N4 PHARMA

SHARES SPOTLIGHT

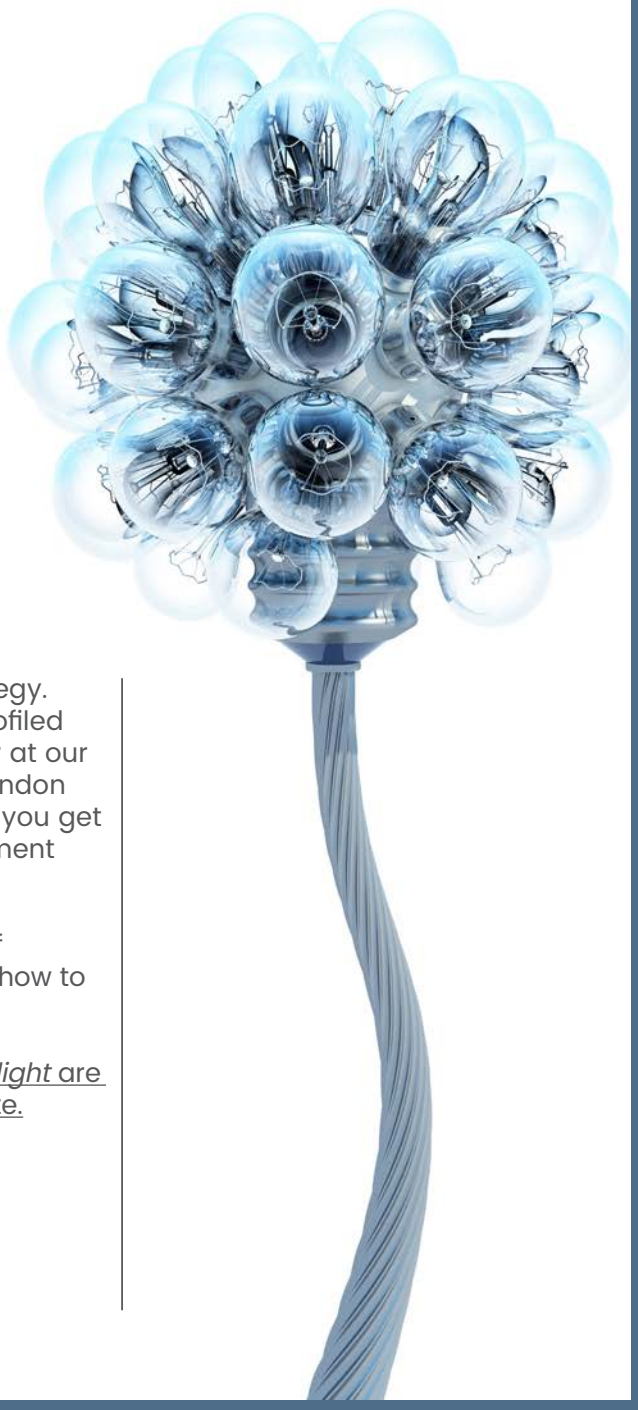
Growth & Innovation

INCLUDES COMPANY PROFILES, COMMENT AND ANALYSIS

FEBRUARY 2018

Introduction

Welcome to *Spotlight*, a bonus magazine which is distributed eight times a year alongside your digital copy of *Shares*.



Spotlight provides small caps with a platform to tell their stories in their own words.

The company profiles are written by the businesses themselves rather than by *Shares* journalists.

They pay a fee to get their message across to both existing shareholders and prospective investors.

These profiles are paid-for promotions and are not independent comment. As such, they cannot be considered unbiased. Equally, you are getting the inside track from the people who should best know the company and its strategy.

Some of the firms profiled in *Spotlight* will appear at our investor evenings in London and other cities where you get to hear from management first hand.

Click here for details of upcoming events and how to register for free tickets.

Previous issues of *Spotlight* are available on our website.

State of AIM report

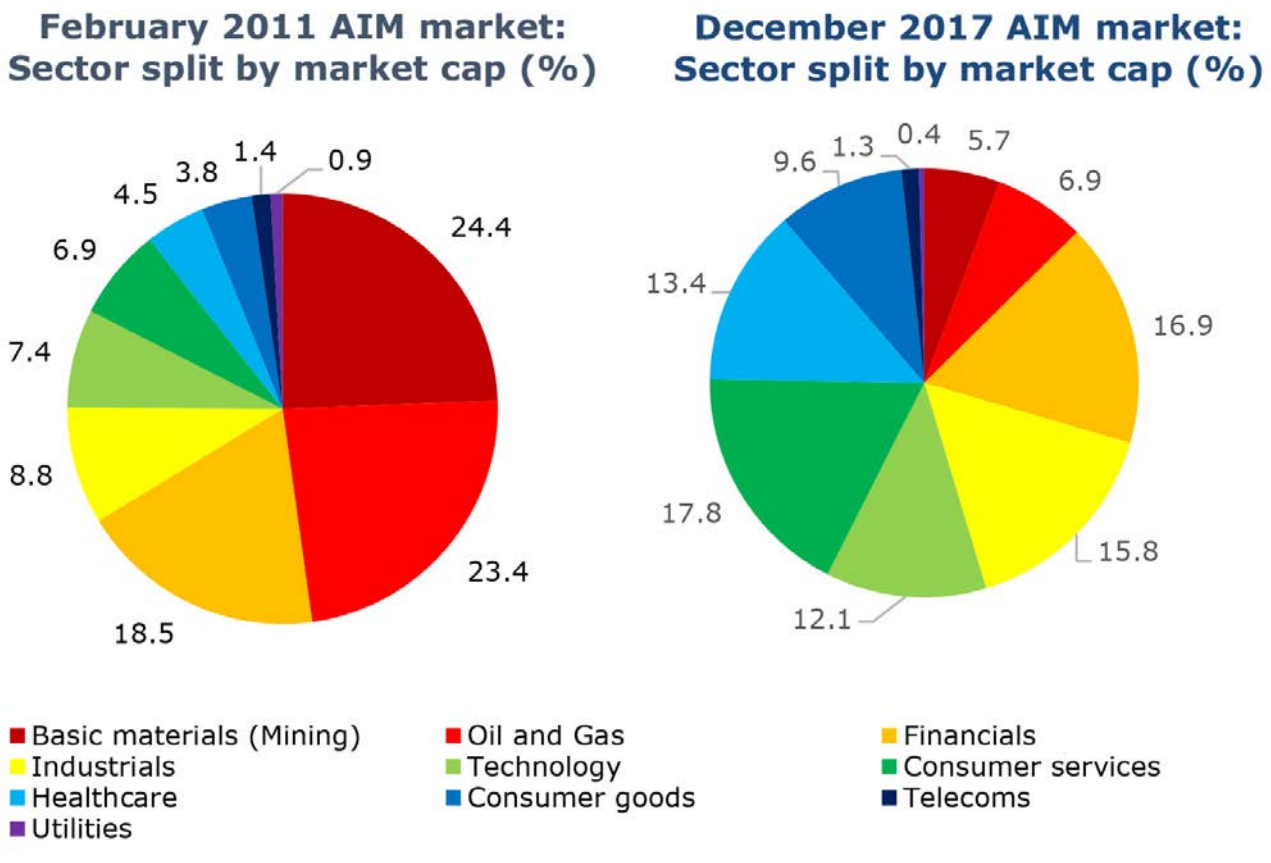
Research shows the outperformance of London's market for growth companies and its changing composition

In our November edition of Spotlight, we looked at the strong performance of AIM shares since they became eligible for inclusion in ISAs back in 2013. Now research house Equity Development has taken an in-depth look at the current state of London's junior market.

In recent years we have written a series of notes on AIM, and its performance relative to the FTSE All-Share Index. We published the first of these notes on 5 August 2013, the very date that AIM listed shares were (finally) permitted to be included in ISA accounts.

At the time we suggested that this one change would be the catalyst to AIM starting to outperform the FTSE All-Share, after many years of relative underperformance. Our 'bullish call' has proved to be absolutely spot on.

Two subsequent events, both in the spring of 2014, in the form of the abolition of stamp duty on AIM share purchases, and George Osborne's 'death of annuities' budget, which made the inheritance tax planning advantages of holding AIM shares much more



Source: LSE AIM market statistics

relevant, further significantly strengthened AIM's 'hand'.

AIM has consistently outperformed since then and has enjoyed a buoyant 12 months: in 2017 the AIM All-Share Index rose 24%, while the more concentrated AIM 100 Index rose a very impressive 33%. In sharp contrast the FTSE All-Share Index rose a modest 9%, and the FTSE100 just 8%.

AIM an important market for private investors

The Office for National Statistics released a paper on 29 November 2017 entitled 'Ownership of UK quoted shares' (which related to data at the end of 2016). It stated that 29.7% of all AIM shares are held by individuals, and a further 11.3% by Unit Trusts, where 'individuals' are presumably in most cases the ultimate owners.

These high numbers confirm the increasing all-round attractions of AIM to private investors, swollen by a combination of more AIM companies paying dividends and the £20,000 per annum ISA allowance encouraging greater individual ownership.

We are now in a new, post MiFID II world, with the number of brokers' analysts continuing to decline at a pretty alarming rate (with institutional equity commission effectively now a thing of the past). Going forward, the key for AIM companies wishing to continue to perform is to ensure that their broad investor base has free & widely available access to research & forecasts.

This should no longer be the sole preserve of the select group of institutions which are now being obliged to pay hard cash to brokers for their research.

Changing composition of AIM

As recently as February 2011, Basic Materials (Mining shares make up approx. 70% of the Basic Materials sector) plus Oil & Gas dominated AIM at 47.8% of AIM's entire market cap.

At the time of our last update, using March 2017 stats, Basic Materials (inc. Mining) and Oil & Gas represented just 15.7% of AIM, and by the end of 2017 this combined number had dropped to an all-time low 12.6%, and this despite the oil price currently being at a three-year high!

In sharp contrast, the Consumer Goods & Consumer Services sectors have risen from a combined 10.7% in February 2011 to 27.4% now. Other sectors moving strongly in the 'right' direction in recent years include Healthcare and Technology.

This text is taken from Equity Development's *AIM's spectacular 3 year run* research report published on 16 January 2018

2017: ANOTHER EXCELLENT YEAR FOR AIM

There is absolutely no doubt that AIM ended last year in fine fettle. As at 31 December 2017, AIM could claim:

- Record average AIM company market capitalisation of £109.4m
- Record 14 companies over £1bn market cap plus a further 217 over £100m
- Record proportion of AIM constituents paying a dividend
- 184 AIM companies have made the move onto the LSE full list
- Much more evenly balanced sector split, with Mining and Oil & Gas no longer dominating AIM (and arguably hindering its performance) as they did for most of its early years
- £105.4bn of new money has now been raised (for companies) in AIM's 22 year history: new money raised at IPO £43.2bn, follow on (secondary) company raises £62.2bn
- Decent performance by the vast majority of 2017's AIM IPOs, with a healthy pipeline going into 2018

N4 Pharma is focused on delivery

Website: www.n4pharma.com

Founded in 2014, **N4 Pharma (N4P:AIM)** is a specialist pharmaceutical company with two separate divisions. The first division is focused on reformulation of generic drugs, the second division is a novel delivery system for cancer vaccines and therapeutics.

Developing a new drug is very expensive and risky, it can often take over ten years and cost upwards of £1bn with less than 5% chance of the drug successfully coming to market. Reformulation is quicker, cheaper and far less risky taking approximately two to three years and less than £5m to bring each reformulated drug to market.

REFORMULATED RETURNS

N4's business model is to get their reformulated products to a point where they can be commercially licensed to larger pharmaceutical companies, in return for up front milestone payments and ongoing future royalties from product sales. The regulatory pathway for such products is already well established. N4 is reformulating a range of products backed by patent applications, each of which is targeting annual sales of over £300m thereby providing a portfolio of reformulation opportunities.

Each one of these opportunities has the potential for high returns from relatively low levels of expenditure when compared to traditional drug or biotech product development. Their lead product in this division is the reformulation of sildenafil, more commonly known as Viagra.

Viagra was originally developed as a cardiac drug, but it was repositioned to treat erectile dysfunction. As a consequence, it does not have the perfect product profile for the treatment of ED.

It takes approximately one hour to take effect, lasts for roughly six hours and should not be taken with food. Other companies developed their own products looking to improve on one of these three disadvantages, but no drug has been developed to tackle all three problems at once.

N4's reformulation is designed to do just that by improving the onset of the drug in the body, making it last longer and allowing it to still work when taken with food. N4's product is entering initial proof of concept clinical trials in Q1 2018 with results expected in Q2 2018.

The company will then look to present the findings along with a plan for a further pivotal trial to the FDA to seek guidance on its route to marketing authorisation. At this point N4 will either look to license its product to a partner to perform the final trial or seek to raise funds to do the trial itself resulting in higher royalties once marketing approval is granted.

WHO IS N4 PHARMA?

A SPECIALIST COMPANY WHICH BOTH REFORMULATES GENERIC DRUGS AND PROVIDES A NOVEL DELIVERY SYSTEM FOR CANCER THERAPEUTICS AND VACCINES.

A CONSISTENT MODEL

Vaccine development is a much longer and more expensive process compared to generic reformulation, however N4 has adopted a very similar business model in this space to its reformulation division.

It has licensed a novel silica nanoparticle from the University of Queensland in

Australia for the exclusive development of vaccines and therapeutics using nucleic acids, initially focusing on DNA and RNA.

Just as with the generic division, the silica nanoparticle system (named nuvec) provides multiple opportunities to license it to large pharmaceutical and biotech companies developing cancer vaccines and therapeutics using their own nucleic acid compounds.

N4's strategy is to develop its nuvec system to the point where it can be licensed to other pharmaceutical companies to take their own products into clinical trials, spending a similar amount required for reformulating a generic drug. N4 is not intending to spend exorbitant sums of money developing a novel vaccine, this responsibility falls on the partner. N4 will provide the delivery platform to help its partners develop more effective vaccines.

In order to achieve this N4 has in place a research program for nuvec to provide proof of concept information that it can use to enter commercial collaboration agreements with companies and ensure that nuvec is ready to enter human clinical trials by the end of 2020. This model allows N4 to receive early up front and milestone payments when nuvec is licensed and is not solely reliant on future royalties as many partner products could possibly fail in development.

MULTIPLE OPPORTUNITIES

N4 is operating a multi opportunity model with high rewards for low initial expenditure. The Global nanotech drug delivery market

is forecast to reach $11.9bn by 2023; dominated by cancer applications*, providing a vast number of licensing opportunities for nuvec. In early February 2018, N4 announced a collaboration with MedImmune UK, a key player in DNA vaccine delivery and is looking to develop further collaborations in 2018 as its research program evolves.

Nuvec has a unique spiky design developed to allow DNA or RNA to attach to these spikes in sufficient amounts to deliver the required treatment dose. These spikes help protect the nucleic acid from degradation due to exposure to nuclease and experiments have already shown the ability for nuvec to achieve excellent cellular transfection and evidence of a good potential immune response.

Most companies developing new vaccines using nucleic acids use some form of lipid nanoparticle system, but these systems have disadvantages in terms of dose, protection and toxicity. Nuvec is designed to improve vaccine delivery and is being positioned as the best alternative to lipid nanoparticles for nucleic acid vaccine delivery.

N4 completed a successful placing to raise £1.7m which will enable them to produce initial human clinical data to establish the pharmacokinetic profile of their sildenafil reformulation and help to determine how they will position the Nuvec vaccine delivery system for the best approach to engage with vaccine companies. The Company believes that they will have enough funds to see them through 2018.

IN A NUTSHELL

In summary N4 Pharma is a multi-opportunity pharmaceutical company operating a potentially low risk, high reward business model for successful product development across both generic reformulation and vaccine delivery.

* Source: Technology market research 2017