continuing operations	81.7	(12.4)

Earnings / (loss) per ordinary share have been calculated by dividing profit / (loss) for the period by the weighted average number of shares in issue during the period.

See note 10 for the earnings per ordinary share from discontinued operations.

	Six months ended	
	30.9.22	30.9.21
Weighted average number of shares in issue		
Basic	183,006,485	192,829,279
Dilution for long term incentive plans	665,316	687,371
Diluted	183,671,801	193,516,650

7 Dividends

An interim dividend of 22.00 pence (1H 2021/22 22.00 pence) per ordinary share has been proposed by the board which will be paid on 1st February 2023 to shareholders on the register at the close of business on 9th December 2022. The estimated amount to be paid is £42 million (1H 2021/22 £42 million) and has not been recognised in these accounts.

	Six months ended	
	30.9.22	30.9.21
	£ million	£ million
2020/21 final ordinary dividend paid — 50.00 pence per share	-	96
2021/22 final ordinary dividend paid — 55.00 pence per share	100	-
Total dividends	100	96

Notes to the Accounts

for the six months ended 30th September 2022

8 Property, plant and equipment

	Freehold land and buildings £ million	Leasehold improvements £ million	Plant and machinery £ million	Assets in the course of construction £ million	Total £ million
Cost					
At 1 st April 2022	570	27	2,055	304	2,956
Additions	3	-	14	88	105
Transfers from assets in the course of construction	17	1	59	(77)	-
Transferred to assets classified as held for sale (note 10)	-	-	(11)	-	(11)
Disposals	-	-	(11)	-	(11)
Exchange adjustments	30	4	123	14	171
At 30 th September 2022	620	32	2,229	329	3,210
Accumulated depreciation and impairment					
At 1 st April 2022	265	14	1,424	15	1,718
Charge for the period	8	1	58	-	67
Transferred to assets classified as held for sale (note 10)	-	-	(9)	-	(9)
Disposals	-	-	(11)	-	(11)
Exchange adjustments	13	2	86	-	101
At 30 th September 2022	286	17	1,548	15	1,866
Carrying amount at 30th September 2022	334	15	681	314	1,344
Carrying amount at 1 st April 2022	305	13	631	289	1,238

Assets classified as held for sale relate to Piezo Products, see note 10.

Notes to the Accounts

for the six months ended 30th September 2022

9 Other intangible assets

	Customer contracts and relationships £ million	Computer software £ million	Patents, trademarks and licences £ million	Acquired research and technology £ million	Development expenditure £ million	Total £ million
Cost						
At 1 st April 2022	132	419	47	37	135	770
Additions	-	23	2	-	-	25
Transferred to assets classified as held for sale (note 10)	(13)	-	-	-	-	(13)
Disposals	-	-	(6)	-	-	(6)
Exchange adjustments	4	1	2	1	-	8
At 30 th September 2022	123	443	45	38	135	784
Accumulated amortisation and impairment						
At 1 st April 2022	112	178	44	36	133	503
Charge for the period	2	14	-	-	-	16
Transferred to assets classified as held for sale (note 10)	(13)	-	-	-	-	(13)
Disposals	-	-	(6)	-	-	(6)
Exchange adjustments	4	1	2	1	-	8
At 30 th September 2022	105	193	40	37	133	508
Carrying amount at 30th September 2022	18	250	5	1	2	276
Carrying amount at 1 st April 2022	20	241	3	1	2	267

Assets classified as held for sale relate to Piezo Products, see note 10.

Notes to the Accounts

for the six months ended 30th September 2022

10 Discontinued operations and assets and liabilities classified as held for sale

The group strategically drives for efficiency and disciplined capital allocation to enhance returns, as such we continue to actively manage our portfolio. In line with this strategy and to focus on our core businesses, during the period we completed the sale of our Health and Battery Materials UK businesses. Refer to note 11 for further information on these disposals.

The Health segment is classified as a discontinued operation and presented separately in the consolidated income statement. The Health segment was not previously classified as held-for-sale or as a discontinued operation for the period to 30th September 2021, although was in the financial statements for the year to 31st March 2022. The comparative income statement and statement of total comprehensive income has been restated to show the discontinued operations separately from continuing operations.

Financial information relating to the Health discontinued operations for the period to disposal date (1st June 2022) is set out below. The 30% equity interest in the business is equity accounted as an investment in associate.

	Six months ended	
	30.9.22	30.9.21
	£ million	£ million
Revenue	35	83
Expenses	(40)	(88)
Loss before tax from discontinued operations	(5)	(5)
Tax credit	1	1
Loss after tax from discontinued operations	(4)	(4)
Profit on disposal of discontinued operations after tax (see note 11)*	14	-
Profit / (loss) from discontinued operations	10	(4)
Exchange differences on translation of discontinued operations	(32)	4
Other comprehensive income from discontinued operations	(32)	4
Total comprehensive income from discontinued operations	(22)	-
Net cash inflow from operating activities	13	14
Net cash outflow from investing activities	(5)	(13)
Net cash outflow from financing activities	-	(2)
Net increase / (decrease) in cash generated by the discontinued operations	8	(1)
	pence	pence
Profit / (loss) per ordinary share from discontinued operations		
Basic profit / (loss) per ordinary share from discontinued operations	5.4	(2.4)
Diluted profit / (loss) per ordinary share from discontinued operations	5.4	(2.4)

* The profit on disposal of discontinued operations after tax includes a tax credit of £3 million.

As at 30th September 2022, Piezo Products and remaining Battery Materials assets are classified as held for sale. Assets held for sale as at 30th September 2022 are £48 million, comprised of £28 million property, plant and equipment, £4 million goodwill, £7 million inventories and £9 million trade and other receivables. Liabilities classified as held for sale as at 30th September 2022 are £10 million comprised of £6 million trade and other payables and £4 million employee benefit obligations.

Notes to the Accounts

for the six months ended 30th September 2022

11 Disposals

Health

On 1st June 2022, the group completed the sale of its Health business for a gross consideration of £325 million. This gross consideration is comprised of £150 million cash, a £50 million vendor loan note (which we have recorded as an other receivable), £75 million in the form of shares which constitutes a 30% equity interest in the business (which we have equity accounted for as an investment in associate) and £50 million in contingent consideration (which we have recognised at a fair value of £nil). After adjusting for working capital and an additional £3 million cash receipt due to cash in business upon disposal, the net consideration was £272 million. The business was disclosed as a disposal group held for sale as at 31st March 2022.

Battery Materials

On 26th May 2022, the group completed the sale of part of its Battery Materials UK business for a cash consideration of £20 million. The business was disclosed as a disposal group held for sale as at 31st March 2022.

30th September 2022	Health	Battery	Total
	£ million	Materials	£ million
	£ million	£ million	£ million
Proceeds			
Cash consideration	153	20	173
Cash and cash equivalents disposed	(5)	-	(5)
Net cash consideration	148	20	168
Disposal costs paid	(1)	(1)	(2)
Net cash inflow	147	19	166
Assets and liabilities disposed			
Non-current assets			
Property, plant and equipment	105	14	119
Right-of-use assets	1	-	1
Other intangible assets	42	10	52
Deferred income tax assets	13	-	13
Current assets			
Inventories	142	-	142
Trade and other receivables	60	-	60
Cash and cash equivalents	5	-	5
Current liabilities			
Trade and other payables	(71)	-	(71)
Lease liabilities	(1)	(5)	(6)
Provisions	(1)	-	(1)
Non-current liabilities			
Lease liabilities	(2)	-	(2)
Provisions	(1)	-	(1)
Net assets disposed	292	19	311
Cash consideration	153	20	173
Non-cash consideration	119	-	119
Less: carrying amount of net assets sold	(292)	(19)	(311)
Less: disposal costs	(1)	(1)	(2)
Cumulative currency translation gain recycled from other comprehensive income	32	-	32
Profit recognised in the income statement	11	-	11

Notes to the Accounts

for the six months ended 30th September 2022

12 Post-employment benefits

Background

The group operates a number of post-employment benefit plans around the world, the forms and benefits of which vary with conditions and practices in the countries concerned. The major defined benefit plans are pension plans and post-retirement medical plans in the UK and the US.

Financial assumptions

The financial assumptions for the major plans are as follows:

	30.9.22		31.3.22	
	UK plan	US plans	UK plan	US plans
	%	%	%	%
First year's rate of increase in salaries	4.75	4.00	3.85	3.00
Ultimate rate of increase in salaries	3.75	3.00	3.85	3.00
Rate of increase in pensions in payment	3.25	-	3.20	-
Discount rate	5.10	5.40	2.80	3.70
Inflation	-	2.50	-	2.20
– UK Retail Prices Index (RPI)	3.50	-	3.60	-
– UK Consumer Prices Index (CPI)	3.00	-	3.10	-
Current medical benefits cost trend rate	5.40	-	5.40	-
Ultimate medical benefits cost trend rate	5.40	-	5.40	-

The financial assumptions for the other plans are reviewed and updated annually.

Financial information

Movements in the net post-employment benefit assets and liabilities, including reimbursement rights, were:

	UK pension - legacy section £ million	UK pension - cash balance section £ million	UK post-retirement medical benefits £ million	US pensions £ million	US post-retirement medical benefits £ million	Other £ million	Total £ million
At 1 st April 2022	351	(18)	(9)	(2)	(13)	(26)	283
Current service cost - in operating profit	(2)	(11)	-	(3)	-	-	(16)
Past service credit - in operating profit	(1)	-	-	4	-	-	3
Administrative expenses - in operating profit	(2)	-	-	(1)	-	-	(3)
Interest	5	-	-	-	-	-	5
Remeasurements	(125)	20	-	(12)	2	-	(115)
Company contributions	3	10	-	4	-	1	18
Benefits paid	-	-	-	-	1	-	1
Exchange	-	-	-	(2)	(2)	(1)	(5)
At 30th September 2022	229	1	(9)	(12)	(12)	(26)	171

Notes to the Accounts

for the six months ended 30th September 2022

12 Post-employment benefits (continued)

Financial information (continued)

The post-employment benefit assets and liabilities are included in the balance sheet as follows:

	30.9.22	30.9.22	31.3.22	31.3.22
	Post- employment benefit net assets £ million	Employee benefit net obligations £ million	Post- employment benefit net assets £ million	Employee benefit net obligations £ million
UK pension - legacy section	229	-	351	-
UK pension - cash balance section	1	-	-	(18)
UK post-retirement medical benefits	-	(9)	-	(9)
US pensions	-	(12)	-	(2)
US post-retirement medical benefits	-	(12)	-	(13)
Other	1	(27)	1	(27)
Total post-employment plans	231	(60)	352	(69)
Other long-term employee benefits		(3)		(3)
Post-employment plan obligations classified as held for sale		4		
Total long-term employee benefit obligations		(59)		(72)

13 Fair values

Fair value hierarchy

Fair values are measured using a hierarchy where the inputs are:

- Level 1 – quoted prices in active markets for identical assets or liabilities.
- Level 2 – not level 1 but are observable for that asset or liability either directly or indirectly.
- Level 3 – not based on observable market data (unobservable).

Fair value of financial instruments

Certain of the group’s financial instruments are held at fair value. The fair value of a financial instrument is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the balance sheet date.

The fair value of forward foreign exchange contracts, interest rate swaps, forward precious metal price contracts and currency swaps is estimated by discounting the future contractual cash flows using forward exchange rates, interest rates and prices at the balance sheet date.

The fair value of trade and other receivables measured at fair value is the face value of the receivable less the estimated costs of converting the receivable into cash.

The fair value of money market funds is calculated by multiplying the net asset value per share by the investment held at the balance sheet date.

There were no transfers of any financial instrument between the levels of the fair value hierarchy during the current or prior periods.

Notes to the Accounts

for the six months ended 30th September 2022

13 Fair values (continued)

	30.9.22 £ million	31.3.22 £ million	Fair value hierarchy level
Financial instruments measured at fair value			
Non-current			
Investments at fair value through other comprehensive income ¹	58	45	1
Interest rate swaps - assets	31	11	2
Interest rate swaps - liabilities	(14)	(2)	2
Borrowings and related swaps	(7)	(2)	2
Other financial liabilities	(3)	(12)	2
Current			
Trade receivables ³	439	492	2
Other receivables ⁴	63	44	2
Cash and cash equivalents - money market funds	253	137	2
Other financial assets ²	52	27	2
Interest rate swaps	-	1	2
Other financial liabilities ²	(84)	(44)	2

	30.9.22 £ million	31.3.22 £ million	Fair value hierarchy level
Financial instruments not measured at fair value			
Non-current			
Borrowings and related swaps	(1,106)	(897)	-
Lease liabilities	(41)	(40)	-
Current			
Amounts receivable under precious metal sale and repurchase agreements	131	114	-
Amounts payable under precious metal sale and repurchase agreements	(1,052)	(793)	-
Cash and cash equivalents - cash and deposits	161	254	-
Cash and cash equivalents - bank overdrafts	(45)	(37)	-
Borrowings and related swaps	(183)	(265)	-
Lease liabilities	(12)	(10)	-

¹ Investments at fair value through other comprehensive income are quoted bonds purchased to fund pension deficit (£45 million) and an investment held at fair value through other comprehensive income (£13 million).

² Other financial assets includes forward foreign exchange contracts (£7 million) and currency swaps (£45 million). Other financial liabilities includes forward foreign exchange contracts (£47 million), forward precious metal price contracts (£9 million) and currency swaps (£28 million).

³ Trade receivables held in a part of the group with a business model to hold trade receivables for collection or sale. The remainder of the group operates a hold to collect business model and receives the face value, plus relevant interest, of its trade receivables from the counterparty without otherwise exchanging or disposing of such instruments.

⁴ Other receivables with cash flows that do not represent solely the payment of principal and interest.

Notes to the Accounts

for the six months ended 30th September 2022

13 Fair values (continued)

The fair value of financial instruments, excluding accrued interest, is approximately equal to book value except for:

	30.9.22		31.3.22	
	Carrying amount £ million	Fair value £ million	Carrying amount £ million	Fair value £ million
US Dollar Bonds 2023, 2025, 2027, 2028, 2029 and 2030	(720)	(675)	(688)	(662)
Euro Bonds 2023, 2025, 2028, 2030 and 2032	(384)	(347)	(176)	(179)
Sterling Bonds 2024, 2025 and 2029	(145)	(132)	(110)	(107)
KfW US Dollar Loan 2024	(45)	(43)	(38)	(36)

The fair values are calculated using level 2 inputs by discounting future cash flows to net present values using appropriate market interest rates prevailing at the period end.

14 Precious metal leases

The group leases precious metals to fund temporary peaks in metal requirements provided market conditions allow. These leases are from banks for specified periods (less than 12 months) and the group pays a fee which is expensed on a straight-line basis over the lease term in finance costs. The group holds sufficient precious metal inventories to meet all the obligations under these lease arrangements as they fall due. At 30th September 2022, precious metal leases were £129 million at closing prices (31st March 2022: £140 million). Precious metal leases are not accounted for under IFRS 16 as they qualify as short term leases.

15 Contingent liabilities

The group is involved in various disputes and claims which arise from time to time in the course of its business including, for example, in relation to commercial matters, product quality or liability, employee matters and tax audits. The group is also involved from time to time in the course of its business in legal proceedings and actions, engagement with regulatory authorities and in dispute resolution processes. These are reviewed on a regular basis and, where possible, an estimate is made of the potential financial impact on the group. In appropriate cases a provision is recognised based on advice, best estimates and management judgement. Where it is too early to determine the likely outcome of these matters, no provision is made. Whilst the group cannot predict the outcome of any current or future such matters with any certainty, it currently believes the likelihood of any material liabilities to be low, and that such liabilities, if any, will not have a material adverse effect on its consolidated income, financial position or cash flows.

As previously disclosed, the group has been informed by a customer of failures in certain engine systems for which the group supplied a particular coated substrate as a component for that customer's emissions after-treatment systems. The reported failures have not been demonstrated to be due to the coated substrate supplied by the group. The group has not been contacted by any regulatory authority about these engine system failures. Having reviewed its contractual obligations and the information currently available to it, the group believes it has defensible warranty positions in respect of this matter. If required, it will vigorously assert its available contractual protections and defences. The outcome of any discussions relating to this matter is not certain, nor is the group able to make a reliable estimate of the possible financial impact at this stage, if any.

The group works with all its customers to ensure appropriate product quality and we have not received claims in respect of our emissions after treatment components from this or any other customer. Our vision is for a world that's cleaner and healthier; today and for future generations. We are committed to enabling improving air quality and we work constructively with our customers to achieve this.

Notes to the Accounts

for the six months ended 30th September 2022

16 Transactions with related parties

There have been no material changes in related party relationships in the six months ended 30th September 2022 and no related party transactions have taken place which have materially affected the financial position or performance of the group during that period.

17 Non-GAAP measures

The group uses various measures to manage its business which are not defined by generally accepted accounting principles (GAAP). The group's management believes these measures provide valuable additional information to users of the accounts in understanding the group's performance. Certain of these measures are financial Key Performance Indicators which measure progress against our strategy.

All non-GAAP measures are on a continuing operations basis.

Notes to the Accounts

for the six months ended 30th September 2022

17 Non-GAAP measures (continued)

Definitions

Measure	Definition	Purpose
Sales ¹	Revenue excluding sales of precious metals to customers and the precious metal content of products sold to customers.	Provides a better measure of the growth of the group as revenue can be heavily distorted by year on year fluctuations in the market prices of precious metals and, in many cases, the value of precious metals is passed directly on to customers.
Underlying operating profit ²	Operating profit excluding non-underlying items.	Provides a measure of operating profitability that is comparable over time.
Underlying operating profit margin ^{1,2}	Underlying operating profit divided by sales.	Provides a measure of how we convert our sales into underlying operating profit and the efficiency of our business.
Underlying profit before tax ²	Profit before tax excluding non-underlying items.	Provides a measure of profitability that is comparable over time.
Underlying profit for the year ²	Profit for the year excluding non-underlying items and related tax effects.	Provides a measure of profitability that is comparable over time.
Underlying earnings per share ^{1,2}	Underlying profit for the year divided by the weighted average number of shares in issue.	Our principal measure used to assess the overall profitability of the group.
Return on Invested Capital (ROIC) ¹	Annualised underlying operating profit divided by the 12 month average equity, excluding post tax pension net assets, plus average net debt for the same period.	Provides a measure of the group's efficiency in allocating the capital under its control to profitable investments.
Average working capital days (excluding precious metals) ¹	Monthly average of non-precious metal related inventories, trade and other receivables and trade and other payables (including any classified as held for sale) divided by sales for the last three months multiplied by 90 days.	Provides a measure of efficiency in the business with lower days driving higher returns and a healthier liquidity position for the group.
Free cash flow	Net cash flow from operating activities after net interest paid, net purchases of non-current assets and investments, proceeds from disposal of businesses, dividends received from joint ventures and associates and the principal element of lease payments.	Provides a measure of the cash the group generates through its operations, less capital expenditure.
Net debt (including post tax pension deficits) to underlying EBITDA	Net debt, including post tax pension deficits and quoted bonds purchased to fund the UK pension (excluded when the UK pension plan is in surplus) divided by underlying EBITDA for the same period.	Provides a measure of the group's ability to repay its debt. The group has a long-term target of net debt (including post tax pension deficits) to underlying EBITDA of between 1.5 and 2.0 times, although in any given year it may fall outside this range depending on future plans.

¹ Key Performance Indicator

² Underlying profit measures are before profit or loss on disposal of businesses, gain or loss on significant legal proceedings, together with associated legal costs, amortisation of acquired intangibles, major impairment and restructuring charges, share of profits or losses from non-strategic equity investments and, where relevant, related tax effects. These items have been excluded by management as they are not deemed to be relevant to an understanding of the underlying performance of the business.

Notes to the Accounts

for the six months ended 30th September 2022

17 Non-GAAP measures (continued)

Reconciliations to GAAP measures

Sales

See note 2.

Underlying profit measures

Six months ended 30th September 2022

Underlying
Amortisation of acquired intangibles
Major impairment and restructuring charges¹
Share of losses of joint ventures and associates

	Operating profit £ million	Profit before tax £ million	Tax expense £ million	Profit for the period £ million
	222	201	(40)	161
	(2)	(2)	-	(2)
	(9)	(9)	2	(7)
	-	(2)	-	(2)
Reported	211	188	(38)	150

Reported

¹ For further detail please see note 4.

Six months ended 30th September 2021*

Underlying
Gain on significant legal proceedings
Amortisation of acquired intangibles
Major impairment
Reported

	Operating profit £ million	Profit before tax £ million	Tax expense £ million	Profit for the period £ million
	297	269	(43)	226
	44	44	(4)	40
	(3)	(3)	-	(3)
	(314)	(314)	27	(287)
Reported	24	(4)	(20)	(24)

Underlying earnings per share

Underlying profit for the period (£ million)
Weighted average number of shares in issue (million)
Underlying earnings per share (pence)

Six months ended	
30.9.22	30.9.21*
161	226
183.0	192.8
88.2	117.1

* Restated to reflect classification of the Health segment as discontinued operations (see note 10).

Notes to the Accounts

for the six months ended 30th September 2022

17 Non-GAAP measures (continued)

Return on Invested Capital (ROIC)

	Period ended 30.9.22 £ million	Year ended 31.3.22 £ million*	Period ended 30.9.21 £ million*
Annualised underlying operating profit	479	553	634
Average net debt	979	877	1,069
Average equity	2,471	2,467	2,467
Average capital employed	3,450	3,344	3,536
Less: Average pension net assets	(291)	(221)	(206)
Less: Average related deferred taxation	71	48	37
Average capital employed (excluding post tax pension net assets)	3,230	3,171	3,367
ROIC (excluding post tax pension net assets)	14.7%	17.4%	18.8%
ROIC	13.9%	16.5%	17.9%

Average working capital days (excluding precious metals)

	Six months ended 30.9.22 £ million	Year ended 31.3.22 £ million*	Six months ended 30.9.21 £ million*
Inventories	1,781	1,549	1,879
Trade and other receivables	1,881	1,796	1,847
Trade and other payables	(2,567)	(2,563)	(2,994)
	1,095	782	732
Working capital balances classified as held for sale	10	-	163
Less: Working capital balances relating to discontinued operations	-	-	(138)
Total working capital	1,105	782	757
Less: Precious metal working capital	(502)	(562)	(356)
Add: Precious metal working capital relating to discontinued operations	-	-	11
Working capital (excluding precious metals)	603	220	412
Average working capital days (excluding precious metals)	35	36	30

Free cash flow from continuing operations

	Six months ended	
	30.9.22 £ million	30.9.21 £ million*
Net cash inflow from operating activities	145	412
Interest received	11	6
Interest paid	(38)	(40)
Purchases of property, plant and equipment	(111)	(141)
Purchases of intangible assets	(26)	(43)
Proceeds from sale of non-current assets	-	2
Proceeds from sale of businesses	166	-
Principal element of lease payments	(6)	(7)
Less: Net cash (inflow) / outflow from discontinued operations	(8)	1
Free cash flow	133	190

* Restated to reflect classification of the Health segment as discontinued operations (see note 10).

Notes to the Accounts

for the six months ended 30th September 2022

17 Non-GAAP measures (continued)

Net debt (including post-tax pension deficits) to underlying EBITDA

	30.9.22 £ million	31.3.22 £ million*	30.9.21 £ million*
Cash and deposits	161	254	223
Money market funds	253	137	523
Bank overdrafts	(45)	(37)	(42)
Bank overdrafts transferred to liabilities classified as held for sale	-	(8)	-
Cash and cash equivalents	369	346	704
Less: Cash and cash equivalents - bank overdrafts from discontinued operations	-	8	5
Cash and cash equivalents from continuing operations	369	354	709
Interest rate swaps - current assets	-	1	3
Interest rate swaps - non-current assets	31	11	17
Interest rate swaps - non-current liabilities	(14)	(2)	-
Borrowings and related swaps - current	(183)	(265)	(309)
Borrowings and related swaps - non-current	(1,113)	(899)	(1,054)
Lease liabilities - current	(12)	(10)	(11)
Lease liabilities - non-current	(41)	(40)	(48)
Lease liabilities - current - transferred to liabilities classified as held for sale	-	(2)	-
Lease liabilities - non-current - transferred to liabilities classified as held for sale	-	(7)	(1)
Less: Lease liabilities relating to discontinued operations	-	3	3
Net debt	(963)	(856)	(691)
Increase / (decrease) in cash and cash equivalents	9	(205)	156
Less: (Increase) / decrease in cash and cash equivalents from discontinued operations	(8)	3	1
Less: (Increase) / decrease in borrowings	(13)	131	(63)
Less: Principal element of lease payments	6	14	7
Less: Principal element of lease payments from discontinued operations	-	(1)	-
(Decrease) / increase in net debt resulting from cash flows	(6)	(58)	101
New leases, remeasurements and modifications	(6)	(9)	(4)
Less: New leases, remeasurements and modifications from discontinued operations	6	3	2
Exchange differences on net debt	(117)	(24)	(20)
Other non-cash movements	16	2	-
Movement in net debt	(107)	(86)	79
Net debt at beginning of year	(856)	(770)	(770)
Net debt at end of year	(963)	(856)	(691)
Net debt	(963)	(856)	(691)
Add: Pension deficits	(39)	(29)	(47)
Add: Related deferred tax	7	4	8
Net debt (including post tax pension deficits)	(995)	(881)	(730)
Underlying EBITDA for this period	309		382
Underlying EBITDA for prior year	724		633
Less: Underlying EBITDA for prior half year	(382)		(209)
Annualised underlying EBITDA	651	724	806
Net debt (including post tax pension deficits) to underlying EBITDA	1.5	1.2	0.9

* Restated to reflect classification of the Health segment as discontinued operations (see note 10).

Notes to the Accounts

for the six months ended 30th September 2022

17 Non-GAAP measures (continued)

	30.9.22 £ million	31.3.22 £ million*	30.9.21 £ million*
Underlying EBITDA	309	724	382
Depreciation and amortisation	(89)	(177)	(88)
Gains and losses on significant legal proceedings	-	42	44
Major impairment and restructuring charges	(9)	(440)	(314)
Profit on disposal of businesses	-	106	-
Finance costs	(48)	(101)	(37)
Finance income	27	41	9
Share of losses of joint ventures and associates	(2)	-	-
Income tax expense	(38)	(79)	(20)
Profit for the period from continuing operations	150	116	(24)

* Restated to reflect classification of the Health segment as discontinued operations (see note 10).

Notes to the Accounts

for the six months ended 30th September 2022

2022**8th December**

Ex dividend date

9th December

Interim dividend record date

2023**1st February**

Payment of interim dividend

25th May

Announcement of results for the year ending 31st March 2023

20th July

132nd Annual General Meeting (AGM)

Cautionary Statement

This announcement contains forward looking statements that are subject to risk factors associated with, amongst other things, the economic and business circumstances occurring from time to time in the countries and businesses in which the group operates. It is believed that the expectations reflected in this announcement are reasonable but they may be affected by a wide range of variables which could cause actual results to differ materially from those currently anticipated.

Johnson Matthey Plc

Registered Office: 5th Floor, 25 Farringdon Street, London EC4A 4AB

Telephone: +44 (0) 20 7269 8400

Fax: +44 (0) 20 7269 8433

Internet address: www.matthey.com

E-mail: [jmpmr@matthey.com](mailto:jmpr@matthey.com)

Registered in England – Number 33774

LEI code: 2138001AVBSD1HSC6Z10

Registrars

Equiniti, Aspect House, Spencer Road, Lancing, West Sussex BN99 6DA

Telephone: 0371 384 2344 (in the UK) *

+44 (0) 121 415 7047 (outside the UK)

Internet address: www.shareview.co.uk

* Lines are open 8.30am to 5.30pm Monday to Friday excluding public holidays in England and Wales.