

Neo Performance Materials Inc.

NEO-TSX

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Special Situations

October 2, 2018 | 5:16 am EDT

Company Report - Initiation of Coverage

Strong Buy 1
C\$25.00 target price

Rev Up Your Investment Engine

Recommendation

You may wonder why we took inspiration from car industry lingo dating back a century for the title of our initiation of coverage (IOC) report on Neo Performance Materials. For one, it conveniently and appropriately conveys how we believe this special situation can deliver above-average returns over the next 12-18 months. Just as importantly, it intimates how closely linked the firm is to the global automotive sector's revolution. Because Neo's products today are increasingly found in hybrid vehicle power steering systems, seat motors, fuel pumps, folding mirrors and trunk door lifts, we see its stock as a smart play on the electrification of vehicles. Based on our analysis—and our previous experience covering Neo's predecessor—we are launching coverage of the stock with Strong Buy rating and a target price of C\$25.00.

Analysis

- ◆ **Undisputed global leader in rare earth based functional materials.** Neo boasts years of experience formulating critical compounds used in everything from electric vehicles to electronics and jet engines. As the only non-Chinese licensed processor of rare earths in China, Neo also benefits from its proximity to the region's massive deposits and lower operating cost structure. Just how strategic are Neo's engineered products? Just ask the Trump US administration, which recently shelved its plan to levy tariffs on the critical collection of minerals.
- ◆ **Integrated development efforts paving way for high single-digit organic growth.** Through such initiatives Neo is embedding R&D teams with its customers' customers and helping formulate the next "it" product or application. We are most bullish on MQU, a high performance magnetic powder born out of collaboration with Daido Electronics and Honda, which is now used to power the traction motors of the Accord, Insight, and Fit hybrid models in certain markets. There is also strong potential in the massive global market for water pumps, where smaller and more efficient motors are the answer to meeting ever stricter environmental regulations.
- ◆ **Value-add reflected in healthy margins.** Neo's move up the complexity curve is not only affording it better pricing power, but also giving it the ability to subject more of its volumes to pass-through pricing mechanisms. While that won't fully eliminate Neo's exposure to cyclical swings in rare earth and rare metal prices, it should go a long way in improving and protecting the firm's margins over time.

Valuation

We assume Neo's EV/EBITDA multiple using our 2019 forecasts will expand from 5.2 times to 8.0 times in the next 12 months. Said target multiple is in-line with the five-year average forward multiple for suppliers of advanced materials and chemicals. In our view, it is reasonable to expect Neo's valuation to approach those of its closest comps given its unique, defensible market position and our assessment of its FCF potential.

EPS	1Q Mar	2Q Jun	3Q Sep	4Q Dec	Full Year	Revenues (mln)	EBITDA (mln)
2017A	US\$0.35	US\$0.30	US\$0.24	US\$0.09	US\$0.98	US\$434	US\$68
2018E	0.25A	0.31A	0.27	0.24	1.07	466	73
2019E	0.29	0.28	0.31	0.28	1.16	493	80

Source: Raymond James Ltd., Thomson One

Current Price (Sep-28-18)	C\$18.02
Total Return to Target	41%
52-Week Range	C\$18.65 - C\$13.87
Suitability	High Risk/Growth

Market Data

Market Capitalization (mln)	US\$569
Current Net Debt (mln)	-US\$75
Enterprise Value (mln)	US\$499
Shares Outstanding (mln, f.d.)	40.5
10 Day Avg Daily Volume (000s)	10
Dividend/Yield	C\$0.38/2.1%

Key Financial Metrics

	2017A	2018E	2019E
EPS C\$	C\$1.27	C\$1.34	C\$1.46
P/E	14.2x	13.5x	12.4x
EV/EBITDA	7.3x	6.8x	6.2x
EBITDA Margin (%)	15.6%	15.7%	16.3%
FCF Conversion	81.9%	81.6%	83.2%
FCF Payout Ratio	44.8%	22.7%	22.7%
Net Debt/Equity			NM
Net Debt/EBITDA			NM
BVPS			US\$11.78

Company Description

Neo Performance Materials Inc. is a leading global manufacturer of functional materials derived from rare earth elements operating through three segments: Magnequench, Chemicals & Oxides, and Rare Metals.

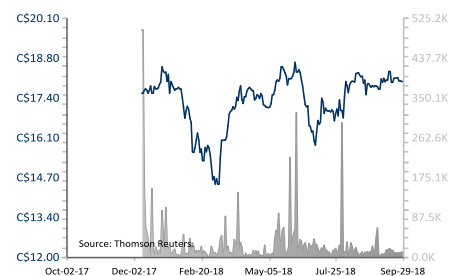


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Investment Overview

We are initiating coverage of Neo Performance Materials, a company we are no strangers with, with a Strong Buy rating. As we will expound throughout this report, the firm boasts several of same investment attributes that once attracted us to its predecessor—a leading and defensible position in the rapidly growing market for advanced materials, solid growth prospects and outstanding free cash flow potential. Where Neo differs is in its significantly reduced risk profile post patent expiry, ongoing diversification efforts, and heightened collaborative approach to research and development. Key considerations supporting our constructive recommendation on Neo are as follows:

- ◆ **There is only one Neo.** It draws on 25 years of experience engineering cutting-edge materials that help make smaller, better, lighter and more environmentally-friendly applications possible. The firm works directly with its customers and, increasingly, its customers' customers to stay ahead of trends and create the new standards of technology. What's more, Neo is the only non-Chinese company operating within close proximity of the nation's substantial rare earth deposits, giving it significant cost advantages over equally technically savvy competitors.
- ◆ **What better way to play to auto sector's transformation?** We see the firm's top-line growing at high single to low double-digit rates as the electrification of vehicles goes mainstream and emission targets become ever stricter. We highlight that Neo's proprietary rare earth based magnetic powders form the basis of a dozen car applications—from electric and hybrid vehicle traction motors to fuel pumps and power seats, windows and trunks. Other Neo functional materials allow for significant reductions in greenhouse gases emanating from the one billion gasoline-powered vehicles currently in circulation globally. This bodes well for Neo, which ranks as a qualified supplier to all leading manufacturers of auto catalysts, including Umicore, Johnson Matthey, and BASF.
- ◆ **Unique proposition facilitates solid, more predictable margins.** A sought-after product offering is not only resulting in healthy pricing across Neo's operating segments, but also giving the firm power to lock in margins for its magnetic powder and catalyst-related volumes. We expect these pass-through arrangements to effect better earnings visibility for the firm irrespective of inevitable fluctuations in input prices.
- ◆ **Management has seen it all (and learned from it).** Investors ought to rest assured Neo's C-suite is stacked with seasoned veterans who understand what makes the company and its industry tick. Just as importantly, they fully appreciate what makes a public entity successful (and not so). Based on our analysis, we believe management stands to create tremendous value for its shareholders.
- ◆ **Balance sheet locked and loaded.** With ample cash, zero debt, and healthy free cash flow potential, Neo has ample flexibility to deploy capital accretively. We would be remiss to predict a game-changing transaction for this niche special situation, but still see potential for each operating segment to add incremental value with tuck-in acquisitions. While we have not factored this potential into our neo model, history tells us we may soon have to.
- ◆ **We see Neo building on a very strong 2017.** We forecast current year revenue and adjusted EBITDA growth rates of 7% and 8%, respectively, as favourable pricing and product mix compensate for lower tonnage versus last year. We are calling for a different year in 2019 since our expectations for above-average growth in Neo's new applications should positively impact volumes but skew average selling prices (ASPs) modestly lower. From an earnings per share standpoint, we model \$1.07 for 2018 and 1.16 for 2019, implying 9% year-over-year growth for both years.

Introduction

You may wonder why we took inspiration from car industry lingo dating back a century to coin the title of our initiation of coverage report on Neo Performance Materials. For one, it conveniently and effectively communicates how we believe this special situation can contribute above-average returns to a portfolio of small-cap stocks. Just as importantly for us, it intimates how closely linked the firm is to the global automotive sector’s revolution. Because Neo’s products today are increasingly found in traction motors for hybrid cars, power steering systems, fuel pumps, folding mirrors and trunk door lifts, we see its stock as a smart play on the electrification of vehicles.

Although Neo’s recent gains in the auto sector may appear to be fortuitously timed, to us nothing could be further from the truth. We argue they are the direct result of a leadership team hell-bent on driving product innovation in partnership with its customers and creating new market opportunities for the business. Whether in magnetics, engineered rare earth products or rare metals, this strong impetus for innovation has been a powerful and long-term differentiator for Neo and its operating subsidiaries. For proof, consider that wholly 20% of the firm’s current revenue is derived from products that did not exist five years ago. This gives us confidence the company can capitalize on, if not lead the next “it” product or application.

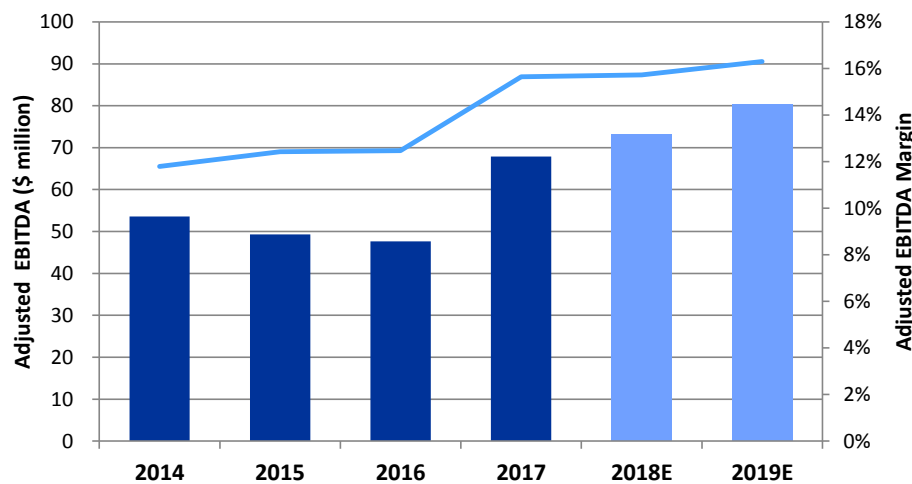
The biggest challenge with initiation of coverage reports is that it often requires analysts to produce a comprehensive analysis of a company when they know it the least. We do not have this problem or excuse, having followed the prior incarnation of this publicly-traded company from the spring of 2007 until its acquisition by Molycorp in the summer of 2012. After reacquainting ourselves with the story more recently, we can say with confidence that Neo did not let good crises go to waste. The business continued to innovate even as critical patents expired and falling commodity prices proved the death knell for Molycorp (and its flagship Mountain Pass rare earth mine). Under the new ownership of Oaktree Capital Management, which provided debtor-in-possession financing to its former parent, Neo returned to the public markets last fall as essentially the same strong cash-flowing organization we previously covered, but with the following distinctions:

- ◆ **Neo’s value-add push is yielding higher, less volatile margins.** Intensified collaborative research and development efforts have enabled the company to meet, if not anticipate the ever stricter applications requirements of its customers. Neo’s successful move up the complexity curve has also given it better bargaining power as well as the ability to subject more of its volumes to flow-through pricing mechanics, which help smooth out (but not completely eliminate) cyclical swings in rare earth and rare metal prices. The result has been gradually improving margins for the company post patent expiry.

A strong focus on innovation and collaboration has helped Neo...

...move up the complexity curve and produce better margins

Exhibit 1: Neo’s EBITDA Margins Have Increased Steadily since the Expiry of Critical Patents

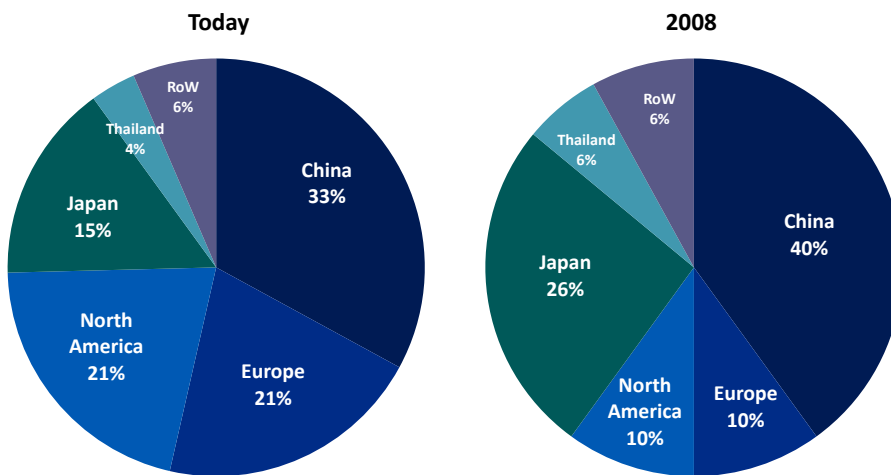


Source: Neo Performance Materials Inc., Raymond James Ltd.

- ◆ **Visibility on top-line growth has improved.** We recall vividly at the time of our launch that the emergence of solid state drives (SSDs) was rapidly eating away at the dominance of Neo's largest and most profitable end-market, hard disk drives (HDDs). Today, more and more Neo applications are making the gradual electrification of the two trillion dollar automobile industry possible.
- ◆ **Neo's business is more diversified than ever before.** The firm previously sourced 100% of its feedstock from Chinese deposits. Although Neo remains the only international entity allowed to process rare earth elements (REEs) in the country, giving it a cost advantage, it now secures materials conflict free from Africa, South America, and Asia. Better diversification also applies to Neo's customer base. North American and European customers account for about 42% of the company's revenue today, whereas that percentage was less than half that a decade ago.

Stronger tailwinds and a more diversified business model...

Exhibit 2: Neo's Top-Line is Less Dependent on China and Japan than 10 Years Ago



Source: Neo Performance Materials Inc., Raymond James Ltd.

- ◆ **The story has been significantly de-risked.** We remember many past conversations with portfolio managers who flagged the looming expiry of Neo's patents as a good enough reason to stay away from the stock. Some failed to appreciate it has forced management to stay steps ahead of the competition as it pertains to technological advances. Neo's patents may very well be a thing of the past, but the company is evidently passing the test of time.

What is painstakingly obvious to us, judging from the above, is that the quality of Neo's earnings has dramatically improved in the past decade, making it a much better investment than when we first covered it. This notwithstanding, its valuation has been seemingly frozen in time just as those of other comparable stocks have expanded with the broader markets. We do not profess Neo should ever trade in-line with the larger, more diversified companies we measure it against, but certainly expect the valuation gap to narrow as the company continues to grow profitably and the stock's liquidity improves over time.

...make Neo a better investment than ever before

Company Background

Company Profile

Toronto-based Neo Performance Materials ranks as one of the leading global manufacturers of functional materials derived from rare earth elements and other Rare Metals. Through its Magnequench, Chemicals and Oxides (C&O) and Rare Metals divisions, the firm collaborates closely with its customers (and its customers' customers) to engineer and develop magnetic powders, oxides and compounds that meet precise specifications. These innovative products, in turn, make a range of indispensable automotive, high-tech and household applications possible. Neo runs its research and development, processing, manufacturing and sales efforts from three continents and employs a workforce of about 1,850. It should be noted, however, that the majority reside in China, from where over 85% of all global rare earths are sourced. For the 12 months ended Jun-30-18, Neo generated revenue of \$457 million and adjusted EBITDA of \$67 million, for a healthy margin of 15%.

Neo is a pioneer in the development of advanced materials used in future-facing industries

History

Neo's roots trace back to **AMR Technologies**, which 25 years ago started processing REE-based specialty materials through two joint ventures in China—a country endowed with the world's largest, economically recoverable deposits and located in close proximity to key Asian tech markets. By 2004, the company had grown an estimated global market share of 20% for the proprietary materials, thanks to unrelenting business development efforts and a bit of luck. We say this because China's National Development and Reform Commission (NDRC) clamped down on the oversupplied sector after the late 1990s' tech boom went bust. It imposed strict controls on domestic production and, more notably, limited the processing of REEs to the only two international entities that previously performed these activities locally—AMR and Rhodia (now a subsidiary of the Belgian chemical company Solvay). The next several years saw the company move downstream with the transformational acquisition of Magnequench and its patented magnetic powders, rebrand as **Neo Material Technologies** (under the TSX symbol NEM) and strategically expand its global offering to include Rare Metals.

As Neo Material embarked on its latest diversification efforts in 2009, China started placing restrictions on the export of REEs. The move not only caused prices (and the company's profitability) to skyrocket, but also turned the mining of REEs outside China into an economically viable option. Enough so that US-based Molycorp raised sufficient capital from the public markets to reopen its Mountain Pass rare earth mine in California, buy a small processing plant in Silmet, Estonia and finally make a successful run at Neo Material in 2012 for C\$1.3 billion. The business continued to operate independently as a Molycorp subsidiary even as China eased its export restrictions in 2014 and rare earth prices returned to earth (no pun intended). This rendered the mining operations of Molycorp unprofitable, forcing it to file for Chapter 11 bankruptcy and restructure under the new ownership of its biggest lender, Oaktree. The reorganization meant separating the cash flowing Neo Material and Estonia operations from the Mountain Pass mine and appropriately recapitalized them for a future initial public offering. This transpired last December when 11.1 million common shares of the combined entity, re named **Neo Performance Materials**, were floated on the Toronto Stock Exchange under the NEO ticker at a price of C\$18.00 per share (for gross proceeds to Oaktree of C\$200 million).

Leadership & Ownership

Geoffrey Bedford, Neo's President and CEO, has worn different hats since joining in 1999. He moved from CFO at AMR Technologies to COO at Neo Material and CEO at Molycorp, giving him all the essential tools to create shareholder value. Supporting Mr. Bedford on the operating and financial fronts are COO Kevin Morris and CFO Rahim Suleman. Mr. Morris, a mechanical engineer, has held numerous roles within Molycorp and the reborn Neo entity since 2011, prior to which he practiced environmental law and civil litigation for 16 years at a California-based law firm. Mr. Suleman came on board last year after a successful tenure at Stackpole International, where he played an instrumental role in growing the supplier of engine and transmission pumps and powder metal components until its acquisition by Johnson Electric. At the divisional level are three executives who share a similar enthusiasm for and knowledge of the advanced materials business. Greg Kroll, with whom we've had ongoing discussions for over a decade, heads Magnequench, while Jeffrey Hogan and Frank Timmerman oversee the C&O and Rare Metals

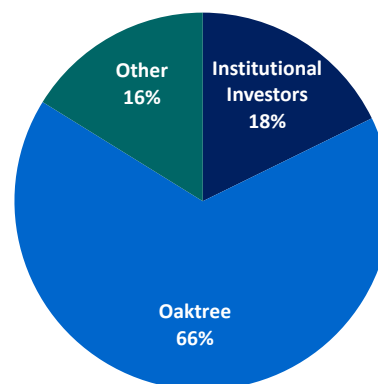
Management boasts a wealth of industry experience

segments, respectively. Together, these six individuals share 78 years of direct experience at Neo and its predecessors.

It is worth noting that Constantine Karayannopoulos, who successfully steered the first iteration of Neo before its takeout, chairs the publicly-listed company. Rounding out the Board are Mr. Bedford, two independent directors, and five principals from Oaktree—which retains 25.8 million of the 39.9 million outstanding shares of NEO for a majority ownership of 65%. Due to the nature of the private equity firm's involvement, management is incentivized through options and profit sharing mechanisms, but left holding very little stock. Using a current stock price of C\$18.02 and recognizing that about half of the 1.0 million options outstanding are in-the-money, the firm's market capitalization equates to C\$729 million. After adjusting for its net cash position and non-controlling interests, Neo's enterprise value approximates C\$639 million. This equates to a TTM EV/EBITDA multiple of 7.4 times versus an average of 9.6 times for a group of comparable advanced materials and specialty chemicals companies.

Exhibit 3: Oaktree Capital Remains a Significant Shareholder in Neo

Ownership Summary	Shares Owned	%
Management & Directors		
Geoffrey Bedford (President & CEO)	29,254	0.07%
Kevin D. Morris (EVP & COO)	18,580	0.05%
Rahim Suleman (EVP & CFO)	13,617	0.03%
Jeffrey R. Hogan (EVP of C&O)	11,336	0.03%
Gregory K. Kroll (EVP of Magnequench)	6,526	0.02%
Frank Timmerman (SVP of Rare Metals)	5,649	0.01%
Eric Noyrez (Lead Independent Director)	1,704	0.00%
Constantine E. Karayannopoulos (Chairman)	1,578	0.00%
	88,244	0.22%
Institutional Ownership		
CI Investments Inc.	1,417,626	3.56%
Dolefin SA	1,205,000	3.03%
Manulife Asset Management	1,041,159	2.62%
RBC Global Asset Management Inc.	784,100	1.97%
RobecoSAM AG	720,000	1.81%
1832 Asset Management L.P.	280,100	0.70%
Sentry Investments Corp.	277,800	0.70%
Fiera Capital Corporation (TSX:FSZ)	207,229	0.52%
Mackenzie Financial Corporation	173,000	0.43%
Highstreet Asset Management Inc.	159,900	0.40%
Others	780,162	1.96%
	7,046,076	18%
Oaktree Capital Management, L.P.	26,216,655	66%
Unidentified Holders	6,423,733	16%
Total Shares Outstanding	39,774,708	100%



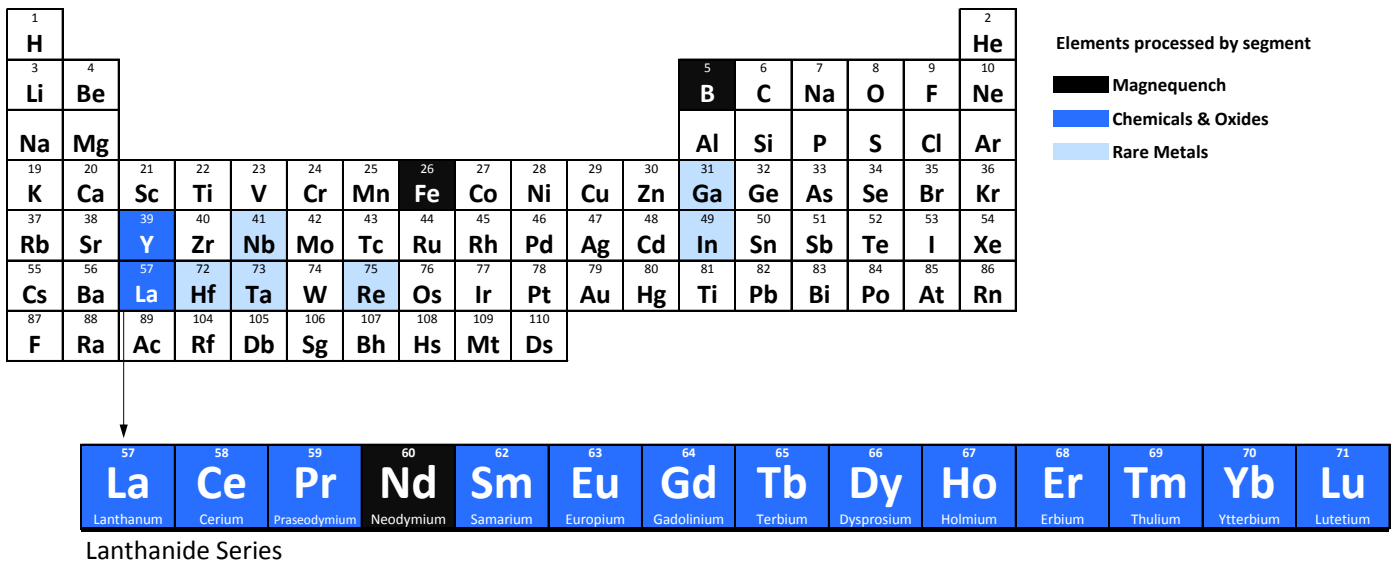
Source: Neo Performance Materials Inc., Capital IQ, Raymond James Ltd.

Industry Overview

Neo develops and manufactures materials which are vital to high tech, future-facing industries. Included as key manufacturing inputs are rare earths, a collection of 15 chemical elements in the periodic table, and other rare metals such as niobium, tantalum, gallium, and indium. Sought after for their unique magnetic, catalytic, luminescent, electrochemical, thermal, and superconductive properties, these elements provide essential functionality for existing and emerging technologies ranging from jet engines and LED lighting to cordless vacuum cleaners and electric vehicle traction motors. Without REEs and Rare Metals, many everyday products we take for granted would be heavier, clunkier, and less efficient.

Rare earth elements and rare metals enable many tech products we take for granted

Exhibit 4: Rare Earths Share Similar Chemical and Physical Properties, and Generally Occur Together in Nature



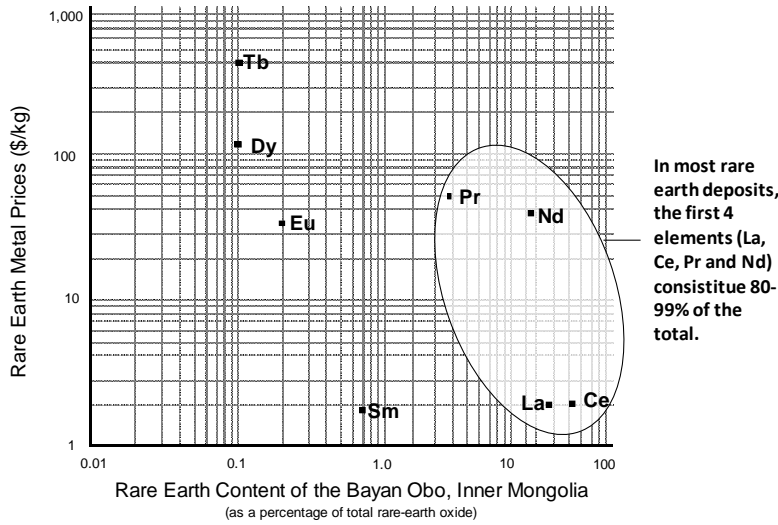
Source: Raymond James Ltd.

We should clarify that the use of the term ‘rare’ in rare earths is misleading, since some of the more common REEs are as abundant as nickel, copper, zinc and other industrial metals. Rare earths elements became known as such because they are typically found together in geological deposits and their similar compositions make them difficult to separate from one another. Having said this, concentrations of the most and least abundant REEs in any particular deposit differ by several orders of magnitude, as do their prices. For example, light REEs such as cerium and lanthanum are widely available and can be purchased for a mere \$2 per kilogram whereas less common, heavy REEs such as dysprosium and terbium can fetch prices as high as \$400 per kilogram. Accordingly, the use of heavy REEs carries significant risks from the perspectives of stable procurement and material costs.

Another point worth stressing is that while China is short of just about every base metal, it is home to the world’s largest known rare earth reserves. Close to 85% of global REE production notably originates from Inner Mongolia, Sichuan and the southern provinces of Jiangxi, Guangdong and Fujian. Over half of all Chinese production is recovered in the north as a byproduct of large-scale iron ore mining operations. This region is rich in bastnaesite, which boasts a high content of light rare earths. In the south, roughly 20,000 metric tonnes of rare earth oxides are extracted annually from ion adsorption clays. Importantly, these clays can be mined with relative ease and are not only rich in heavy rare earths, but also unique to the region.

China’s strategic grip on the rare earth industry is pure coincidence

Exhibit 5: Rare Earth Prices and Content in the Bayan Obo Mine



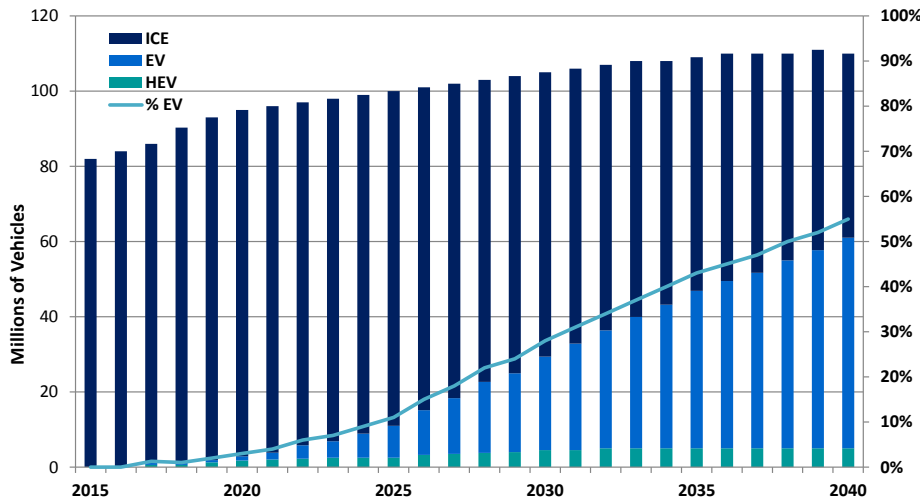
Source: U.S. Geological Survey, Bloomberg, Roskill, Raymond James Ltd.

According to recent data from the US Geological Survey, roughly 130,000 metric tonnes of REEs were mined globally in 2017. This is up from 110,000 metric tonnes in 2013—representing a compound annual growth rate (CAGR) of 4%. However, management impressed upon us that demand for some of Neo’s core engineered products has outpaced that of the overall industry by a factor of almost two. Importantly, it sees a number of global trends supporting mid to high single-digit growth rates for its combined operations through 2021. These include:

Greater demand for smaller, lighter and more efficient motors...

- ♦ **Electrification of automobiles.** Improving technology in the auto sector has bolstered demand for small REE-based magnets used to power car seats, windows, and trunks, fuel and water pumps, and visual components. Rare earth magnets are also critical for powering the drive trains of hybrid and electric vehicles, which will combine for over half of expected global auto sales in 2040, according to a Bloomberg NEF study. Whether the actual numbers ultimately meet this target is a moot point for us. Considering today’s still small EV and HEV population, we believe tremendous growth lies ahead for the sector.

Exhibit 6: The Outlook for Global Electric Vehicle Sales is Very Promising



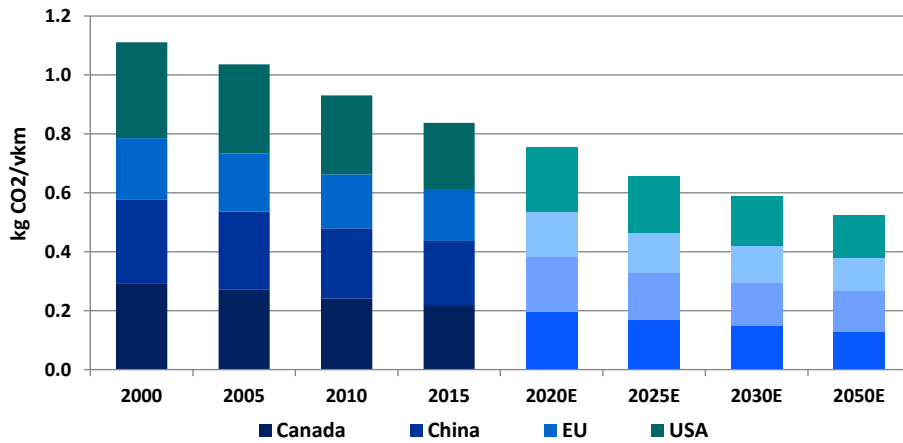
Source: Bloomberg New Energy Finance, Raymond James Ltd.

- ♦ **Stricter environmental standards.** Global standards of emissions are becoming stricter as more governments around the world set targets to meet the 2020 Paris Accord. In the auto sector, the increased focus on greenhouse gas reduction is driving demand for higher-quality catalysts, a feat that can only be accomplished with more advanced REE materials. In the

...environmentally friendly applications...

wastewater sector, REE-based engineered materials are also helping municipalities and industry maintain ever lower concentrations of phosphorus allowed.

Exhibit 7: Emissions Have Been Steadily Declining Since the Early 2000s

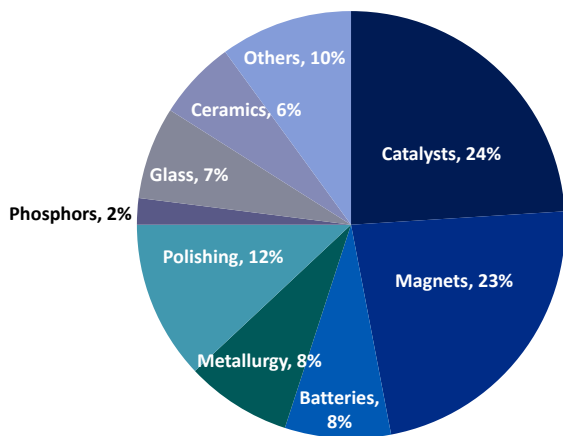


Source: Climate Action Tracker, Raymond James Ltd.

- ◆ **Insatiable appetite for better electronic devices.** As consumer demand for more efficient, smaller and lighter electronics increases, so too should the need for improved rare earth inputs. In addition, there is potential for REE-based magnets to take market share away from ferrite magnets, which are gradually becoming impractical for micro-motor applications due to their large size and relative inefficiency. Lastly, we submit there will always be steady demand for REEs to produce smartphones, glass, lenses and phosphors, which generate the primary colours in plasma and backlit LCD displays.
- ◆ **Souped-up superalloys.** Air travel ridership has been on a strong upward trend in the past four decades and, according to Airbus, is expected to rise to the tune of 4% annually well into the future. This signals even better growth rates for the Neo Rare Metals core to superalloys used in the aerospace sector. That’s because the strong surface strength of superalloys and their excellent resistance to thermal creep deformation, corrosion and oxidation allow them to deliver significant weight reduction, decrease fuel consumption and reduce emissions.
- ◆ **Growth in automation.** We can reasonably expect the increased prevalence of artificial intelligence (AI), which is steadily expanding the domain of physical automation, to support long-term demand for engineered functional materials. Booming demand for cloud computing and data storage solutions will also require the use of hard disk drives, which remain the preferred form of storage for data centers due to their relatively lower cost and ability to facilitate data recovery.

...and more efficient electronics bodes well for Neo

Exhibit 8: REE-Based Applications Span Various End-Markets


















Source: Neo Performance Materials Inc., Raymond James Ltd.

Operating Segments

Neo competes across segments of the global rare earth and rare metals industry value chain. Given this distinction and a different, though not mutually exclusive set of growth drivers, we believe Neo’s three operating divisions are best described separately.

Exhibit 9: Summary of Neo’s Operating Segments

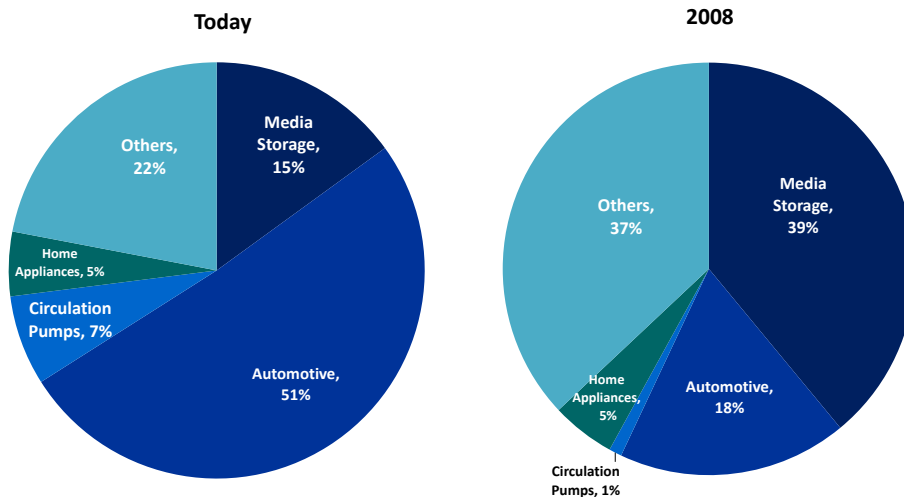
Operating Segment				
Market Position	Dominant supplier of neodymium-based powder for bonded magnets	Top 3 global producer of materials for auto catalysts	Only licensed foreign rare earth separator in China	The Top Producer of Gallium Trichloride (GaCl ₃)
Select Applications	EV and HEV traction motors, hard disk drives, power seats, fuel sensors, household appliances	Auto catalysts	Multi-layer ceramic capacitors, wastewater treatment, high precision optics	Jet engines, solar panels, medical imaging systems, high efficiency lighting, mobile communications
Industry Growth Target	6% - 12%	4% - 10%		3% - 7%
Key Customers	  	  	  	  
Competition	TDK Corporation, Hitachi Metals, Beijing Sanhuan New Material Hi-Tech	Rhodia (Solvay), Magnesium Elektron, Daiichi Kigenso Kaga, Kogyo Co. Ltd.	Lynas Corporation, six state-owned Chinese companies, ShinEtsu Chemicals Ltd.	5N Plus Inc., Ulba (a Kazatomprom company), H.C. Starck

Source: Neo Performance Materials Inc., Raymond James Ltd.

Magnequench (47% of revenue)

The company’s largest operating segment, Magnequench, developed and patented over 30 years ago a jet casting technology to transform neodymium (Nd), iron (Fe) and boron (B) into powders with highly desirable magnetic properties. Production of the NdFeB powders—or neo powders for simplicity—takes place at a large 145,000 square-foot facility on the outskirts of Tianjin, China, as well as a smaller plant in Korat, Thailand. From there, the powders are shipped to Magnequench’s customers where they are bonded with a polymer or hot pressed to form high-performance magnets. These, in turn, are incorporated in the motors and sensors used in countless automotive applications and everyday products such as cell phones, hard disk drives, circulation pumps and bladeless hairdryers. It should be noted that due to their ability to be molded into unique shapes, neo bonded magnets are better suited for micro motor applications. For proof, consider that motors designed with neo bonded magnets are 40% lighter and 36% smaller than conventional motors made from ferrite, according to a company study.

Magnequench powders are found in virtually all products requiring small, efficient motors

Exhibit 10 – Neo Magnet End Use by Industry Has Dramatically Shifted over the Past Decade

Source: Neo Performance Materials Inc., Raymond James Ltd.

The leadership team at Magnequench has long been cognizant of the monopoly-like status its intellectual property rights afforded the business. To discourage entry of new participants in the sector when its patents expire and stimulate the developments of new applications for its neo powder, the division began reducing prices as early as 1999. Management also started taking on a more active role in the motor design and magnet selection process, bringing it closer to customers and partners. There is evidence these strategic initiatives paid off, since Magnequench still maintains a lock on the neo powder market four years after its key patent expired. To wit, its global market share has only slipped to 75% from 90% 10 years ago, with the losses mainly contained to lower-quality, lower-margin applications for neo powders such as bike locks. We're certain that's a battle management willingly lost.

We see Magnequench's volumes increasing at a CAGR of 10% through 2021, consistent with Roskill's forecasts for small-size NdFeB magnet applications in motors, sensors, and actuators. Underpinning our growth expectations is the auto sector, which considers the use of micro motors as imperative in improving the efficiency of all vehicles, be they conventional, electric, or hybrid. This is true in developed markets, where certain luxury vehicles incorporate up to 100 micro motors, as well as in emerging markets, where car makers now include power seats, power doors, power windows and sensors as standard features. We are most bullish on MQU, a high performance powder grade born out of collaboration with Daido Electronics and Honda in 2015. MQU significantly improves the resistance of neo bonded magnets to high heat, a property previously unattainable without the addition of dysprosium or terbium, two of the most challenging and expensive heavy REEs to source. This enhancement has facilitated the adoption of MQU powders to power the traction motors of several Honda hybrid models including the Accord, Insight, and Fit. Sales of the 'enhanced' neo powder in EV main motors and HEV traction motors have already expanded to \$10 million in 2017 from \$3 million in 2016, and we believe there is room for them to grow to \$40 million in the foreseeable future.

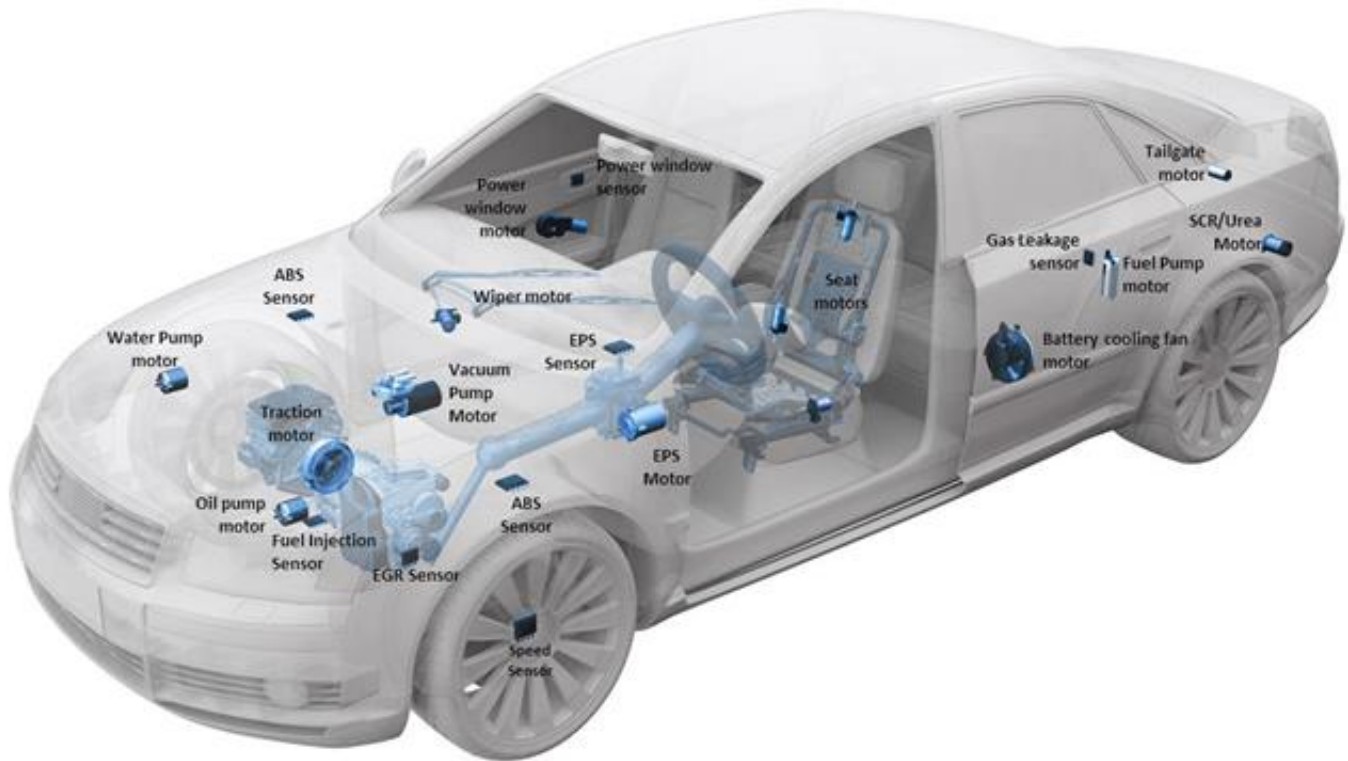
Other important Neo partners include Grundfos and Dyson, two of the world's most innovative companies. The Danish maker of pumps, which account for an astounding 10% of all electricity consumption globally, uses Magnequench's materials to power its ground breaking MGE motor. This product meets the strictest criteria of IE5—the highest energy efficiency level for electrical motors—making it hugely popular for radiant heating applications in environmentally conscious Europe. We believe it also gives Grundfos a leg up on the competition in China, which may tighten regulation in its pledge to curb greenhouse gases. For an equally compelling Magnequench powder application, look no further than the slick Supersonic hair dryer manufactured by Dyson. The bladeless product relies on a small lightweight motor to spin up to 110,000 revolutions per minute, or six times faster than conventional hair dryer motors. It doesn't come cheap at roughly C\$500 a pop, but it reportedly cuts drying time and energy consumption (by extension) in half.

Patents expiry have forced Neo to stay steps ahead of the competition

We expect the use of neo powders in electric vehicles...

...and circulation pumps to grow rapidly

Exhibit 11: Magnequench Magnets Are Used in Virtually All Parts of the Vehicle



Source: Neo Performance Materials Inc.

Chemicals & Oxides (38% of revenue)

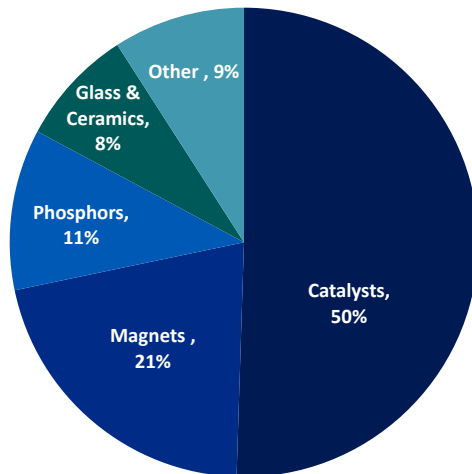
The Chemicals & Oxides (C&O) segment manufactures and distributes a broad range of rare earth engineered products from the two original AMR Chinese facilities in Zibo and Jiangsu (conveniently branded ZAMR and JAMR) and the Silmet plant added in the Molycorp days. The ZAMR and Silmet operations first process light REE concentrate into cerium, lanthanum, neodymium and praseodymium oxides and salts, then engineer functional products for use in auto and chemical catalysts, petroleum refining, magnets and water treatment, among key applications. The JAMR complex, for its part, separates heavier feedstock from the south of China into elements for use in multi-layer ceramic capacitors (MLCC), high-efficiency lighting, optical lenses and electronics.

Although Neo competes with firms that both separate REEs and engineer functional materials, we believe it occupies an advantageous position in the market. The company invests continuously in analytical, quality and process control systems and leans on a global sales and marketing team to provide support for current and future customer requirements, both of which result in market-leading products and services. As the only international licensed separator of rare earths in China, Neo additionally benefits from its proximity to the region's substantial REE deposits and a lower operating cost structure. Its position in the global REE industry is therefore inimitable in that it runs best-in-class manufacturing facilities in cost-competitive jurisdictions.

This leadership position is paying off in the conventional and hybrid auto markets, where ever stricter government regulations push the boundaries of auto catalyst complexity and manufacturers strive to lower the proportion of higher cost metals they use (such as platinum). As evidence, we highlight that Neo has more than doubled its auto catalyst related volumes over the past three years and now ranks as a qualified supplier to all leading manufacturers. To the extent it is difficult for the Umicores and Johnson Mattheys of this world to switch and requalify a new supplier, we are confident Neo can match, if not outpace the auto catalyst industry's projected CAGR of 7% to 8% over the foreseeable future. That should tip the percent of C&O revenue derived from the auto catalyst sector well above today's estimated 50%.

The firm produces high-quality products at competitive prices

Neo is a top 3 supplier of REEs to the \$13 billion auto catalyst market

Exhibit 12 – C&O End Use by Industry

Source: Neo Performance Materials Inc., Raymond James Ltd.

Although we see the growth of Neo's auto catalyst business far outstripping that of its rare earth separating activities, in no way does it diminish their strategic significance to the company. First, the Silmet plant benefits from a non-Chinese source of supply in Russia, which enhances Neo's global scale and geographic diversity. Second, the REE-processing operations can act as a launch pad for new applications, as was the case recently for the new products engineered to remove phosphate in wastewater. Third, Neo can leverage its vertically integrated model to feed to Magnequench the rare earths C&O does not sell to third-party customers. Finally, the ZAMR and JAMR facilities offer significant upside optionality to production quota reductions. One only has to go back seven years to appreciate just how material of an impact China's rare earth trade dispute had on C&O's profitability. We are not banking on this happening again, to be clear, nor do we believe investors should buy the stock solely on this premise. But with President Trump's trade follies presaging more protectionism...

Rare Metals (17% of Revenue)

The firm's newest and smallest operating segment, Rare Metals, supplies materials that are not only physically and chemically different from REEs, but also share few overarching similarities. Tantalum and niobium metals are sought after because they can withstand high temperatures, whereas gallium and indium are favoured in electronic applications ranging from light-emitting diodes (LEDs) to semiconductors. These materials come from conflict-free sources—a key buying consideration for many customers—then separated, purified and upgraded at any one of the division's six facilities. We note the bulk of Neo's rare metals production is conducted at the Silmet facility, where REE-processing activities occur in tandem. In 2015, said facility suffered a fire that destroyed key raw materials leaching equipment and slowed the segment's output through the better part of 2017.

Collaborative research and development efforts have extended Neo's leadership position in REE-based applications to the rare metals sector. The firm now ranks as the number one producer of gallium trichloride (GaCl₃) for use in LEDs and solar panels, and a top supplier of pure metals and alloys for high performance jet engines (which go a long way in reducing both fuel consumption and greenhouse gas emissions). Given these advanced materials underpin solutions that can help transform the world into a greener and safer place to live, we are confident they will continue to gain in value. We are not suggesting the Rare Metals segment will ever outgrow its sister divisions in size or strategic value, but it is already yielding significant diversification benefits to Neo and its shareholders.

Rare metals bring welcome diversification to Neo's business

Financial Analysis & Outlook

Neo's financial results thus far in 2018 underscore positive demand and pricing trends for the firm's key applications—including traction motors for hybrid and electric vehicles—and continued operational efficiencies across all three business segments. They also reflect the inherent lumpiness that arises from the timing and size of certain customer purchases. Magnequench, for example, experienced flat volume growth in 1H18 because it faced a particularly tough comp in 1H17 (when the stars aligned for very strong shipments early in the period) and experienced lower demand from the HDD market. At the same time, C&O volumes shrank 15% year-over-year due to the transitory effects of a newly installed wastewater treatment system at ZAMR and little to no pick up from the heavy rare earth production campaign (which started later this year as compared to last). Notwithstanding these largely time-sensitive issues, Neo grew its 1H18 revenue and adjusted EBITDA to the tune of 11% and 5% year-over-year to \$231 million and \$34 million, respectively. It should be noted the EBITDA improvement would have come in closer to 16% had \$4 million of premium freight costs not been incurred to replenish the auto-catalyst supply chain post-Zibo interruptions

Exhibit 13: 1H18 Quarterly Segmented Results

Period	1H18	1H17	% Chg	
End of Period	Jun-18	Jun-17		
Volume (metric ton)				
Magnequench	3,081	3,085	(0)	Offsetting demand growth for traction motors and other auto applications was a slowdown in the HDD market and changes in customer buying patterns.
Chemicals & Oxydes (C&O)	3,783	4,468	(15)	
Rare Metals	274	222	23	
Corporate/Eliminations	(143)	(135)	6	
	6,995	7,640	(8)	
Average selling price (\$ per kilogram)				
Magnequench	36.34	29.08	25	Rising rare earth prices accounted for all the unit's 25% top-line growth year-to-date.
Chemicals & Oxydes (C&O)	21.64	18.90	15	
Rare Metals	160.92	177.84	(10)	
	50.99	39.53	29	
Revenue (\$ mln)				
Magnequench	112.0	89.7	25	Revenues fell despite higher ASPs as the installation of a new wastewater treatment system adversely impacted 1Q18 sales. 2018's heavy rare earth production campaign is also slated for later in the year, as compared to 2017.
Chemicals & Oxydes (C&O)	81.9	84.4	(3)	
Rare Metals	44.1	39.5	12	
Corporate/Eliminations	(7.3)	(5.3)	37	
	230.6	208.3	11	
Adjusted EBITDA (OIBDA) (\$ mln)				
Magnequench	28.9	24.6	17	Also hurting C&O results were \$4 mln of premium freight costs incurred to refill the auto-catalyst supply chain (post wastewater treatment implementation).
Chemicals & Oxydes (C&O)	8.7	14.7	(41)	
Rare Metals	6.3	5.2	21	
Corporate/Eliminations	(6.7)	(9.0)	(26)	
	37.1	35.4	5	
Adjusted EBITDA (OIBDA) margin				
Magnequench	25.8%	27.4%		The Silmet facility saw big gains on increased volumes, higher flow-through margins and operational improvements.
Chemicals & Oxydes (C&O)	10.6%	17.4%		
Rare Metals	14.2%	13.1%		
	16.1%	17.0%		

Source: Neo Performance Materials Inc., Raymond James Ltd.

Our expectations are for Magnequench volumes to stabilize in 2H18, leaving it only off marginally for the year, and resume their ascent in 2019. We see prices for the firm's magnetic powders remaining healthy, but ASPs falling slightly through our forecast horizon. The above trends are consistent with the outsized growth we anticipate from the MQU product, which is sold at a lower price point than the average neo powder. All told, we believe the division can build on 2017's elevated base and grow revenue a further 9% and 5% in 2018 and 2019, respectively, to \$222 million and \$233 million. Our adjusted EBITDA projections exhibit a similar pattern, increasing from last year's \$49 million to a respective \$55 million and \$57 million for this year and next.

We see Chemicals & Oxides volumes benefiting from ZAMR's later production start in 2H18, but then normalizing to a mid-single digit growth rate thereafter. Balancing our assumptions are strong expected demand from auto catalyst producers and negligible rates of growth for Neo's rare earth processing business, as management continues to prioritize pricing over quantity across its business lines. These, plus the absence of unusual costs, will help the C&O operations in 2019 not only return to the healthy profitability levels attained in 2017, but also contribute to more

We see healthy demand across Neo's three operating segments...

than half of Neo's bottom-line growth for the year. This, at least, is what is implicit in our EBITDA forecasts of \$21 million for 2018 and \$26 million for 2019, versus \$25 million for 2017.

We forecast more of the same for the Rare Metals—namely, steady volume gains from the aerospace, display and LED end markets, higher flow-through margins and continued operational improvements. These inputs combine for an estimated 20% rise in sales and 31% growth in adjusted EBITDA for 2018. Similarly for 2019, we conservatively assume the division can increase its top-line at a rate of 5% that approximates Roskil's annual growth rate expectations for the sector, and growth profits by 7%. Our adjusted EBITDA estimates notably put us at \$12 mln and \$13 million for this year and next, respectively, compared to \$9 million for last year.

Bringing it all together, we believe Neo will grow its current year revenue and adjusted EBITDA to the tune of 7% and 8% to \$466 million and \$73 million, respectively, as favourable pricing and product mix compensate for lower tonnage. We are calling for a different year in 2019 since our expectations for above-average growth in Magnequench's new applications business should positively impact volumes but skew Neo's ASPs lower. The end result should ring a familiar tone, however, as we forecast the firm's revenue and adjusted EBITDA to rise a respective 6% and 10% to \$493 million and \$80 million. After deducting approximately \$13 million of depreciation, amortization and stock-based compensation expense for both years, adjusting for 1H18's insurance settlement and applying an effective tax rate of 26%, we project earnings per share to climb to \$1.07 in 2018 and to \$1.16 in 2019, from \$0.98 in 2017.

...pushing adjusted EBITDA 8% in 2018 and a further 9% in 2019

Exhibit 14: Segmented Full-Year Results and Forecast

Period	2017	2018E	2019E	% Chg	% Chg	
End of Period	Dec-17	Dec-18	Dec-19	18/17	19/18	
Volume (metric ton)						
Magnequench	6,305	6,217	6,714	(1)	8	We see volumes levelling off in 2018, after the 17% gain enjoyed in 2017, and then hit high single-digit growth in 2019.
Chemicals & Oxydes (C&O)	8,656	8,067	8,551	(7)	6	
Rare Metals	448	537	564	20	5	
Corporate/Eliminations	(324)	(293)	(300)	(10)	2	
	15,085	14,529	15,530	(4)	7	
Average selling price (\$ per kilogram)						
Magnequench	32.18	35.66	34.70	11	(3)	Our expectations are for prices to remain range-bound over the next six quarters.
Chemicals & Oxydes (C&O)	19.74	21.56	21.34	9	(1)	
Rare Metals	169.66	162.92	170.00	(4)	4	
	28.78	32.07	31.77	11	(1)	
Revenue (\$ mln)						
Magnequench	202.9	221.7	233.0	9	5	Our mid single-digit growth target for this year factor in healthy gains for the auto-catalyst business and flattish volumes for the rare earth separation plants.
Chemicals & Oxydes (C&O)	170.9	174.0	182.5	2	5	
Rare Metals	76.0	87.6	95.9	15	10	
Corporate/Eliminations	(15.6)	(17.3)	(18.0)	11	4	
	434.2	465.9	493.4	7	6	
Adjusted EBITDA (OIBDA) (\$ mln)						
Magnequench	49.4	54.9	57.1	11	4	We assume for 2019 that C&O will earn as much as it did in 2017. Offsetting the inventory holding gains enjoyed that year should be a more favourable mix.
Chemicals & Oxydes (C&O)	25.3	21.2	25.6	(16)	21	
Rare Metals	9.1	11.9	12.8	31	7	
Corporate/Eliminations	(15.9)	(14.7)	(15.0)	(8)	2	
	67.9	73.3	80.4	8	10	
Adjusted EBITDA (OIBDA) margin						
Magnequench	24.3%	24.8%	24.5%			A continued focus on value-add products is expected to yield gradually improving margins for the Rare Metals segment.
Chemicals & Oxydes (C&O)	14.8%	12.2%	14.0%			
Rare Metals	12.0%	13.6%	13.3%			
	15.6%	15.7%	16.3%			
Adjusted EPS (diluted)	\$0.98	\$1.07	\$1.16	9	9	We see Neo building on the strong bottom-line results it posted last year.

Source: Neo Performance Materials Inc., Raymond James Ltd.

Neo's free cash flow conversion rate exemplifies a company that requires minimal capital investments. Using the midpoint of management's annual capex guidance range of \$12 million to \$15 million through our forecast horizon, we derive FCF conversion rates for this year and next that are in-line with the healthy 82% generated last year. Meanwhile our projected payout ratios of 23% for both 2018 and 2019 compare favourably to the 45% posted for 2017, when the company distributed \$25 million to Oaktree prior to its initial public offering. We believe this leaves Neo with plenty of headroom to raise dividends, buy back stock or otherwise expand the business in a value-accretive fashion. However, since there is no sure way of knowing when one or more such catalysts will transpire, we have the supplier of advanced materials exiting 2019 with a net cash position of \$145 million, up from \$97 million at the end of 2017.

Solid free cash flow and a healthy balance sheet yield Neo the flexibility to grow via acquisition

Exhibit 15: We See Steady FCF Conversion Rates for Neo Through our Forecast Horizon

Reconciliation to Adjusted EBITDA and Free Cash Flow					
Period	2017	2018E	2019E	% Chg	% Chg
End of Period	Dec-17	Dec-18	Dec-19	18/17	19/18
EBITDA					
Net income	25.4	46.1	42.2		
Finance income, net	(0.2)	(1.5)	–		
Income tax expense (recovery)	11.9	12.9	14.8		
Depreciation and amortization included in cost of sales	10.1	10.0	10.0		
Depreciation and amortization	7.4	7.5	7.8		
	54.7	75.0	74.8	37	(0)
Adjustments to EBITDA:					
Equity (income) loss in associates	(1.0)	0.9	–		
Other income	(1.8)	(8.1)	–		
Foreign exchange (gain) loss	0.5	(0.1)	–		
Reorganization items	–	–	–		
Stock and value-based compensation expense	6.6	5.6	5.6		
IPO transactions costs	6.0	–	–		
Acquired inventory fair value release	2.9	–	–		
Adjusted EBITDA	67.9	73.3	80.4	8	10
Capital expenditures	(12.3)	(13.5)	(13.5)	10	0
Free Cash Flow	55.6	59.8	66.9	7	12
<i>Adjusted EBITDA margins</i>	<i>15.6%</i>	<i>15.7%</i>	<i>16.3%</i>		
<i>Free cash flow conversion</i>	<i>81.9%</i>	<i>81.6%</i>	<i>83.2%</i>		
<i>Payout ratio</i>	<i>44.8%</i>	<i>22.6%</i>	<i>22.7%</i>		

Source: Neo Performance Materials Inc., Raymond James Ltd.

Valuation & Recommendation

We are initiating coverage of Neo Performance Materials with a Strong Buy rating and a target price of C\$25.00, a full 41% above current trading levels. Our valuation assumes that the EV/EBITDA multiple using our 2019 estimates will increase from the current 5.2 times to 8.0 times over the next six to twelve months. Said target multiple wasn't plucked out of thin air; it matches that which we applied to Neo's predecessor company during much of our time covering the stock and approximates the midpoint of its trading range in the three volatile years leading to its acquisition. We further note our valuation looks reasonable compared the five-year average forward EV/EBITDA multiple of 8.3 times for a group of firms specializing in advanced materials and chemicals.

In our view, it is reasonable to expect Neo's valuation to expand and approach those of its closest comps given its prominent position in the global rare earth and rare metal value chain, and our favourable assessment of the firm's free cash flow potential. This re-rating process has yet to kick into gear, however, judging from the stock's muted reaction to strong operating results thus far in 2018. The shares continue to trade around their IPO price of \$18.00, implying a forward EV/EBITDA multiple of 6.2 times that leaves Neo at a 2.2 multiple point discount to its peers. Although we feel the firm's small public float and limited track record as a new public entity partly explain some of the valuation gap, we're hard pressed painting a scenario where it widens further from here. Therein lies the opportunity for investors who are new to the Neo story and those reacquainting themselves to it.

From where we sit, Neo claims a unique and defensible place in the rapidly growing market for engineered materials. Just as importantly, its management team is comprised of industry veterans with a wealth of experience and the capability to deliver outstanding returns to its shareholders (as it did in the past). We never purposely wait to launch coverage of a stock until all stars align for outperformance, for this could ultimately prove an exercise in futility. Having said that, the margin of safety we find in Neo's current valuation does leave us feeling pretty good about the timing of our IOC report. As Neo continues to deliver consistently strong operating results and its liquidity improves post Oaktree secondaries, we see it delivering above-average returns through 2019.

Neo offers an attractive risk-reward profile at current trading levels

Exhibit 16: Neo Trades at a Big Discount to its Peers Notwithstanding its Undisputed Leadership Position in Engineered Materials

Company Name	Ticker	Market Price	Market Cap (mln)	Ent. Value (mln)	P/E			EV/EBITDA			Net Debt to Total Capital	Price to Book	EBITDA Margin	Dividend Yield
					2017A	2018E	2019E	2017A	2018E	2019E				
ADVANCED MATERIALS MANUFACTURERS														
5N PLUS INC.	VNP.CA	\$3.30	\$278	\$298	23.0	13.9	11.2	9.6	7.0	6.3	7%	2.5	12.2%	--
ALLEGHENY TECHNOLOGIES INCORPORATED	ATI.US	\$29.75	\$3,739	\$5,285	n.m.	18.1	13.3	16.6	10.0	8.7	28%	1.9	10.1%	--
CARPENTER TECHNOLOGY CORPORATION	CRS.US	\$59.14	\$2,798	\$3,291	n.m.	24.9	16.2	15.1	10.8	8.5	15%	1.9	14.3%	1%
DAIICHI KIGENSO KAGAKU KOGYO CO., LTD.	4082.JP	¥1,389	¥33,581	¥36,611	9.9	10.2	11.0	5.8	5.6	5.4	8%	1.3	26.2%	1%
HITACHI METALS, LTD.	5486.JP	¥1,391	¥594,752	¥742,576	13.1	13.6	11.8	6.4	6.9	5.9	19%	1.0	11.4%	2%
JOHNSON MATTHEY PLC	JMAT.GB	£35.67	£6,848	£7,524	17.6	17.3	15.6	11.5	10.9	10.1	9%	2.9	4.9%	2%
MATERION CORPORATION	MTRN.US	\$58.75	\$1,189	\$1,165	36.8	27.5	24.0	13.5	12.4	11.5	-2%	2.3	7.3%	1%
MINERALS TECHNOLOGIES INC.	MTX.US	\$67.25	\$2,374	\$3,286	14.7	13.8	12.6	9.4	9.2	8.5	27%	1.8	21.0%	0%
SHIN-ETSU CHEMICAL CO., LTD.	4063.JP	¥9,799	¥4,179,960	¥3,227,682	24.4	17.2	14.2	9.6	7.3	6.1	-32%	1.8	28.2%	2%
UMICORE S.A.	UMI.BR	€ 48.55	€ 11,868	€ 12,333	39.4	33.2	27.5	26.1	16.5	14.0	3%	4.6	4.0%	1%
					22.4	18.9	15.7	12.4	9.7	8.5				
DIVERSIFIED SPECIALTY CHEMICALS & METALS														
CABOT CORPORATION	CBT.US	\$63.40	\$3,903	\$4,906	18.4	15.4	13.4	9.8	8.5	7.9	18%	3.4	17.9%	2%
DAIDO STEEL CO., LTD.	5471.JP	\$5,460.00	\$232,765	\$392,175	16.2	10.0	9.8	8.5	6.9	6.6	35%	0.8	12.1%	2%
FERRO CORPORATION	FOE.US	\$23.42	\$1,970	\$2,777	18.1	14.7	12.7	11.9	10.1	9.1	29%	5.3	15.4%	--
H.B. FULLER COMPANY	FUL.US	\$52.89	\$2,677	\$4,914	20.5	16.4	13.5	16.7	10.6	9.7	46%	2.4	10.9%	1%
MURATA MANUFACTURING CO., LTD.	6981.JP	¥17,420	¥3,714,816	¥3,556,260	23.1	25.7	17.6	11.1	11.3	9.1	-4%	2.5	24.1%	2%
SOLVAY SA	SOLB.BR	€ 114.70	€ 11,851	€ 15,573	13.4	13.7	13.0	7.0	7.0	6.7	23%	1.2	19.8%	3%
					18.3	16.0	13.3	10.8	9.1	8.2				
GROUP AVERAGE					20.6	17.8	14.8	11.8	9.4	8.4				
NEO PERFORMANCE MATERIALS INC.	NEO.CA	\$18.02	\$729	\$640	14.2	13.5	12.4	7.3	6.8	6.2	-15%	1.2	15.6%	2%

Notes:

- 1) Estimates for Neo Performance Materials are from Raymond James Ltd.; all other estimates are consensus from Capital IQ.
- 2) Enterprise Values for all listed companies include non-controlling interests.
- 3) P/E and EV/EBITDA multiples for Neo Performance Materials are calculated using adjusted EPS and adjusted EBITDA estimates.

Source: Capital IQ, Raymond James Ltd.

Appendix A: Financial Statements

Income Statement

Period	2015	2016	2017	2018E	2019E	% Chg	% Chg	% Chg	% Chg
End of Period	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	16/15	17/16	18/17	19/18
Revenue	396.8	382.1	434.2	465.9	493.4	(4)	14	7	6
Less: costs excluding depreciation and amortization	294.7	271.6	296.6	324.7	341.5	(8)	9	9	5
Less: depreciation and amortization	14.8	11.1	10.1	10.0	10.0	(25)	(9)	(1)	0
Gross profit	87.3	99.4	127.4	131.3	142.0	14	28	3	8
<i>Gross profit margin</i>	<i>22.0%</i>	<i>26.0%</i>	<i>29.3%</i>	<i>28.2%</i>	<i>28.8%</i>				
Selling, general and administrative	45.4	49.3	63.2	51.1	54.0	9	28	(19)	6
Depreciation	18.9	7.7	7.4	7.5	7.8	(59)	(4)	1	4
Stock-based compensation	–	–	6.2	4.4	4.4	–	–	(30)	0
Research and development	13.3	13.6	15.7	18.2	18.8	2	16	16	3
Impairments	203.9	–	–	–	–	(100)	–	–	–
Operating income	(194.2)	28.8	34.8	50.2	57.1	–	21	44	14
Other (expense) income	(40.5)	(1.1)	1.8	8.1	–	(97)	–	348	(100)
Finance costs, net	(8.3)	(7.3)	0.2	1.5	–	(12)	–	864	(100)
Foreign exchange (loss) gain	7.6	(4.8)	(0.5)	0.1	–	–	(90)	(114)	(100)
Earnings before tax and associates	(235.4)	15.6	36.3	59.8	57.1	–	133	65	(5)
Tax expense	10.0	(13.9)	(11.9)	(12.9)	(14.8)	–	(15)	8	15
Equity (loss) income of associates (net of income tax)	(0.7)	0.1	1.0	(0.9)	–	–	–	–	–
Net income	(226.2)	1.7	25.4	46.1	42.2	–	–	82	(8)
Attributable to Neo Performance Materials	(223.8)	1.9	24.6	45.6	41.4	–	–	85	(9)
Non-controlling interest	(2.3)	(0.2)	0.8	0.5	0.9	–	–	(32)	64
	(226.2)	1.7	25.4	46.1	42.2	–	–	82	(8)
EPS (basic)	–	–	\$0.62	\$1.14	\$1.04	–	–	84	(9)
EPS (diluted)	–	–	\$0.61	\$1.13	\$1.02	–	–	85	(9)
<i>Effective tax rate</i>	<i>4.2%</i>	<i>89.5%</i>	<i>32.8%</i>	<i>21.6%</i>	<i>26.0%</i>				
				13.1					
Adjusted Net Income Reconciliation									
Net income	(226.2)	1.7	25.4	46.1	42.2	–	1,385	82	(8)
Foreign exchange loss (gain)	(7.6)	4.8	0.5	(0.1)	–	–	(90)	(114)	(100)
Stock and value-based compensation expense	–	–	6.6	6.7	7.8	–	–	–	–
Acquired inventory fair value release	–	–	2.9	–	–	–	–	–	–
IPO transaction costs	–	–	6.0	–	–	–	–	–	–
Insurance recovery included in other income	–	–	–	(7.9)	–	–	–	–	–
Tax impact of above items	0.3	(4.3)	(1.2)	(1.1)	(2.0)	–	(72)	(10)	84
Adjusted Net Income	(233.5)	2.2	40.2	43.7	48.0	–	–	9	10
Attributable to Neo Performance Materials	(231.1)	2.4	39.4	43.2	47.1	–	–	10	9
Non-controlling interest	(2.3)	(0.2)	0.8	0.5	0.9	–	–	(32)	64
	(233.5)	2.2	40.2	43.7	48.0	–	–	9	10
Adjusted EPS (basic)	–	–	\$0.99	\$1.08	\$1.18	–	–	9	9
Adjusted EPS (diluted)	–	–	\$0.98	\$1.07	\$1.16	–	–	9	9

Source: Neo Performance Materials Inc., Raymond James Ltd.

Cash Flow Statement

Period	2016	2017	2018E	2019E	% Chg	% Chg	% Chg
End of Period	Dec-16	Dec-17	Dec-18	Dec-19	17/16	18/17	19/18
Cash from Operations							
Net income for the period	(13.0)	25.4	46.1	42.2	–	82	(8)
Depreciation and amortization	6.6	17.5	17.5	17.8	165	(0)	2
Stock-based compensation	–	6.2	4.4	4.4	–	(30)	0
Acquired inventory fair value release	24.2	2.9	–	–			
Change in pension liability	(0.0)	(0.1)	(0.1)	–			
Finance costs, net	0.1	(0.2)	(1.5)	–			
Equity (income) loss of associates	0.2	(1.0)	0.9	–			
Loss on disposal of property, plant and equipment	0.4	0.8	0.2	–			
Income tax expense	0.4	11.9	12.9	14.8			
Foreign exchange (gain)	0.6	(1.8)	(0.5)	–			
Other	(0.1)	2.3	(8.2)	–			
Change in non-cash working capital	(21.4)	7.1	(20.0)	(0.2)			
Income taxes paid	(4.5)	(9.3)	(11.8)	(13.6)			
Interest received, net of interest paid	0.0	0.3	0.2	–			
	(6.5)	62.2	39.9	65.4	–	(36)	64
Cash from Investing							
Additions of property, plant and equipment	(2.7)	(12.2)	(12.3)	(12.3)	352	1	–
Additions of intangible assets	(0.3)	(0.0)	(1.2)	(1.2)			
Other	–	(1.5)	–	–			
	(3.0)	(13.8)	(13.5)	(13.5)	358	(2)	0
Cash from Financing							
Debt draw (repayment)	0.6	(7.8)	(0.2)	–			
Dividends paid to non-controlling interest	–	(1.3)	(0.0)	–			
Dividends paid	–	(24.9)	(13.5)	(15.2)	–	(46)	12
Repurchase of common shares	(0.5)	–	(0.7)	–			
	0.1	(34.0)	(14.4)	(15.2)	–	(57)	5
Effect of exchange rate changes on cash and cash equiv	(1.5)	2.9	(0.4)	–			
Cash (used) provided during the period	(10.9)	17.4	11.6	36.7	–	(33)	216
Cash and cash equivalents, beginning of period	90.3	79.4	96.8	108.4			
Cash and cash equivalents, end of period	79.4	96.8	108.4	145.2	22	12	34

Source: Neo Performance Materials Inc., Raymond James Ltd.

Balance Sheet

Period	2015	2016	2017	2018E	2019E	% Chg	% Chg	% Chg	% Chg
End of Period	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	16/15	17/16	18/17	19/18
Assets									
Cash and cash equivalents	101.3	79.4	96.8	108.4	145.2	(22)	22	12	34
Restricted cash	37.6	–	1.5	1.5	1.5	–	–	–	–
Accounts receivable	124.3	39.2	46.8	49.8	54.1	(68)	19	6	9
Inventories	115.5	101.3	104.5	121.3	121.7	(12)	3	16	0
Income taxes receivable	1.0	1.3	0.7	0.8	0.8	31	(50)	28	–
Other current assets	11.4	17.3	14.0	27.2	27.2	52	(19)	95	–
	391.1	238.5	264.3	309.0	350.4	(39)	11	17	13
Property, plant and equipment	86.4	87.8	88.4	84.8	79.3	2	1	(4)	(6)
Intangible assets	76.9	75.4	72.8	70.9	72.1	(2)	(3)	(3)	2
Goodwill	53.8	98.9	101.9	101.1	101.1	84	3	(1)	–
Investments	7.3	7.7	8.6	7.8	7.8	5	13	(10)	–
Deferred tax assets	2.7	3.2	1.4	1.4	1.4	17	(56)	(2)	–
Other non-current assets	2.1	2.2	1.2	0.7	0.7	6	(48)	(39)	–
Total Assets	620.3	513.8	538.5	575.6	612.8	(17)	5	7	6
Liabilities and Equity									
Short-term debt	178.6	7.9	0.2	0.0	0.0	(96)	(98)	(96)	–
Accounts payable and other accrued charges	38.8	57.4	72.2	76.6	81.1	48	26	6	6
Income taxes payable	6.9	4.8	6.3	7.4	8.6	(30)	31	17	16
Other current liabilities	0.0	0.9	2.7	3.6	3.6	–	191	32	–
	224.3	71.1	81.5	87.6	93.3	(68)	15	8	7
Long-term debt	1.8	–	–	–	–	(100)	–	–	–
Employee benefits	2.7	2.7	2.4	2.3	2.3	(3)	(9)	(5)	–
Derivative liability	6.1	9.7	9.8	8.6	8.6	59	2	(13)	–
Provisions	4.4	4.4	4.7	4.7	4.7	–	7	1	–
Deferred tax liabilities	18.5	21.3	20.2	20.0	20.0	15	(5)	(1)	–
Other non-current liabilities	0.6	0.6	0.6	1.0	1.0	(7)	6	54	–
	109.7	109.7	119.2	124.2	129.9	–	9	4	5
Non-controlling interest	4.6	6.3	5.8	5.2	6.0	35	(7)	(11)	17
Equity attributable To NPMI	357.3	397.8	413.4	446.2	476.8	11	4	8	7
Total Equity	361.9	404.1	419.2	451.4	482.8	12	4	8	7
Total Liabilities and Equity	620.3	513.8	538.5	575.6	612.8	(17)	5	7	6

Source: Source: Neo Performance Materials Inc., Raymond James Ltd.

Appendix B: Management & Board of Directors

Management

Geoffrey Bedford, President & CEO

Mr. Bedford has been with Neo and its predecessor companies since 1999. He first acted as CFO and Executive VP, Finance of AMR Technologies, then led the Performance Materials division of NEM (now Chemicals & Oxides). Mr. Bedford was promoted to COO of NEM up until its takeover by Molycorp. He would eventually assume the same role at Molycorp before his appointment as CEO in 2013. Mr. Bedford is a Chartered Accountant holding a Bachelor's degree in Mathematics from the University of Western Ontario and an MBA from Northwestern University's Kellogg School of Management.

Rahim Suleman, CFO

Mr. Suleman was hired to oversee Neo's finances in 2017. Mr. Suleman was CFO at Stackpole International for a period of six years, and prior to that Global Finance Manager at GE Digital Energy Protection and Control from 2009 to 2010. He holds the CPA designation as well as Bachelor and Master degrees in Accounting from the University of Waterloo.

Kevin Morris, COO

Mr. Morris joined Molycorp as SVP Administration in 2011. He moved through the ranks taking leadership over the Rare Metals segment until 2016 when he became the COO of the organization. Mr. Morris practiced environmental law and civil litigation for 16 years with Andre, Morris & Buttery. Educationally, he holds a Bachelor's degree in Mechanical Engineering and a JD from UCLA School of Law.

Gregory Koll, EVP Magnequench

Mr. Koll joined Magnequench in 2000 and has been based in Singapore since 2002. He was promoted to Director of Sales & Marketing in 2010 and to SVP in 2015. He completed his undergraduate studies at George Washington University and holds an MBA from Chicago's Booth School of Business.

Jeffrey Hogan, EVP Chemicals & Oxides

Mr. Hogan has been with the company since 1999. He took on a leadership role with the C&O segment in 2006 and was promoted to his current position in 2013. He holds a BSc in Chemical Engineering from Cleveland State University.

Frank Timmerman, SVP Rare Metals

Mr. Timmerman joined NEM's rare metals business as General Manager in 2012 and has held his current title since 2016. Prior to joining the firm, he oversaw R&D efforts at Phillips Display Components. He holds a BSc in Chemistry from Fontys University of Applied Sciences in Eindhoven, Netherlands and a Diploma in Business Management and Leadership at the Rotterdam School of Management, Erasmus University.

Directors

Constantine Karayannopoulos, Chairman

Mr. Karayannopoulos, Chairman since 2013, has a long history with the company. Prior to this role, he led Neo and its predecessor companies from 1995 until it was acquired by Molycorp in 2012. Mr. Karayannopoulos holds Bachelor and Master degrees in Chemical Engineering from the University of Toronto. He has also served as Chairman of Neo Lithium Corp. since 2016.

Eric Noyrex, Lead Director

Mr. Noyrex has served as director for the company since 2016 and as its lead director since 2017. He held leadership roles with Lynas Corporation prior to serving as CEO and Executive Director from 2013 to 2014. Mr. Noyrez holds a Master's degree in Engineering from ENSM in France.

Nicholas Basso, Director

Mr. Basso has been a director of Neo since 2016. He is currently SVP in the Strategic Credit Group at Oaktree Capital Management. Prior to joining Oaktree, Mr. Basso was an M&A Analyst at Citigroup. He holds a B.S. degree summa cum laude in Business Administration from the Tepper School of Business at Carnegie Mellon University.

Brook Hinchman, Director

A director of the company since 2016, Mr. Hinchman serves as SVP for Oaktree's Opportunities Funds. He spent four years at Goldman Sachs & Co. prior to joining the private equity firm in 2010. Mr. Hinchman holds a BBA degree from the Tippie College of Business at the University of Iowa.

Claire Kennedy, Director

Ms. Kennedy has been a director of Neo since 2017. From 2010 to 2012, she was a member of the board of directors for NEM and sat on the Audit Committee. Ms. Kennedy is a Partner at the Toronto office of Bennet Jones LLP, since 2009. She is currently a Director of Alamos Gold and the Bank of Canada, where she also serves on the Audit & Finance and Human Resources Committees and chairs the Corporate Governance Committee. She is a Professional Engineer and holds a BSc in Chemical Engineering from the University of Toronto and a Bachelor of Laws degree from Queens University.

Aman Kumar, Director

A director of the company since 2017, Mr. Kumar is Vice President, Strategic Credit at Oaktree Capital. Prior to Oaktree, Mr. Kumar spent three years at Deutsche Bank. He holds a Bachelor of Medicine from Kings College London and an MBA from Wharton School and the University of Pennsylvania.

Edgar Lee, Director

Mr. Lee, a Portfolio Manager for Oaktree's Opportunities Fund, has served as director of Neo since 2016. Prior to Oaktree Capital, Mr. Lee worked in Investment Banking at UBS and Fixed Income at Lehman Brothers. He holds a BA in Economics from Swarthmore College and an MPP in Applied Economics from Harvard University.

Emily Stephens, Director

Ms. Stevens has been a director of Neo and its predecessor company since 2016. Ms. Stephens is Managing Director for the Opportunities Funds Group at Oaktree Capital. She holds a BA degree in Government from Dartmouth College and a JD from the University Of Texas School of Law.

Appendix C: Risks

Commodity Price Risk

As a manufacturer of rare earths, Neo is susceptible to volatility in rare earth pricing. Each of Neo's segments has pricing exposure, while C&O and Rare Metals have the option of selling rare earths and metals in their natural form, which can increase or decrease margins as prices fluctuate. To mitigate this risk, Neo has pricing pass-through arrangements in place and is continually investing in R&D to create more value-add solutions for customers.

Geopolitical Risk

Operating in many nations leaves Neo exposed to political risks resulting in changes in trade, regulation, and currency. Tensions continue to rise between China and the United States and trade wars have impacted several industries in China. To date, REEs have not been the latest topic of scrutiny from the US, but they have been proposed. Neo's strong customer ties and global production facilities give it a degree of flexibility in the event REEs became targeted.

Currency Risk

Neo reports in US dollars while operating globally in several countries, making the company susceptible to changes in each country's currency. Neo does not hedge against the Chinese renminbi, the Japanese yen, and the Euro.

Legal Risk

Legal risk mainly pertains to intellectual property and patent protection. Neo heavily relies on trade secrets for certain aspects of its technology, which are difficult to protect. However, Neo intends to focus on patented products and applications related to auto catalysts, water treatment and bonded magnetic powders. The segment most at risk for patent litigation is C&O, which as of 2Q18 was defending against patent litigations in China, Germany, and the UK. Since litigation is ongoing, we consider the related costs as regular business expenses. Management has provided, using its best estimate, provisions for the ongoing legal action.

Environmental Risk

Neo's C&O and Rare Metals segments are subject to numerous global and domestic laws, regulations and permits, including those pertaining to environmental permitting and licensing, air quality, water usage, pollution, waste management and the handling, storage and disposal of hazardous or radioactive materials. In July 2017, Neo's JAMR and ZAMR facilities were subject to increased environmental regulation which resulted in the closure of the ZAMR facility pending the implementation of a new wastewater treatment system. Neo's Silmet facility is another key area subject to large environmental risks as the facility has been around for over 70 years and deals with radioactive materials. Neo takes every effort to remain compliant with laws in each jurisdiction of operations including China, Canada, Thailand, the US, and Europe.

Customer Concentration Risk

Each operating segment supplies materials to a limited number of key customers. Losing a key customer could have a material adverse effect on the segment's future performance. One of Neo's core strengths is the ability to manage and build lasting relationships with its customers. More often than not, the firm is collaborating with its customers to create products specifically for them. Furthermore, the majority of Neo's customers have long standing histories with the firm as a result of the intricate processes for certification and ever changing industry standards which has created a bond that new competitors cannot easily break.

Regulatory Risk

China is the largest producer and exporter of rare earth products, leaving the company vulnerable to the country's policy around rare earths and trade. The government has implemented several environmental and protectionist policies on rare earths in the past, including quotas, licenses, taxes, and export controls. As with others in the industry, Neo is subject to quotas on production of rare earths which place constraints on supply as the Chinese government continues to enact increasingly stringent policies. Neo has ample experience in dealing with China and its policies after establishing operations there in 1994. Management understands the environment in which the firm operates and has a long track record of managing risk.

Company Citations

Company Name	Ticker	Exchange	Currency	Closing Price	RJ Rating	RJ Entity
Airbus Group	AIR.PA	EPA	€	108.18	1	RJEE/RJFI
Alamos Gold Inc.	AGI	TSX	C\$	5.93	2	RJ Ltd.
BASF	BASFn.DE	XETRA	€	76.55	2	RJEE/RJFI
Solvay	SOLB.BR	EBR	€	115.50	1	RJEE/RJFI

Notes: Prices are as of the most recent close on the indicated exchange and may not be in US\$. See Disclosure section for rating definitions. Stocks that do not trade on a U.S. national exchange may not be registered for sale in all U.S. states. NC=not covered.

Glossary

HDDs	Hard Disc Drives
MLCC	Multi-layer Ceramic Capacitors
NDRC	National Development and Reform Commission
REEs	Rare Earth Elements
SSDs	Solid State Drives

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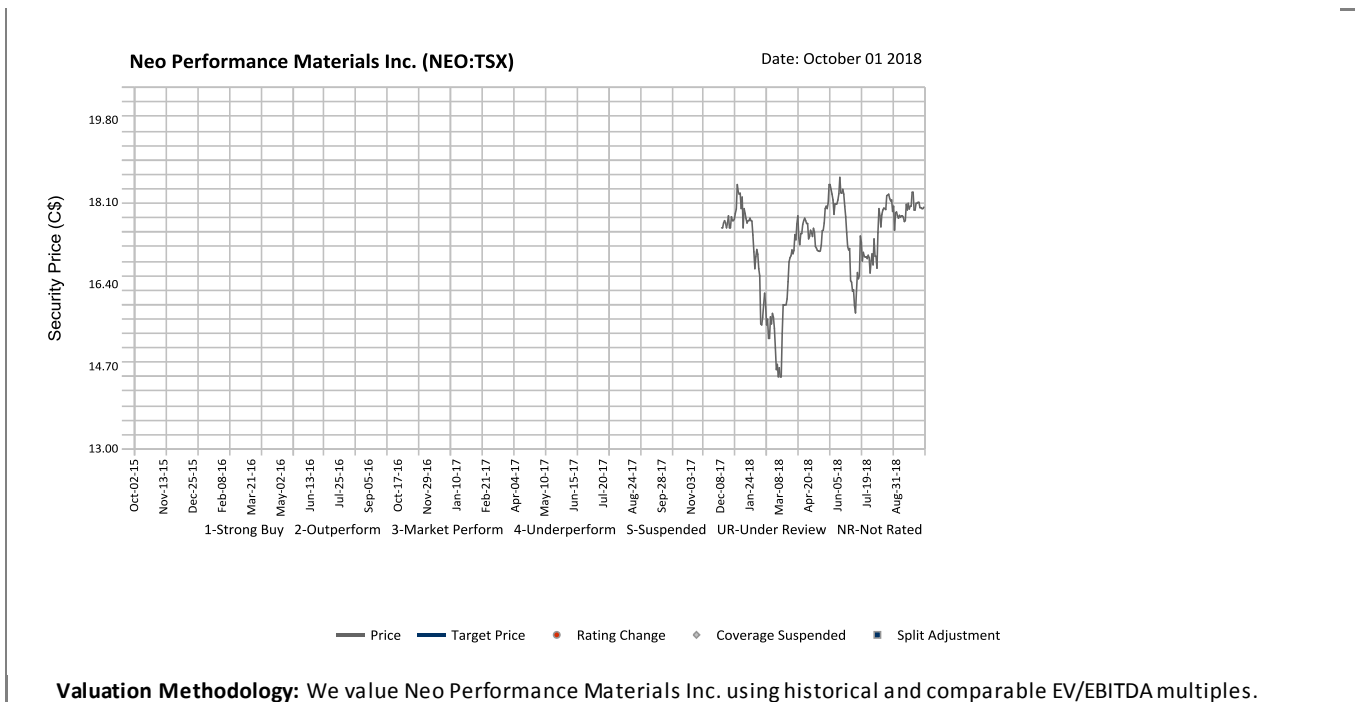
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Company Name	Disclosure
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STOCK CHARTS, TARGET PRICES, AND VALUATION METHODOLOGIES

Valuation Methodology: The Raymond James methodology for assigning ratings and target prices includes a number of qualitative and quantitative factors including an assessment of industry size, structure, business trends and overall attractiveness; management effectiveness; competition; visibility; financial condition, and expected total return, among other factors. These factors are subject to change depending on overall economic conditions or industry- or company-specific occurrences.

Target Prices: The information below indicates our target price and rating changes for NEO stock over the past three years.



RISK FACTORS

General Risk Factors: Following are some general risk factors that pertain to the businesses of the subject companies and the projected target prices and recommendations included on Raymond James research: (1) Industry fundamentals with respect to customer demand or product / service pricing could change and adversely impact expected revenues and earnings; (2) Issues relating to major competitors or market shares or new product expectations could change investor attitudes toward the sector or this stock; (3) Unforeseen developments with respect to the management, financial condition or accounting policies or practices could alter the prospective valuation.

Risks - Neo Performance Materials Inc.

Commodity Price Risk

As a manufacturer of rare earths, Neo is susceptible to volatility in rare earth pricing. Each of Neo's segments has pricing exposure, while C&O and Rare Metals have the option of selling rare earths and metals in their natural form, which can increase or decrease margins as prices fluctuate. To mitigate this risk, Neo has pricing pass-through arrangements in place and is continually investing in R&D to create more value-add solutions for customers.

Geopolitical Risk

Operating in many nations leaves Neo exposed to political risks resulting in changes in trade, regulation, and currency. Tensions continue to rise between China and the United States and trade wars have impacted several industries in China. To date, REEs have not been the latest topic of scrutiny from the US, but they have been proposed. Neo's strong customer ties and global production facilities give it a degree of flexibility in the event REEs became targeted.

Currency Risk

Neo reports in US dollars while operating globally in several countries, making the company susceptible to changes in each country's currency. Neo does not hedge against the Chinese renminbi, the Japanese yen, and the Euro.

Legal Risk

Legal risk mainly pertains to intellectual property and patent protection. Neo heavily relies on trade secrets for certain aspects of its technology, which are difficult to protect. However, Neo intends to focus on patented products and applications related to auto catalysts, water treatment and bonded magnetic powders. The segment most at risk for patent litigation is C&O, which as of 2Q18 was defending against patent litigations in China, Germany, and the UK. Since litigation is ongoing, we consider the related costs as regular business expenses. Management has provided, using its best estimate, provisions for the ongoing legal action.

Risks - Neo Performance Materials Inc.

Environmental Risk

Neo's C&O and Rare Metals segments are subject to numerous global and domestic laws, regulations and permits, including those pertaining to environmental permitting and licensing, air quality, water usage, pollution, waste management and the handling, storage and disposal of hazardous or radioactive materials. In July 2017, Neo's JAMR and ZAMR facilities were subject to increased environmental regulation which resulted in the closure of the ZAMR facility pending the implementation of a new wastewater treatment system. Neo's Silmet facility is another key area subject to large environmental risks as the facility has been around for over 70 years and deals with radioactive materials. Neo takes every effort to remain compliant with laws in each jurisdiction of operations including China, Canada, Thailand, the US, and Europe.

Customer Concentration Risk

Each operating segment supplies materials to a limited number of key customers. Losing a key customer could have a material adverse effect on the segment's future performance. One of Neo's core strengths is the ability to manage and build lasting relationships with its customers. More often than not, the firm is collaborating with its customers to create products specifically for them. Furthermore, the majority of Neo's customers have long standing histories with the firm as a result of the intricate processes for certification and ever changing industry standards which has created a bond that new competitors cannot easily break.

Regulatory Risk

China is the largest producer and exporter of rare earth products, leaving the company vulnerable to the country's policy around rare earths and trade. The government has implemented several environmental and protectionist policies on rare earths in the past, including quotas, licenses, taxes, and export controls. As with others in the industry, Neo is subject to quotas on production of rare earths which place constraints on supply as the Chinese government continues to enact increasingly stringent policies. Neo has ample experience in dealing with China and its policies after establishing operations there in 1994. Management understands the environment in which the firm operates and has a long track record of managing risk.

Additional Risk and Disclosure information, as well as more information on the Raymond James rating system and suitability categories, is available for Raymond James at rjcapitalmarkets.com/Disclosures/index and for Raymond James Limited at www.raymondjames.ca/researchdisclosures.

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