EDISON

NetScientific

Initiation of coverage

Transatlantic healthcare technologies

Healthcare equipment & services

NetScientific is a healthcare investment company with a portfolio of digital health, diagnostic, and therapeutic investees. In 2015 the company realigned its investment strategy, bringing a new highly experienced CEO on board, rationalisation of the portfolio and new funding (£18.2m gross from the issue of 15.2m new shares at 120p) to accelerate development in some of its key holdings. A series of value inflection points are expected in 2016 and 2017 including Series A financing for four holdings, the commercial ramp of the Wanda digital health platform, and the launch of the Vortex liquid biopsy product.

Year end	Revenue (£m)	PBT* (£m)	EPS* (p)	DPS (p)	P/E (x)	Yield (%)
12/14	0.0	(6.2)	(15.3)	0.0	N/A	N/A
12/15	0.1	(11.3)	(24.4)	0.0	N/A	N/A
12/16e	1.0	(19.9)	(29.2)	0.0	N/A	N/A
12/17e	4.1	(18.8)	(27.8)	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments.

Digital health, diagnostics, therapeutics

NetScientific has evolved its strategy and rationalised its portfolio into three clear investment themes: digital health, diagnostics and therapeutics. The current portfolio consists of five investments in which it has controlling stakes (Vortex, Wanda, ProAxsis, Glycotest and Glucosense) and one material investment (PDS). The aim is to bring these to commercialisation over the next two years, with the ultimate goal of an exit, realising value for investors. Timing of the potential exit will be determined by development progress and opportunity.

Commercial traction to unlock value

Efforts by NetScientific to raise both its profile and those of its portfolio companies with UK and US investors should increase the visibility of forthcoming value inflection points. Achieving a number of near-term commercial milestones should drive share price appreciation as value creation becomes more apparent. These include Vortex's commercial VTX-1 launch in 2017, Wanda's launch of OncoVerse in 2016, ProAxsis CE mark approval around end-2016, Glycotest's HCC Panel launch end-2017, Glucosense CE mark end-2018 and PDS's Phase II initiations in 2016. These milestones may also enable exits through IPO or trade sale.

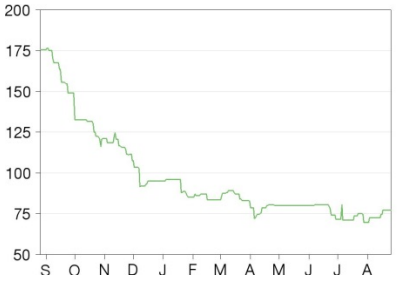
Valuation: £71.7m or 140p per share

We initiate our valuation of NetScientific at £71.7m or 140p per share based on a risk-adjusted NPV analysis of the portfolio companies and NetScientific's proportional ownership. As per the business model, the investee companies are at early stages of development and hence have significant financing needs in order to develop and commercialise their products. We currently value Wanda as the highest value portfolio company (£17.1m for NetScientific's share). We expect to update our valuation following the Series A financings planned in H216 for Wanda ProAxsis and Glycotest, with a Vortex financing in 2017.

26 August 2016

Price	**77.0p**
Market cap	**£39m**
	US$1.32/£
Net cash (£m) at 31 March 2016	19.5
Shares in issue	51.1m
Free float	16.2%
Code	NSCI
Primary exchange	AIM
Secondary exchange	N/A

Share price performance



%	1m	3m	12m
Abs	2.7	(3.8)	(56.1)
Rel (local)	0.5	(10.8)	(60.5)
52-week high/low	176.5p		69.5p

Business description

NetScientific is a transatlantic biomedical and healthcare technology group. Its portfolio of five core investments and one material investment is focused on three main sectors: digital heath (Wanda, Glucosense), diagnostics (Vortex, ProAxsis, Glycotest) and therapeutics (PDS Biotechnology).

Next events

Series A closure (Wanda, ProAxsis, Glycotest)	H216
PDS Phase II initiation	H216
Vortex product launch	H117

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Investment summary

A portfolio of diverse technologies

NetScientific is a healthcare investment company with a portfolio of six major holdings, all in early stages of clinical validation. It has made investments all under £6m and is the majority shareholder for five of the companies. Vortex is developing a fluidics-based mechanism of isolating circulating tumour cells. Wanda is a digital health company launching a patient monitoring programme for people with heart failure and chronic obstructive pulmonary disease (COPD). ProAxsis is developing an at-home test for cystic fibrosis (CF) and COPD exacerbations. Glycotest is developing a test for hepatocellular carcinoma. Glucosense has a prototype non-invasive glucose monitor and PDS Biotechnology (the sole minority stake) is developing vaccines for HPV-driven cancers.

Valuation: £71.7m or 140p per share

We value NetScientific at £71.7m or 140p per share. This is based on a risk-adjusted NPV analysis of each of the major holdings. We currently value Wanda as the highest value holding (£23.9m total valuation, £17.1m NetScientific's share) because of near-term commercial prospects and the large market for chronic disease management (£352m peak sales estimate). We value the remaining investee shares in a range of £3m to £12m with 15% to 95% ownership. Valuations reflect the early stage of development across the board, with probabilities of success ranging from 5% for Glucosense to 15% for Vortex.

Financials: £19.5m in cash, three Series A financings in 2016

NetScientific ended Q116 with £19.5m in cash, and intends to raise capital for Wanda, ProAxsis, and Glycotest via Series A financings in 2016 and Vortex in 2017. Our model forecasts £85m needed to bring the six companies to profitability, corresponding to £18m in additional financing for NetScientific's proportion of costs. We forecast increases in combined R&D spending to £13.6m in 2016 (from £7.3m in 2015), primarily associated with the acceleration of development for Vortex and Wanda. We expect these two operations and the parent company to become cash flow positive in 2020 and 2019 respectively, with the remaining programmes breaking even in 2020 and 2021.

Sensitivities: Multiple early-stage programmes

NetScientific caries the risks associated with investing in early stage healthcare companies, and the individual portfolio companies can all be considered high risk. However, we expect the risk to the parent company to be mitigated by the portfolio approach and by potential exit strategies to realise value for investors and limit downstream risk. Wanda is the most commercially advanced company, with a product in the early stages of commercialisation. Wanda is also operating in a highly fractured space with low barriers to entry and significant competition. The other portfolio companies are all in the development stage and carry the associated clinical and regulatory risks. Vortex and Glycosense will likely need to seek pre-market approval (PMA), and will require both clinical validity and utility trials. Vortex is one of at least 37 companies developing technology to isolate circulating tumour cells. ProAxsis has a simpler pathway and may be able to seek a 510(k) approval, but we project low peak sales (£49m). Glycosense is entering a market (hepatocellular carcinoma) that we expect to decline in incidence with increasing treatment of hepatitis C. Glucosense is also entering a competitive market (glucose sensing) that is largely commoditised, and even superior technology may not be able to justify the cost to payers. Moreover, Glucosense has only developed a benchtop prototype. PDS Biotechnology has the high development costs and risk associated with therapeutic development, and cancer vaccines have historically underperformed in the clinic. All of the above risks are compounded by financing concerns, and these companies may not be able to raise sufficient capital to reach profitability in the current financing environment.

Casting a wide net in bioscience

NetScientific is an investment company focused on early to mid-stage investing in healthcare companies across a range of different technologies. The company's main holdings include three diagnostics companies (Vortex, ProAxsis, Glycotest), a digital health company (Wanda), a medical device company (Glucosense) and a cancer therapeutic company (PDS Biotechnology) (Exhibit 1). NetScientific's investments in these companies are in the £500k to £6m range, and it holds a majority in five companies.

The current model of the company follows a strategic change in direction away from seed-stage investing in 2015. François Martelet MD, a highly experienced biopharma professional, was appointed CEO in June 2015, along with additional appointments in the board and upper management. The company divested approximately half of the companies in the portfolio to focus on the five main companies, and in particular to accelerate the development programmes in Vortex and Wanda. To finance this, NetScientific issued 15.2m new shares at 120p in November 2015 raising £18.2m (gross) from new and existing shareholders. The company retained a small number of seed investments (Exhibit 2), but these are beyond the scope of this report.

Exhibit 1: Core portfolio and material investment

Investment	Technology	% held	Founded	Status	Business advantage	Targets
Vortex	"Centrifuge-on-chip" cancer diagnostic using liquid biopsy from circulating tumour cells	95.0%	2012	VTX-1 instrument beta units prepared	Faster separation of viable cancer cells with high purity.	VTX-1 launch Q216 into US research labs for beta testing; clinical validation to complete during FY16. CE mark in EU and FDA Class I exemption filing in H216. First commercial sales in FY17.
Wanda	Clinical decision support software to reduce hospitalisation risk. Initially focused on CHF	71.3%	2011	CHF and oncology deals signed Q116	Patient friendly interface. Highly scalable, predictive analytics.	Expand platform to cover additional chronic conditions. Planned DTC campaign to target consumers. Economic validation: raised marketing profile 4k sponsored and unsponsored users Q416; 15k Q417.
ProAxsis	Protease-Tag diagnostic products for monitoring disease biomarkers; focus on CF and COPD	56.5%	2013	Lab tests launched; NEATstik in R&D	NEATstik home test detects neutrophil elastase with high reliability and specificity. Potential to reduce hospitalisation risk.	PoC test in clinical trials from Q217. CE mark approval Q416/Q117; EU launch 2017 of in clinic and self-test NEATstik devices.
Glycotest	Liver cancer diagnostic test based on proprietary biomarkers and algorithms	87.5%	2012	HCC panel developed, 208-pt clinical study completed	Outperforms current biomarker AFP test.	Clinical validation by Q317, CLIA registration Q317, HCC test launch Q417.
Glucosense	Non-invasive glucose monitoring device	60.7%	2011	Prototype, limited data	Supplement/replace finger-stick testing. Possible wearable device.	Testing of benchtop device by end 2016; clinical studies in 2017; EU launch possible 2019.
PDS*	Therapeutic vaccine, clinical trials against HPV	14.85%	2006	Clinical	Low production cost; deals with Merck-Serono and MedImmune.	Phase II initiations; further licensing deals.

Source: NetScientific. Note: *Material investment. PoC = point-of-care; CHF = congestive heart failure; CF = cystic fibrosis; COPD = chronic obstructive pulmonary disease.

Exhibit 2: Seed-stage investments

Investment	Technology	% held	Founded	Status	Business advantage	Targets
G-Tech	Electrical monitoring of GI function via wearable disposable patch	ND	2014	Early stage	Real-time diagnosis and monitoring of GI disease	Innovation needs to be linked to clinical outcomes
Longevity Biotech	Uses β amino acids scaffold to resist degradation in blood	ND	2014	Early stage	Longer half-life biosimilar therapeutics	Needs clinical equivalence and toxicology and safety
CytoVale	Microfluidics to measure >10 biophysical cell markers	2.15	2014	Concept validation	Detects early stages of sepsis in white cells	Clinical validation and commercial test development
EpiBone	Customised bone grafts	ND	2015	Research	Grown from own stem cells	Clinical, economics
Neumitra	Real-time stress level measurement	ND	2015	Retail market	Neuma biowatch (embedded biomodules in jewellery)	Validation and marketing

Source: NetScientific. Note: Seed-stage investments sourced from Breakout Labs. ND = not disclosed.

NetScientific's new strategy is to develop a balanced portfolio of digital health, diagnostics and therapeutics companies focused on chronic disease. The company intends to seek majority ownership in future portfolio investees, and to leverage its ability to recruit high-quality management

to operate these companies independently. NetScientific has stated that the development of therapeutics companies is of high strategic importance. The goal is to structure a new therapeutics company surrounding a therapeutic asset, as opposed to the acquisition of an existing entity. We predict that expansion of the portfolio will follow exits from the current investments. NetScientific aims to drive asset appreciation using external financings concurrent with investee inflection points such as clinical results. We do not expect NetScientific to invest during these subsequent rounds. We expect the company to exit pre-profits through a trade or public listing to limit its exposure to commercialisation risk.

Swirling into the Vortex

Vortex BioSciences is a California-based spin-out focused on cancer diagnostics. It has developed a novel 'liquid biopsy' system to capture rare circulating tumour cells (CTCs) from whole blood based on technology developed at the Department of Bioengineering at UCLA. The system includes a novel liquid biopsy automated instrument (VTX-1) and integrated microfluidic cartridge. CTCs are an area of intense clinical research interest and technical development (see review in Nature Reviews Cancer) as they provide information about an individual's cancer, which can be used for prognostic, diagnostic and treatment stratification purposes. Rising CTC numbers are a known risk marker for cancer reoccurrence in diagnosed patients, therefore a combination of effective CTC isolation with sophisticated analysis could enable much better and earlier cancer diagnosis, monitoring and personalised cancer therapy. The initial focus is on the research market. The VTX-1 system was introduced at the American Association for Cancer Research (AACR) conference in April 2016. The system is currently in the late stages of development, with the official launch into the US research market planned for Q117. Revenue from the research market is essential for the near term cash flows for the company.

The Vortex technology, using microfluidics, isolates larger cells from whole blood. As CTCs tend to be much bigger than red blood cells and larger than most white immune cells, they are preferentially captured. Note that the method is not specifically selective for cancer. Key advantages include the rapid processing time (taking as little as one hour), collection efficiency (sensitivity) and purity of captured CTCs with limited white blood cell contamination (specificity). Most importantly, the captured CTCs are intact and undamaged and can be identified, analysed and enumerated using different methods. The Vortex technology is label-free, requiring no pre-treatment; hence it can be used in a variety of applications including cancer diagnosis and monitoring, personalised medicine, drug development and cancer research. Moreover, because the cells remain viable during the process they can be further propagated via tissue culture.

Vortex is one of a number of companies with CTC detection systems in development (37 by management's estimates, Exhibit 3 shows a selection of those based on microfluidic isolation). A number are currently marketed for clinical use in Europe or for research use. CellSearch is the sole CTC system that is FDA approved, but its use is limited to enumeration in certain cancer types. In June 2016, the FDA approved the first ctDNA blood-based genetic test: Roche's cobas EGFR Mutation Test v2 as a blood-based companion diagnostic for Tarceva (erlotinib). Vortex flags that liquid biopsy could represent a $22bn market opportunity (according to JP Morgan), excluding the research segment. Our estimates are more conservative: based on the rates for prostate specific antigen (PSA) testing, the most common current cancer blood test, and Vortex's pricing strategy (see below), we predict a market of approximately $13bn by 2031. Due to higher cost, the need for dedicated equipment and significantly lower throughput (each test requires an hour to perform on this platform) compared to the PSA test, as well as a high degree of competition, we expect initially low penetration (1%) of this market, but we expect this to expand (2% by 2030) as the company introduces more high throughput devices. Regardless, this represents a significant growth opportunity for the company as its product pipeline expands from initial research use to

downstream clinical applications, which will be addressed by next-generation instruments. Three different generations are in the pipeline, but the timelines to commercialisation will depend on development progress and funding. Vortex has sufficient current funds to take it through the launch of VTX-1; on existing visibility, the second-generation technology may be on the market in the next two to three years. We expect the company to have to perform clinical validity and utility trials in the US in order to support marketing claims regarding the efficacy of the test. We currently model this as approximately £9m in R&D spending before profitability in 2019, corresponding to approximately £8m in additional investment, to support the clinical studies necessary to enter the diagnostic market. The company will be seeking this financing in Series A planned for 2017. We expect the development of future platforms based on the technology to require additional research spending, and expect to update our valuation and estimates with the release of more details on these systems.

Exhibit 3: Selected Microfluidics CTC detection technologies

Product (company)	Status	Notes
ClearCell FX System (Clearbridge Biomedics)	Marketed for research use only	Automated machine using the CTChip FR1 microfluidic chip to isolate CTCs on the basis of their size and inertia. Recovery >40% with spiked samples. Reports ultra-high purity and high throughput. Harvested CTCs are intact and viable. The system can be integrated with a number of downstream analysis technologies and culture of CTCs.
VTX-1 (Vortex Biosciences)	Validation	Microfluidic chip to isolate CTCs on the basis of their size and other physical properties. Preliminary testing suggests >80% purity and high throughput. CTCs are viable and can be harvested for downstream analysis and culture.
Parsortix (Angle)	CE marked for clinical use	Microfluidic disposable cassette captures CTCs on the basis of their size and morphology. CTCs can be fixed and stained in situ or harvested for analysis or culture.
PREP100 (Celsee Diagnostics)	Marketed for research use only	Microfluidic system that isolates CTCs on the basis of size using tapered microchannels. The CTCs can then be stained or cultured directly in the isolation chamber to minimise contamination. 85% capture efficiency.

Source: Edison Investment Research, company websites. Note: Published data are limited on many systems.

Vortex's business model is akin to a razor/razor blade model whereby the instrument is sold at a small mark-up to cost, with profits made through the supply of the disposable microfluidic cartridges. Vortex's pricing strategy is in development, but current indications are that each instrument will cost $125-150k with a per-cartridge price of $250-350. We expect this pricing to ultimately be tempered by discounts to payers, which we predict in the range of 30%.

An algorithm called Wanda

Wanda is a digital health company that has developed a software platform for the management of patients with chronic disease. The Wanda application is an integrated solution to improve patient monitoring and provide behavioural modification and ultimately reduce hospitalisations. The company has developed applications to monitor patients for congestive heart failure (CHF) and COPD and is currently developing an oncology monitoring application.

The Wanda application collects data from remote monitoring systems (RMS) and patient self-assessments on mobile devices to monitor disease progression and uses the company's proprietary analytics to predict disease risk. The project resulted from 12 years of clinical research into chronic disease management at UCLA. The information gathered is automatically leveraged by the application to provide behavioural modifications to the patient, as well as to inform the patient's physician care team should intervention be necessary. The ultimate goal of the application is to reduce the number of hospitalisations by providing more timely feedback based on the patient's status.

Wanda is capable of integrating the health information from an array of different devices, and the company's strategic goal is to partner with multiple healthcare providers and device makers. The company has partnered with the home care company Health Resource Solutions to provide its CHF and COPD application and has a collaboration agreement with hospital operator Dignity Health for the development and launch of the oncology application. Another commercial agreement has been recently signed, with additional new customers expected in 2016.

The Wanda platform is versatile and, hypothetically, can be employed to monitor a wide variety of chronic diseases. The first module developed for the platform was for the monitoring of patients with CHF. The software integrates the patients' medical record information with regular blood pressure and weight measurements gathered wirelessly from Bluetooth-enabled devices, as well as self-reported symptom assessments. The system was previously tested utilising a 1,500-person trial performed at UCLA. Wanda is currently developing a module for the prediction of complications associated with COPD. The company will provide the CHF and COPD modules as a combined application because of the comorbidity of these two diseases. The agreement would provide the application to patients at an upfront cost of $225 and $60 per month, with a target of 50 patients per month from this pool. Wanda will launch its second product, OncoVerse, for the monitoring of cancer patients in 2016. The company has already entered into an agreement with Dignity Health to launch the programme in more than 40 of Dignity's facilities. The company has stated that it expects revenue from these licences to be c $600,000.

Wanda's goal is to have 4,000 people using the system by end-2016. It intends to address this primarily through business-to-business deals with hospital systems and care providers by leveraging the cost-saving potential of the system. However, the company is also planning to initiate a direct-to-consumer campaign targeting early adopters, which we expect to raise the company's profile. The company will be expanding its offering with the introduction of new disease modules and the 2016 target is to enrol at least two new business clients using existing and new systems. The company hopes to have 15,000 registered users by the end of 2017. We model the combined CHF/COPD disease management market in the range of $4bn. Based on our understanding of the FDA guidance on mobile healthcare applications, we do not believe that Wanda will be classified as a device. However, we expect the company to engage in further clinical trials to support marketing claims to drive adoption in this area. We expect these clinical trials to be inexpensive compared for instance to therapeutics, and we currently model R&D spending in the range of £9m (10,000 patients at £900 apiece) before profitability in 2019, but a portion of this will be offset by near-term revenues. We expect the cost of the trials to be associated with device placements, support of physicians performing remote monitoring and the acquisition of medical records to support claims that Wanda reduces hospitalisations, but we expect a high degree of participation from healthcare providers given the low impact on their operations. Moreover, these trials will set up a footprint in participating institutions where Wanda is available, and could support market development. We expect Wanda to require an additional investment of approximately £4m to commercialise the existing programmes. The company stated that it will seek a Series A financing in late 2016 of up to $20m and we expect any additional funds to finance the development of the application for additional chronic disease indications.

The digital health market as a whole is poorly developed, with few to no market leaders, and is highly fragmented due to low barriers to entry. There are no less than 20 companies in the immediate space of Wanda, developing similar solutions for chronic disease management. These can be roughly sub-classified into different groups based on their approach, which include remote patient monitoring, data warehousing, analytics, remote care and behaviour modification. The Wanda combination of patient monitoring, analytics and behaviour modification is unique to our knowledge, but replicated in part in multiple instances.

ProAxsis: Advancing respiratory patient care

ProAxsis was founded in 2013 as a medical diagnostics spin-out of Queen's University Belfast in Northern Ireland. ProAxsis has developed proprietary molecules, called Protease-Tags, which selectively bind active proteases and can be used in a range of diagnostic and disease monitoring tools. The company produces a commercially available immunoassay for research use and is currently developing a PoC test called NEATstik for routine monitoring of neutrophil elastase.

Neutrophil elastase is involved in chronic respiratory diseases such as CF and COPD and is an established biomarker of infection and inflammation. Significant progress with the development of NEATstik was made in 2015 and, contingent on raising further funds in 2016, the company expects to be ready for EU commercialisation by mid-2017.

Active proteases ('molecular scissors') play a key role in many physiological processes and are considered important therapeutic targets, as well as being biomarkers of many diseases. They may be unregulated in diseases including cancer, heart disease, stroke, Alzheimer's disease, rheumatoid arthritis, multiple sclerosis, CF and COPD. Current assay systems for proteases utilise chromogenic or fluorogenic substrates, are often complex and may not be sufficiently specific to detect the active form of the enzyme. ProAxsis has developed novel and patented Protease-Tags to irreversibly inhibit/trap active proteases. Because they are designed to form a bridge to a solid support via covalent binding, they can be combined with established diagnostic technology platforms such as ELISA, lateral flow or multi-analyte biochips.

ProAxsis's first Protease-Tag immunoassay kit was launched in August 2015 and is commercially available for research-only use, including academic labs and clinical research organisations involved in clinical trials. The kit measures active neutrophil elastase (NE), which is produced by white blood cells (neutrophils) in response to lung infections and is also a potential therapeutic target. Elastase destroys the elastic connective tissue that keeps the lungs supple, which results in permanent scarring. Clinical studies have shown that high neutrophil elastase levels are linked to deteriorating lung function (eg Sagel *et al* 2012). Sales in 2015 were modest, although the company expects them to grow as further pharma company customers are secured (following completion of internal validation testing). Beyond the NE kit, three further specific immunoassays are in development against different proteases targets, including those involved in pulmonary fibrosis, CF/COPD and acute respiratory distress syndrome.

ProAxsis is also developing a lateral flow device (NEATstik, Neutrophil Elastase Airways Test) for rapid, easy monitoring of NE levels in the clinic or home from sputum samples. It aims to be the first-to-market, PoC NE test. NE activity in respiratory diseases is responsible for significant airway damage and is a strong predictor of lung function decline. The goal is to detect increased NE levels earlier to reduce exacerbations and hospitalisation risk in patients with CF and COPD, and improve health outcomes.

The chronic respiratory diseases CF and COPD are associated with frequent lung infections, irreversible tissue damage and lung function decline. There are 70,000 patients diagnosed with CF worldwide (30,000 patients in the US and Canada and c 40,000 elsewhere, mainly in Northern Europe) and 35.7 million patients with COPD in the US and EU. The treatment of lung diseases is estimated to cost the UK NHS £4.7bn a year and, according to NICE, "a reduction of 5% in COPD exacerbations would be expected to save the NHS £16 million per annum".

The target population for home testing is adult CF patients and moderate-severe COPD patients, 65% and 25% of whom respectively are 'natural sputum producers'. Even at a conservative price ($25 in the US, £15 in Europe), assuming a 40% share of CF patients (testing weekly) and a 20% share of COPD patients (testing monthly), ProAxsis estimates the European CF/COPD home test market could be around £16.5m. The US market would probably be twice this, giving an estimated US/EU market of c $70m, and these estimates are largely within line with our own. It should be noted that the test is still in the early stages of preclinical development and a marketable end user product has not been developed yet. However, we expect this process to be streamlined because the test utilises established technology and we predict R&D costs in the range of £3m. We expect the company to pursue CE marking in Europe and a 510(k) submission in the US, which would additionally limit R&D spending. In total we expect the company to need £4m in additional financing before profitability in 2020. It has announced that it will be seeking up to £7m in a Series A in H216.

Glycotest: Screening for liver disease

Glycotest is a US-based company developing a non-invasive diagnostic and monitoring test for early-stage liver disease based on proprietary blood-based biomarker panels and algorithms. Its lead product (HCC Panel) is a biomarker panel for curable early-stage hepatocellular carcinoma (HCC), the most common form of primary liver cancer. Liver disease is a large and growing market and current surveillance tests under detect early-stage HCC. Glycotest's HCC Panel outperformed the alpha-fetoprotein (AFP) blood test, a commonly used screening test, in a 208-patient study. Using other biomarkers, Glycotest's approach could be extended to other liver diseases. Glycotest's commercialisation strategy in the US is to market HCC Panel as a laboratory service through a CLIA-accredited laboratory.

Glycotest was founded on technology developed at the Baruch S Blumberg Institute and Drexel University College of Medicine in Philadelphia. Diseased livers secrete a range of glycoproteins with fucose sugar modifications at abnormally high levels, and different diseases may have characteristically abnormal fucosylation patterns. Glycotest has licensed exclusive worldwide rights, with low royalties, to over 50 patented serum glycoprotein biomarkers that exhibit increased fucosylation in liver cancers. Glycotest also owns the rights to assay technology to quantify fucosylated glycoproteins using engineered lectins (sugar-binding molecules).

Glycotest has developed its proprietary HCC Panel test using six biomarkers that are elevated in HCC. The individual biomarkers have been evaluated in >800 patients and the HCC algorithm has been developed in thousands of patients. The technology can be extended to other liver diseases, using a different array of validated biomarkers. Glycotest is also developing tests for cholangiocarcinoma and intermediate-stage liver fibrosis-cirrhosis.

HCC is the third leading cause of cancer-related death worldwide and the ninth leading cause in the US, with an increasing incidence. Globally, there are c 500k deaths due to HCC per year. Cirrhosis is a scarring of the liver resulting from liver disease and 5-30% of patients with cirrhosis go on to develop HCC. The predominant risk factors for cirrhosis (and therefore HCC) are chronic hepatitis C infection (26% of cirrhosis), hepatitis B infection (15%), as well as non-viral factors such as alcohol consumption (21%) and non-alcoholic fatty liver disease – NAFLD (18%). NAFLD is linked to obesity (BMI >30) and is a growing problem affecting 30% of the US population. It can progress to non-alcoholic steatohepatitis (NASH), which has a 4-14% risk of cirrhosis. The prevalence of alcoholic steatohepatitis (ASH) is unknown, although it may be estimated from the prevalence of alcoholism (8% of the US population, one-third with ASH), which is still a major cause of liver disease in Western countries.

Based on AASLD guidelines of HCC risk (for hepatitis B/C, ASH and NASH), we estimate that two million diagnosed patients in the US would be eligible for liver cancer surveillance. However, we expect declining rates of HCV to reduce this number to 1.3 million by 2030. Assuming a 10% uptake, this gives a peak sales projection of over $150m in the US assuming two tests per year at a cost per test of $660 (Glycotest data) and a median 30% payer rebate. We note that the average cost of abdominal ultrasonography plus AFP test is around $500. Whether this higher cost/test pricing is achievable remains to be seen and will presumably hinge on the ability of HCC Panel to demonstrate cost-benefit in detecting early-stage HCC. However, growth drivers are likely to come from an increasingly obese population (increasing fatty liver disease and NASH), albeit offset by declining rates of hepatitis B virus (HBV) and hepatitis C virus (HCV).

Glycotest will be able to offer the test as a laboratory service and will therefore not need FDA approval before marketing. However, the company will need to perform clinical utility trials demonstrating a change in treatment patterns to support the marketing claims and payer support for wider adoption. We predict an R&D cost of £7.6m before profitability in 2019, and a need to raise at least £6m in additional financing, by our estimates. Glycotest is seeking $10m Series A

funding to complete clinical validation of the test, obtain CLIA lab status and launch HCC Panel by Q118. The company also plans to expand its reach via overseas partnerships, particularly in regions that historically have a high rate of HBV and HCV such as Asia.

Glucosense Diagnostics: Painless blood testing

Glucosense is a Leeds University spin-out that is developing a non-invasive continuous glucose sensor for self-monitoring of blood glucose as an alternative to finger-prick testing, which is an $8bn market. The company employs nano-engineered silica glass with a low-powered laser to provide real-time measurements of blood glucose within 30 seconds. It is developing two device modules: a small, portable device for intermittent measurements and a continuous monitoring wearable device with a hypoglycemia-alert. This could supplement or replace the current invasive/implantable devices. A small-scale validation in 12 patients was positive and Glucosense plans further optimisation in 2016. Assuming success in ongoing testing of the benchtop prototype device, and subsequent clinical trials, European commercial launch is possible in 2019.

Glucosense's device uses proprietary photonics technology, which, according to the company, is backed by strong IP. Various patent applications are in place. In July 2015, a key European patent covering the core technology of nano-engineered silica glass (photonic glass) containing ions that fluoresce when stimulated by a low-power laser was awarded. When the glass is in contact with the user's skin, the fluorescent signal varies according to the concentration of blood glucose, enabling a direct measurement of glucose levels in less than 30 seconds.

The current prototype is a desktop device for intermittent testing. A small trial in 12 Type 1 diabetics was run over eight hours comparing Glucosense to standard continuous monitoring and finger-prick testing. The data showed a clinical accuracy rate of 77% and a clinically acceptable accuracy rate of 96.5%, indicating that the device has the potential to be at least as accurate as current methods. Further device development and miniaturisation is underway.

Glucosense is currently optimising the optical components and working on miniaturising the sensor head technology so it can be used in two distinct forms of the device: a portable device for intermittent testing and a wearable continuous monitoring device. Candidate suppliers have been shortlisted for contract manufacturing of the glass, with supplier evaluations ongoing to select a preferred partner.

The company anticipates that testing of the benchtop device could produce a readout in end-June and end-December 2016, leading to the next clinical phase in H117. It should be noted that a benchtop prototype represents one of the earliest stages of product development and there is a significant possibility that a product is not realisable from this technology. The company has stated that it will make a go/no-go decision in H216.

The company will have to perform clinical studies validating that the device can lead to improved glucose control, but timelines will be driven by clinical results and are dependent on a fund-raising in Series A and B rounds. We expect that a CE mark could be gained by end-2018, with a possible commercial launch in Europe in 2019. We assume that FDA approval will need a full clinical validation under the stringent pre-market approval (PMA) route, and hence US launch will follow approximately 12 months later, contingent on the timing of clinical trials. The company plans to discuss the study design with the FDA to ensure all regulatory requirements for the US market are addressed. We include £14m in R&D costs in our model, which will need to be raised from investors. Given an aggressive development timeline, we believe the product can be on the market in 2019 or 2020.

We forecast a market price in the range of $2,000, which is in line with currently available continuous glucose monitors (CGMs). The market for glucose testing is dominated by needle prick

monitors and is largely commoditised. As a result, there are already significant headwinds getting reimbursements for CGMs, and we do not expect this situation to change before the Glucosense product reaches the market.

PDS Biotechnology: Cancer vaccines

PDS Biotechnology is a biopharmaceutical company focused on the development of novel cancer immunotherapies and vaccines for infectious diseases. PDS intends to initiate up to five or six Phase II clinical programmes in oncology in 2017. PDS's products are based on the company's proprietary and novel T-cell activating platform, Versamune. Three of the forthcoming Phase II trials will be run in collaboration with the US National Cancer Institute (NCI). One preclinical programme, which will feed into two or three additional Phase II clinical trials, is also in progress in collaboration with the NCI. Successful clinical trials and regulatory decisions will be followed by sales and marketing of the products, which the company may choose to undertake on its own or with a suitable marketing partner. A licensing deal has already been concluded with Merck KGaA; PDS is in discussions with other large pharma companies regarding clinical development partnerships.

Versamune is a nanoparticle antigen technology based on the use of synthetic positively charged (cationic) lipids. The Versamune platform overcomes a major hurdle in immunotherapy by enabling the unique cancer proteins (antigens) to enter the cytoplasm of the immune dendritic cells directly. This leads to effective priming of tumour-specific killer (CD8+) T-cells to recognise and attack the tumours, leading to tumour cell death. The unique lipid used in the Versamune platform acts as a potent immune activator, which induces proliferation and activation of the primed T-cells.

In contrast to other cancer vaccines, the Versamune-based products are able to reduce the population of certain immune-suppressor cells that could inactivate T-cells. The ability to induce high levels of potent killer T-cells (tumour attack) while simultaneously reducing the number of immune-suppressor cells (tumour defence) allows the product to overcome immune suppression leading to high anti-tumour efficiency.

The nature and potential advantages of the technology mean that PDS management sees Versamune-based products as having the ability to overcome significant shortcomings of existing immunotherapy approaches. Cancer vaccines have been sub-optimal in their ability to treat cancers largely due to their inability to facilitate antigen cross-presentation via the MHC Class I pathway to killer T-cells, which is compounded by inability to overcome tumour immuno-suppression. Chimeric antigen receptor (CAR) T-cells and checkpoint inhibitors, due to their safety profiles, target the very late stage/terminal cancer patients; hence there is a clear therapeutic gap with earlier-stage cancer patients who may be the most treatable by immunotherapy. However, for such subjects a safer immunotherapeutic approach is needed. The company's first therapeutic using this platform, PDS0101, indicated strong T-cell potency and safety in Phase I, which lends it to targeting early-stage cancer.

Phase II clinical trials for PDS0101 will be in (1) grade 2 and 3 cervical and anal neoplasia patients; (2) stage III cervical cancer patients; and (3) late-stage human papillomavirus (HPV)-positive head and neck cancer in combination with a checkpoint inhibitor. Note that AIN/CIN 2/3 are now termed high-grade squamous intraepithelial lesion (HSIL). This type of lesion (CIN 3) is cured surgically, so patients in the proposed study may be at risk of cervical cancer. Most studies establish a therapeutic effect in low-grade squamous intraepithelial lesion (LSIL) patients.

PDS management (based on commissioned independent market research) estimates a market for treatment of high-grade precancerous cervical, anal, vulvar and vaginal lesions of $1.1bn in the fifth year after launch. In addition, sales into metastatic anal, cervical and oropharyngeal cancer markets in the same geographies were estimated by PDS management at $180m, $430m and $330m, respectively. We expect R&D costs in the range of £13m for the Phase II programme (through

2017) and £45m for a Phase III programme (2018-20). Based on our estimates of current cash levels, we expect the company to need at least £48m in additional financing.

Potential direct competitors would include cancer immunotherapy/infectious disease vaccine company Bavarian Nordic; its lead cancer programme, Prostvac, is currently in Phase III and is subject to an option with Bristol-Myers Squibb in return for a $60m upfront fee. A large number of other cancer vaccine programmes have failed to progress in the clinic over the past decade, and we consider the risks associated with their development to be higher than for other therapeutics.

Sensitivities

The NetScientific investment strategy in early-stage companies carries the inherent risk associated with the ability of the investees to both develop products and source additional financing. At this point, however, the amount of capital paid in by NetScientific is small (£14.5m), and significantly outsized by the expectation value of the investments even at our high risk estimates. This positions NetScientific to be able to make early exits, significantly improving the risk profile of the parent. It is unlikely given this model that NetScientific will have a position in any of the investees following commercialisation, but a thorough examination of the risks of the investees over the lifetime of the company gives insight into both current and exit value.

The only company with a fully developed product is Wanda, and the remaining companies are each in very early development stages with significant investment needed before any products can compete commercially. The company with the highest level of development related risk is Glucosense, as it is still in the early prototype phase.

The diagnostics companies (Vortex, ProAxis and Glycotest) may be able to market tests in the near term on a provisional basis via various mechanisms (CE mark, CLIA waiver, investigational use), but will require significant clinical testing before broader marketing approval. We expect the Vortex and Glycotest programmes to require PMA enabling clinical utility trials before they can fully realise their market potential.

Although the Vortex platform has strengths, there are a large number of other companies developing similar technology to isolate CTCs (37 companies by management's measure). In this highly fragmented market, the marginal differences between these technologies may be less important for ultimate success than commercial factors. Another limiting factor of the current system is the long processing time per sample (one hour) and lack of parallelism, which significantly limits throughput for the test, and will hinder adoption for more broad-based screening.

A significant limiting factor for the success of Glycotest is that the company's product is a test for HCC, and the incidence of this disease is closely linked with the prevalence of HCV. HCV is being cured at a dramatically increased rate due to new technology, which we predict will translate into a decline in HCC incidence, as well as a decline in the at-risk population targeted for surveillance.

There are a unique set of risks associated with the commercialisation of the Wanda platform, both in the currently available programmes and for other programmes that may become available for other diseases. This area of digital health (chronic disease management) is largely untested and the size of the addressable market is uncertain. We model the market for recurring services in CHF/COPD in the range of $4bn, but there is significant risk associated with the degree to which healthcare providers and payers will embrace this technology. Additionally, the low barrier to entry for the digital health market has resulted in a large number of competitors in the chronic disease management space. The company will need to establish a sizeable footprint quickly to forestall any future entrants into the CHF/COPD chronic disease management space.

PDS Biotechnology is the only therapeutic company in the portfolio, and carries the associated risks of drug development: high R&D costs, regulatory risk, etc. Historically, cancer vaccine companies

have not been successful at development, and we view the company's lead programmes as very high risk. Moreover, incidence rates for HPV-related cancers has been steadily declining and may decline more quickly as the number of immunised individuals increases and the vaccines prevent infection from an increasing number of strains. Finally, cervical dysplasia, which is a large fraction of the company's potential market (approximately 900k patients per year), has effective surgical treatments.

Every portfolio company needs additional capital, with our projected R&D costs ranging from £3m (ProAxsis) to £58m (PDS). There is substantial risk that these companies will not be able to raise sufficient capital given the current fund-raising environment.

Valuation

We arrive at a valuation for NetScientific of £71.7m or 140p per share based on a risk-adjusted NPV analysis of each of the portfolio companies. These valuations are contingent on a series of assumptions about the individual companies (Exhibit 4). Although the potential market opportunity is large we are only able to assess probability of success in the range of 5-15% due to the early stages of development of the portfolios. Each company is modelled on the basis of self-commercialisation at this point, as opposed to out-licensing of assets, as we believe this is more illustrative of the intrinsic value of the internal programmes at this early stage.

We are withholding a valuation of certain programmes from the various constituent companies awaiting a clear pathway to market. We have not modelled ex-US launches of the Vortex and Glycotest diagnostics because we view the current planned pricing for both programmes to be prohibitive overseas. We will add these programmes in the event that the management for these companies expresses a viable overseas commercialisation strategy or partner. Although we believe that the ProAxsis Protease-Tags may have utility outside of CF and COPD, we are withholding valuation of these programmes until a clear clinical pathway is announced. Lastly, although we see potential for the Wanda platform for the management of other chronic diseases (besides CHF/COPD and cancer), we do not want to speculate as to the nature of these future programmes.

Exhibit 4: Valuation assumptions

Company	Assumptions
Vortex	Research market approximately evenly split between clinical trials (5k Phase II and 2k Phase III per year in the US) and research institutions (210 cancer centres and medical schools in the US). Research penetration modelled at 5%. Potential screening population based on PSA adherence in over 50 individuals (42m in the US). Low (2%) penetration expected due to significant competition. $250/test, $135k/machine. 80% gross margins. EU commercialisation not modelled due to high cost and reimbursement environment. £9m R&D before 2020 to support the diagnostic market.
Wanda	Currently includes only CHF/COPD and OncoVerse programmes with CHF/COPD being dominant, $225 per placement and $60/per month, at 40% and 90% gross margins respectively. £9m R&D before 2019, 20% selling costs. 7.5% probability of success due to unproven model and high competition.
ProAxsis	Thin EU sales following CE mark until payer support and US approval in 2020. Market is CF and severe COPD sputum producers (880k US and EU). US price $25, EU price £15. Low rate (10%) of payer discounts. £3m R&D before 2020.
Glycotest	Addressable market is diagnosed HBV, HCV, and NASH with cirrhosis patients. 2.1m addressable patients declining to 1.3 by 2030. ASH not included because these patients are difficult to reach. $620 per test, two tests per year. 70% gross margin. Only US launch included due to high cost of screening and EU reimbursement environment. £8m R&D before 2019.
Glucosense	Low penetrance (max 2%) expected due to payer pushback. Priced at $2,000 in US and £700 in the EU. 60% gross margin. £14m R&D before 2019. Probability of success is 5% because the product is still in the prototyping phase.
PDS	Currently includes high-grade cervical dysplasia, cervical cancer, and head and neck cancer programmes. All three are expected to have declines in incidence. Cervical dysplasia penetrance expected to be low (max 1%) due to availability of effective alternatives. US price $25k, EU price £10k. 90% Gross margin. £58m in predicted R&D costs before approval. We have a lower probability of success due to low historical success rates for cancer vaccines and because of the early stage of development.

Source: Edison Investment Research

We assign our highest probability of success to Vortex at 15%. We view the technology behind the platform as robust and the fact that it isolates cells without the need for affinity labels provides an added degree of versatility for downstream applications. This should prove to be a competitive

advantage. That said, the main risks to the company are commercial, considering the highly fragmented landscape and the low adoption of CTC testing to date. The company is pursuing the research market, which although small in scale, could potentially establish the test among key opinion leaders and foster more widespread adoption. We consider the research market key to the success of the company, and the availability of near-term revenue contributes approximately £5.2m to its value. If the company is able to establish a significant footprint (e.g. 10% penetration into the research market) or secures a favourable distribution agreement, this corresponds to a substantial reduction in downstream risks, and increases our valuation by 50% or more (to approximately £18m), reflecting a rise in our probability of success (to 22.5%). Additionally, we may update our valuation to reflect the development and future commercialisation of next generation platforms, when the details of these systems are announced.

By our measure, Wanda is the highest value portfolio company (£23.9m total valuation, £17.1m NetScientific's share), due to a number of factors, including the near-term revenue generation with an increasing number of licensing deals with healthcare providers and payers. Wanda is the only company with a marketed product (excluding the small number of sales of laboratory tests from ProAxsis), and there is significant market potential in the management of CHF and COPD ($4bn market for recurring services in the US, by our estimates). It should be noted that this business model is as yet untested and there is significant competition.

Exhibit 5: Valuation of NetScientific

Development Program	Prob. of success	Profitability	Peak sales (£m)	Margin	rNPV (£m)	Ownership	Share Value (£m)
Vortex	15.0%	2020	141	44%	12.3	95.0%	11.7
Wanda	7.5%	2019	352	53%	23.9	71.3%	17.1
Proaxis	10.0%	2020	49	51%	6.9	56.5%	3.9
Glycotest	10.0%	2019	115	51%	12.6	87.5%	11.0
Glucosense	5.0%	2021	252	41%	8.9	60.7%	5.4
PDS	7.5%	2021	284	57%	21.6	14.9%	3.2
Total							52.2
Net cash and equivalents (Q116) (£m)							19.5
Total firm value (£m)							71.7
Total shares (m)							51.1
Value per share (p)							140

Source: Edison Investment Research, NetScientific reports. Note: Valuations assume self-marketing of products and may be affected by future licensing or other partnership agreements.

Financials

NetScientific's FY15 post-tax loss was £12.7m (FY14: loss of £7.1m), which was primarily attributable to **continuing operations** (FY15: loss of £11.2m, FY14: loss of £6.2m) and reflected the ongoing investment into a portfolio of pre-commercialisation and therefore currently loss-making companies. Post-tax loss from **discontinued operations** was £1.5m (FY14: loss of £0.9m), which included the operating loss incurred by the 10 discontinued subsidiaries[1] subject to disposal during 2015, the share of loss from associates and JVs and a £0.3m net loss recorded on disposal.

Significant investment was made into the development of underlying technologies and products of the core portfolio companies, in particular Vortex and Wanda, as indicated by R&D spend of £7.3m in FY15 (FY14: £3.1m). General and admin costs for FY15 were £3.2m (excluding £1.1m in restructuring and non-cash charges), which includes a significant proportion of subsidiary management by NetScientific executives; the increase on FY14 (£2.5m) was driven by increased sales and marketing costs and admin spend at the portfolio level. Headcount across the group also

[1] Frontier Biosciences, MOF Technologies, Morphodyne, Qlida Diagnostics and RoboScientific were the principal disposals in FY15.

increased from 28 to 47, excluding non-executive directors. We forecast a significant rise in expenditure in FY16 to £16m (vs £10.4m), with R&D investment rising to £13.6m (£10.2m after minority contribution) as portfolio assets progress towards commercialisation and potential value realisation events. Funds from the 2015 equity raise have been specifically earmarked to accelerate the development of Vortex and Wanda.

FY15 revenues of £122k were predominantly generated through the sale of ELISA kits to the research market by ProAxsis (£78.6k), an evaluation fee from a corporate booked by Glucosense and Vortex cartridge sales for research use of VTX-1 at universities. Our FY16 forecast includes further modest revenues generated from the sale of VTX-1 cartridges associated with KOL placements and ProAxsis research kits, as well as c £0.5m connected to Wanda functionality delivery. Our revenue estimates are slightly adjusted (£1,014k vs £696k in 2016 and £4.1m vs £3.4m in 2017) relative to our last forecast based on a change to the ramp-up of these products following the capital markets day. Exhibit 6 outlines historic financials and summary forecasts. Note that these forecasts do not reflect future fund-raising plans of the individual portfolio companies.

We have fully incorporated the financials of Vortex, Wanda, ProAxsis, Glycotest, and Glucosense into our projections, and accounted for the difference in earnings due to minority interests. PDS, as the sole minority stake, is accounted for as an equity investment. The future financing needs of PDS attributable to NetScientific are recorded as the acquisition of additional equity.

NetScientific had cash on the balance sheet of £23.2m at 31 December 2015 (FY14: £16.9m), which included the £17.1m net proceeds from the capital raise. Operating outflow (including minority stake PDS) for the year as reported by the company was £11.0m (FY14: £8.8m). At end-March 2016, cash stood at £19.5m.

At IPO, NetScientific issued 18.75m new shares at 160p to raise £30m gross, £28.6m net. Post the November 2015 placing (15.2m new shares at 120p to raise £18.2m gross), the three Azima Family Trusts representing the former CEO (Zahra, White Mustard and Cyrus) held 20.4% of the company's issued share capital; this has been reduced from 47.9% of the post-IPO equity. NetScientific's free float now stands at 16.2%.

All of the NetScientific portfolio companies will need additional financing before reaching profitability, and the company has announced Series A financing rounds for Wanda, ProAxsis and Glycotest in 2016 and Vortex in 2017. Our model forecasts £85m needed before profitability for all six programmes. The degree of dilution of these assets and the proportional ownership by NetScientific will depend on the nature of these offerings, and we expect to update our forecasts at that time. In the interim, we have included £31m in illustrative debt (in 2017) on our balance sheet to reflect the additional financing requirement required by NetScientific (including minority interests). After accounting for £13m in cash burn attributable to minority interests over the period, this corresponds to a net obligation of £18m. This is an increase from our previous assumptions (£10m) based on adjustments to longer-term (2018 onward) spending projections based on the recent capital markets day.

Exhibit 6: Financial summary

£'000s	2014	2015	2016e	2017e
Year end 31 December	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS				
Revenue	24	122	1,014	4,067
Cost of Sales	0	(6)	(223)	(911)
Gross Profit	24	116	792	3,157
Research and development	(3,098)	(7,256)	(13,636)	(13,636)
Selling, general & administrative	(3,212)	(4,260)	(7,006)	(7,519)
EBITDA	(6,352)	(11,530)	(19,966)	(18,115)
Operating Profit (before GW and except.)	(6,286)	(11,400)	(19,850)	(17,999)
Intangible Amortisation	0	0	0	0
Exceptionals/Other	(948)	(1,518)	0	0
Operating Profit	(7,234)	(12,918)	(19,850)	(17,999)
Net Interest	77	78	0	(775)
Other (change in fair value of warrants)	0	0	0	0
Profit Before Tax (norm)	(6,209)	(11,322)	(19,850)	(18,774)
Profit Before Tax (IFRS)	(7,157)	(12,840)	(19,850)	(18,774)
Tax	30	94	99	94
Deferred tax	0	0	0	0
Profit After Tax (norm)	(6,179)	(11,229)	(19,751)	(18,680)
Profit After Tax (IFRS)	(7,127)	(12,746)	(19,751)	(18,680)
Minority interest	702	1,905	4,856	4,478
Profit After Tax after minority interest (FRS 3)	(6,425)	(10,842)	(14,895)	(14,202)
Average Number of Shares Outstanding (m)	35.9	38.2	51.1	51.1
EPS - normalised (p)	(15)	(24)	(29)	(28)
EPS - IFRS (p)	(18)	(28)	(29)	(28)
Dividend per share (p)	0	0	0	0
BALANCE SHEET				
Fixed Assets	3,040	2,946	2,966	3,929
Intangible Assets	10	1	1	1
Tangible Assets	348	285	305	188
Other	2,681	2,660	2,660	3,740
Current Assets	17,720	23,799	6,607	17,865
Stocks	0	0	0	0
Debtors	853	560	66	407
Cash	16,867	23,239	6,540	17,459
Other	0	0	0	0
Current Liabilities	(1,324)	(2,206)	(4,434)	(3,961)
Creditors	(1,281)	(2,156)	(4,434)	(3,961)
Short term borrowings	(43)	(50)	0	0
Long Term Liabilities	(740)	0	0	(31,000)
Long term borrowings	(687)	0	0	(31,000)
Other long term liabilities	(53)	0	0	0
Net Assets	18,696	24,538	5,138	(13,167)
Minority Interest	(1,098)	(1,805)	(6,661)	(11,139)
Shareholder Equity	17,598	22,733	(1,523)	(24,306)
CASH FLOW				
Operating Cash Flow	(6,698)	(10,752)	(16,655)	(18,321)
Net Interest	67	38	43	(775)
Tax	19	83	99	94
Capex	(336)	(299)	(136)	0
Acquisitions/disposals*	(2,181)	(144)	0	(1,080)
Financing	0	18,208	0	0
Dividends	0	0	0	0
Other	119	0	0	0
Net Cash Flow	(9,010)	7,133	(16,649)	(20,082)
Opening net debt/(cash)	(25,069)	(16,136)	(23,189)	(6,541)
HP finance leases initiated	0	0	0	0
Exchange rate movements	(140)	(212)	0	0
Other	218	131	0	0
Closing net debt/(cash)	(16,136)	(23,189)	(6,541)	13,541

Source: Edison Investment Research, NetScientific reports. Note: *Financing requirement of PDS.

Contact details	Revenue by geography
NetScientific 30 St Mary Axe London EC3A 8BF United Kingdom +44 (0)20 3514 1800 www.netscientific.net	N/A

Management team

CEO: Dr François Martelet	Chairman: Sir Richard Sykes
François Martelet joined NetScientific in 2015. He was previously a senior advisor to the CEO at Stallergenes. Before this, he was CEO at Topotarget, and prior to that CEO of Avax Technologies. He has also held senior-level commercial positions at Merck, Novartis Pharma, Schering-Plough and Eli Lilly. François gained a doctorate in medicine and a master's degree in business from Dijon University, and holds a degree in legal medicine from R Descartes University School of Medicine, Paris. He is a graduate of the Advanced General Management Programme at INSEAD.	Sir Richard was CEO of GlaxoSmithKline from 1995 to 2000 and chairman until 2002. He was rector of Imperial College from 2000 to 2008. He has held a number of directorships since 2002 and became the chairman of NetScientific in 2013. He holds a BSc in microbiology from London University and a PhD in microbial metabolism from Bristol University.
CFO: Ian Postlethwaite	**CIO: Vijay Barathan**
Ian Postlethwaite was FD of Allergy Therapeutics from 2002 to 2016. He is a former director of Ellerman Investments, CEO of AFS, FD of several start-up technology companies and held senior finance positions with Ericsson and Philips Electronics. He is a qualified accountant and a Fellow of the Association of Chartered Certified Accountants. Ian has a BSc (hons) in geological sciences from Aston University.	Vijay Barathan joined NetScientific in January 2014 to lead corporate development and investments, before being appointed as CIO in July 2015. He previously worked in healthcare investment banking at Peel Hunt and Piper Jaffray, and as a medical doctor. He has advised numerous UK-listed healthcare companies in medtech, digital health, diagnostics and biotech, completing IPO, M&A and fund-raising deals. He holds a degree in medicine and a BSc in developmental neurobiology from Guy's, King's and St. Thomas' Medical School in London.

Principal shareholders	(%)
Woodford Investment Management	45.1
Invesco Asset Management	18.1
Zahra Holdings	11.7
JO Hambro	9.2
White Mustard Investments	6.2
Woodford Investment Management	45.1
Invesco Asset Management	18.1

Companies named in this report

Vortex; Wanda; ProAxsis; Glycotest; Glucosense; PDS Biotechnology