



AMATI GLOBAL INVESTORS

# Newsletter

Summer 2024: Issue 27

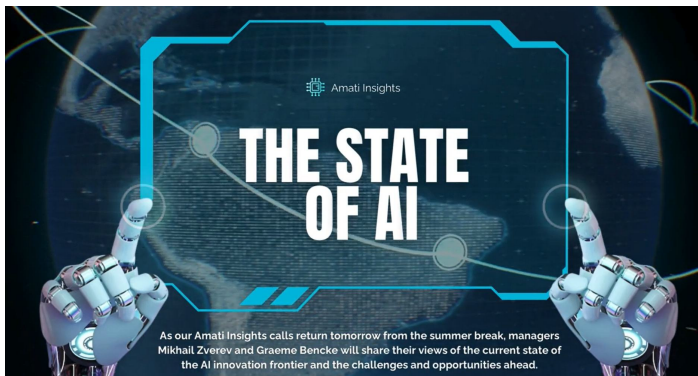


## Amati Insights

As our Amati Insights calls return from the summer break, managers Mikhail Zverev and Graeme Bencke will share their views on the current state of the AI innovation frontier and the challenges and opportunities ahead.

The AI theme dominated the market this year. NVIDIA and other AI-associated stocks posted remarkable share price gains but have been volatile since July, as investors are starting to ask questions about the return on AI capital investment and about technical challenges facing the industry.

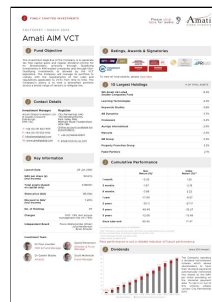
To watch, please [click here](#).



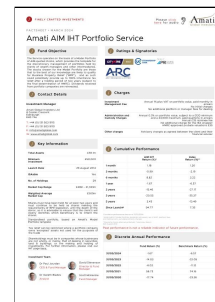
To view previous Amati Insights sessions, please [click here](#)

## Factsheets

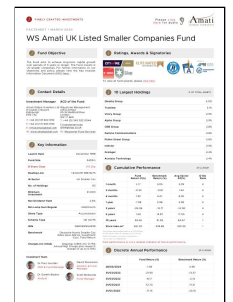
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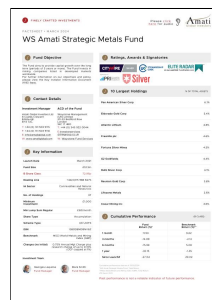
Amati AIM VCT



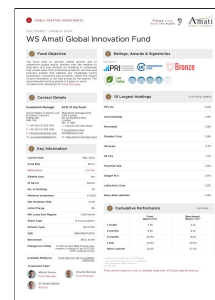
Amati AIM IHT Portfolio Service



WS Amati UK Listed Smaller Companies Fund



WS Amati Strategic Metals Fund



WS Amati Global Innovation Fund

## Opinion Pieces / Videos / Podcasts

In case you missed some of our recent publications, please note a selection below:

- [Thoughts on Amati Global Innovation Process and the Recent Market Volatility](#)
- [Amati Strategic Metals - Insight into Recent Market Volatility](#)

Please [click here](#) to visit our media section to view further content.

## Metals Blog

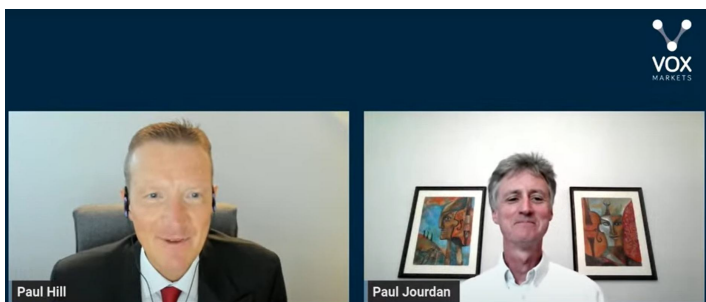
Georges Lequime, fund manager of the WS Amati Strategic Metals Fund, offered insight into recent market volatility. The blog page can be accessed on our website [here](#).



## Vox Markets

Paul Jourdan joins Paul Hill in a masterclass of investing. Paul talks through his approach to investing, the impact from potential UK government changes to IHT, outlook for small caps and 17 stock ideas.

To watch this masterclass, please [click here](#).



## Asset TV

Scott McKenzie joins the Asset TV panel as they explore the current state of UK equities, opportunities for growth, and potential risks.

They discussed:

- How a new government could affect equity market and sector valuations
- Portfolio construction techniques when UK equities are in a period of outflows
- The financial health and spending patterns of UK consumers

To watch, please [click here](#).



## Global Innovation Soundbites

Are there any themes that you think might replace AI as the dominant market theme? [Click here to watch](#).



The most innovative companies are commonly assumed as cash flow negative, Mikhail explains how our approach for the Global Innovation Fund differs. [Click here to watch](#).



WS AMATI STRATEGIC METALS FUND

# Sovereign Metals

Written by  
Mark Smith

They say the streets of London are paved with gold, well let me tell you, the dirt roads of Malawi are paved with titanium. The Kasiya rutile (titanium) – graphite project is positioned to become the largest, lowest cost and lowest carbon-footprint producer of two critical minerals: natural rutile and graphite.

**Figure 1 - Location of Kasiya project and associated infrastructure**



Source: Sovereign; Amati

Kasiya’s Mineral Resource Estimate (MRE) is 1.8Bt at 1.0% rutile resulting in 17.9Mt tonnes of contained natural rutile and 24.4Mt of contained graphite. The deposit was discovered in 2019 as a greenfields discovery and has the potential to produce >200 kilotonnes per annum (ktpa) of both rutile and graphite for over 70 years. Given the world class nature of this deposit Rio Tinto is a strategic partner with 19.9% ownership of Sovereign. When a definitive feasibility study is issued, Rio Tinto have 180 days to elect to become operator, or all rights of the option agreement fall away.

Rutile (>95% TiO<sub>2</sub>) is the highest purity source of titanium and has the lowest carbon footprint for feed stock material to produce titanium. Currently 95% of the world’s titanium is derived from low-purity illmenite (30-60% TiO<sub>2</sub>).

Illmenite must be upgraded via costly and carbon intensive processes to Titania slag or synthetic rutile (>88% TiO<sub>2</sub>). Rutile with 97% lower CO<sub>2</sub> emissions becomes strategically important to lower Rio’s scope 1 & 2 emissions.

**Figure 2 – Heavy mineral concentrate washed out on road**



Source: Amati

**Amati invested in a junior company acting like a major....**

Given the scale of this project (value >US\$1.6bn NPV), it has the potential to change the GDP of Malawi. Sovereign with a technical committee (3 Sovereign, 3 Rio individuals) has established an ESG framework to advance social and environmental initiatives. No corners have been cut and trial mining is currently underway. The trials are to establish whether dry mining and haulage or hydro mining (and pumping) is the best mining method.

The pilot phase data from the dry-mining trial has confirmed that no drilling, blasting, crushing, grinding, or milling is needed before stockpiling material for processing into rutile and graphite products.

WS AMATI STRATEGIC METALS FUND

The temporary water storage pond, constructed and sealed with natural clay from excavated material, has been filled with six million litres of ground water, predominantly from eight water boreholes on site. This water will be used during the hydraulic mining trial and continuously recycled from the constructed holding cells where sand and fines fractions will be stored respectively prior to the planned deposition and rehabilitation test work. Hydraulic mining trial has now commenced at Kasiya Pilot Site as part of an ongoing Optimisation Study. The trial is being conducted by Fraser Alexander, a global industry leader in hydraulic mining, following successful completion of a dry mining trial in July 2024. The hydraulic mining trial is expected to take approximately three months to complete and includes backfilling of main trial pit, deposition and rehabilitation test work.

**Figure 3 - Overview of the hydraulic mining trial**



Source: Sovereign; Amati

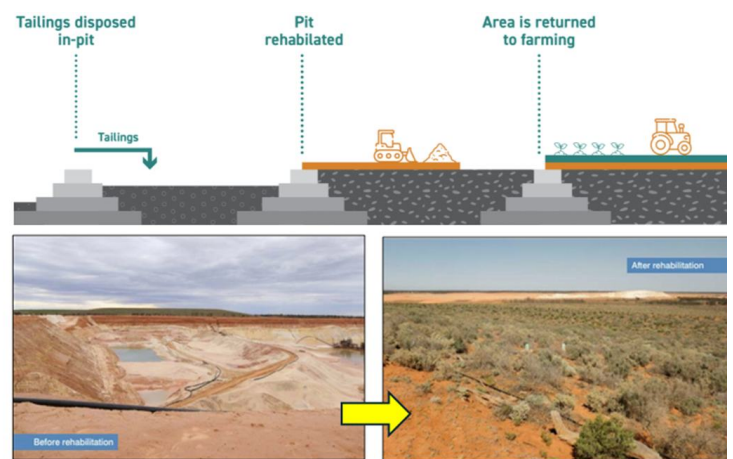
**The importance of progressive rehabilitation**

Land rehabilitation will be a key part of the ongoing optimisation study. Sovereign’s objective is to restore land post-mining to conditions that match or surpass existing agricultural yields. The pilot phase will showcase to local communities the successful rehabilitation of land for agriculture post-mining. These efforts will also help Sovereign refine excavation and backfill techniques. The in-pit disposal minimizes land disturbance and ensures economic and social stability for farming communities while mining can continue.

Sovereign’s ESG strategy is aimed at improving the livelihoods of local communities through the creation of successful smallholder farmers.

Farmers have enthusiastically adopted the program with 90 participants within the project area being trained in low input-cost, high-yield sustainable farming techniques. A further 300 farmers will be added during the 2024 planting season. The Program is being implemented by Sovereign’s experienced team on the ground, which previously ran a very successful program for First Quantum Minerals Limited’s Zambian operations, where its conservation farming program has been effectively operating since 2010.

**Figure 4 – Progressive rehabilitation**



Source: Sovereign; Amati

Conservation farming as a system aims to protect soil from erosion and degradation and increase crop yields. It involves three main principles:

1. minimum soil disturbance, such as no-till farming;
2. maintenance of a permanent soil cover, such as cover crops or crop residues; and
3. diversification of plant species, such as crop rotation.

Simple techniques like watering crops at night reduces evapotranspiration and application of organic fertilizers reduces reliance on chemicals and actually improves yields.

**Figure 5 – Left: planted field using traditional techniques & Right: Field farmed under the Program showing substantially more crop growth**



WS AMATI STRATEGIC METALS FUND

**Make the effort – boots on the ground: it’s not just about licking rocks and kicking tyres**

Following our site visit to Malawi earlier this year, we witnessed the amazing results from the conservation farming system. This was in stark contrast to the many NGO’s sitting around the hotel swimming pools talking up a good power point presentation to use on their next charity road show.

Results matter, and Sovereign are achieving a social license to operate. Pictures tell a 1000 words so I will leave it there.

**Figure 6 – Positive results from the conservation farming**



**Top left (clockwise) – 1 - Amati in the field showing simple tilling methods and organic compost heaps; 2 – Small scale farmer’s yield increased 300%; 3 – happy parents = happy children; 4 – A healthy maize crop yield; 5- Small scale farmers harvested a year’s food requirement and had surplus to sell.**

The investments associated with this fund are concentrated in natural resources companies, which are subject to greater risk and volatility than companies held in other funds with investments across a range of industries and sectors.

# Innovation Investing - Proteomics



Written by  
Graeme Bencke

**T**he holy grail of medicine is to produce personalised and highly targeted diagnostics and treatments, removing the perils of side effects and fixing problems at their source. The advances in our ability to sequence our genetic code (DNA) has led to an explosion of knowledge in this area, but it is only part of the solution. Known broadly as 'genomics', this specialist area of biology has dramatically improved our understanding of the drivers of biological functions and, using modification tools like CRISPR, has allowed us to correct imperfections in the code. The sickle cell disease treatment, Casgevy from Vertex Pharmaceuticals, for example, is the first CRISPR based therapy to be approved for use in Europe and the US, but many others are expected to follow as the science matures. While this is enormously significant, it will not be the right approach for all the health problems we face. The sequence of actions to produce cells that are encoded in DNA is enormously complex and involves the creation of armies of proteins. Some disorders arise because proteins become defective despite having the "right" DNA instructions. These defects cannot therefore be resolved by tweaking the genome. Proteomics is the study of proteins, the functional molecules that carry out the instructions, and only recently have we developed the tools to begin to unlock their secrets.

In order to understand the importance of proteomics in disease treatment let's consider an analogy. Imagine you run a company that makes cakes. In your office you have all the recipes neatly filed in books (DNA) that have been passed down from generation to generation as treasured possessions. Each day you decide which cakes to produce, and you email (mRNA) the recipes to your line managers who then arrange to have them made. At the end of the process, beautiful cakes come out of the bakery. Imagine though, that you never left the office and so don't know any of your workers (proteins), you don't know anything about who they are, whether they're individually good at what they do, or not. Whether they're loyal to you or whether they have nefarious intentions to disrupt your business (a virus or cancer perhaps). It would make running the company very difficult since you rely on the skills and competence of the work force to ensure the quality of the cakes.

Our current ability to manipulate the genome is the equivalent of changing the recipes in the book. The process of transcribing the recipe and emailing to the supervisor is known as 'transcriptomics' and works through messenger-RNA. Here the analogy breaks down somewhat as the information sent is used to build specific proteins, which are effectively the biological workforce (proteome). This is where things become very complicated. The four bases which make up the DNA strands convert into ~20,000 genes in the human body (the 'genome'). Proteins, however, are built from a combination of 20 different amino acids making the complexity much greater. Even after being built proteins can be modified in the cell, like adding different icing to the same base sponge recipe. As a result a single cell can comprise more than a million protein variants, and this scales up closer to a billion when we consider all the different cell types in the body. That's a lot of cakes.

Until recently the actions and physical characteristics of proteins were poorly understood, but this is rapidly changing thanks to new developments in the tools used to analyse them. Breakthroughs in advanced mass spectrometry and spatial imaging are driving an increase in investment as companies seek to commercialise the opportunity. By understanding the actions of proteins individually as well as within their environment, companies can potentially create targeted and even personalised treatments for many areas of disease. They will likely also play an important role in diagnostics, since protein biomarkers can provide an early warning of specific ailments well before any symptoms are evident. Indeed, according to recent research, this approach already appears to provide an early prediction of dementia (1), as well as biomarkers for identifying colorectal cancer (2).

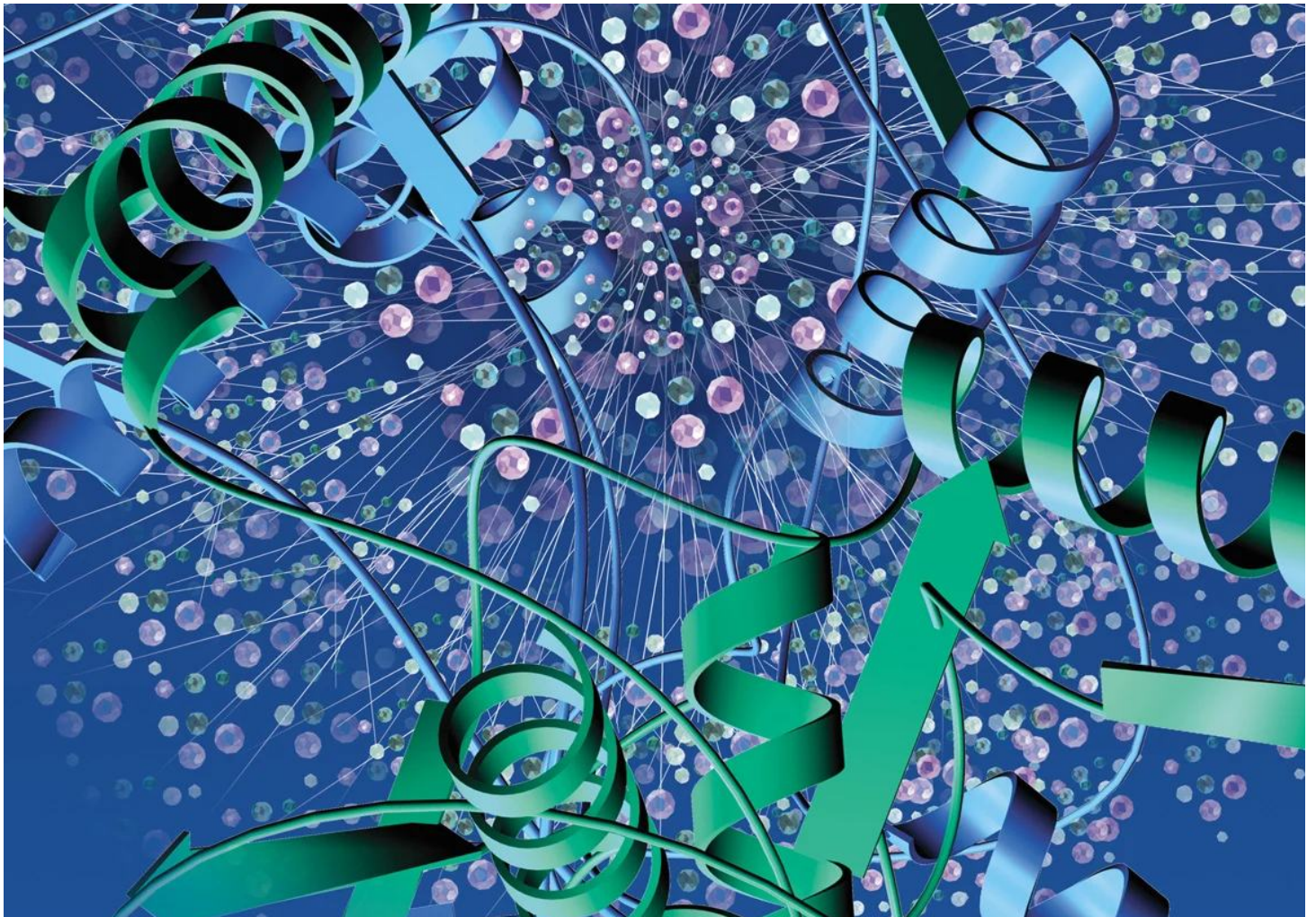
However, in addition to identifying the onset of disease, understanding the specific protein faults in disease can also provide more targeted treatments with greater efficacy and fewer side effects. As these processes move into the mainstream, companies providing clinical testing labs, such as Labcorp (held in the Fund) will be key beneficiaries, providing the constantly expanding testing and diagnostic services to health professionals.

Providing the physical testing services may not sound like the cutting edge of the science, but this highlights an important difference in our approach to innovation investing. As with many areas of advanced technology, investing in this sector can be a minefield. Drug development costs spiral, trials fail, or competing products steal the market before a return is achieved. Even with a high degree of domain expertise, analysts often get burnt when investing in the pioneers. For our money the better approach is to identify the enablers of the research, or the adopters of the diagnostic technologies or biomanufacturing processes. This limits the binary outcome risks and yet often benefits from high barriers to competition.

A focus on profitability and cash generation can help to avoid significant losses of capital in areas of rapidly advancing technology.

For example, one of the more exciting areas in proteomics research is spatial biology, with two companies leading the pack: Nanostring and 10x Genomics. Both are early stage and unprofitable and so not investible under our process. However, after both fell from lofty valuations over the past few years Nanostring was forced into bankruptcy, only to have its assets acquired by a profitable company we do own, Bruker. Amply demonstrating the merits of 'old fashioned' cash generation. We are in the foothills of development in proteomics, but the prizes for success are enormous and we finally have the tools to make it happen.

1. [Nature Ageing Plasma proteomic profiles predict future dementia in healthy adults | Nature Aging](#)
2. [Nature Protein prognostic biomarkers in stage II colorectal cancer: implications for post-operative management | BJC Reports \(nature.com\)](#)



Past performance is not a reliable indicator of future performance.

WS AMATI UK LISTED SMALLER COMPANIES

# Renew Holdings



Written by  
David Stevenson

**R**enew is an engineering services group, supporting the maintenance and renewal of critical UK infrastructure. We invested in the company in 2024, for both our AIM IHT Service and UK Listed Smaller Companies fund.

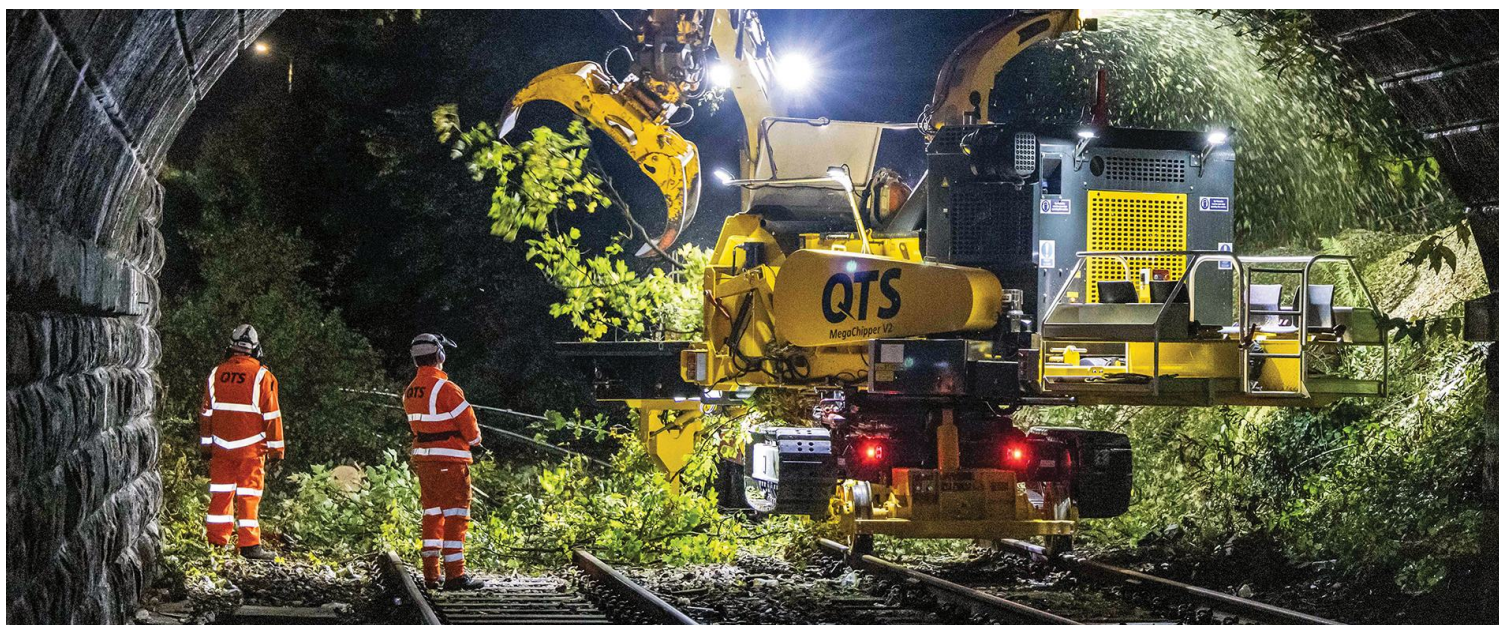
Renew's extensive end markets encompass rail, road, aviation, wireless telecom, nuclear energy, water, and heritage property conservation. It employs a direct labour force, rather than using subcontractors, and so can provide mission-critical, nationwide, 24/7 service capability. The skillsets involved are specialist, with deployment based on regulatory control periods and long term framework contracts (representing 85% of revenues), creating barriers to competitive threat. Renew has no exposure to the uncertainties of greenfield capital projects. All of its services come under customers' operational spending budgets, which are non-discretionary. This creates visible and resilient revenue streams.

Given the long term structural growth drivers to infrastructure spend, Renew should enjoy a continuation of its long term growth record. Since 2010, revenues have increased from under £300m to nearly £1billion. Almost half of this growth has been organic, with the remainder coming from acquisitions.

Renew's contracts incorporate cost plus/reimbursable terms, which creates sustainable margins, and the work they do is short duration and services led, which makes for low capital investment and good cash generation. In turn, this produces a high return on capital employed, and significant balance sheet strength which can fund ongoing acquisitions. The greater scale and breadth of services this creates locks in customers who require quality providers.

Renew's business is predominantly in water, rail and road infrastructure, each of which have long term structural growth drivers. These involve climate change, population growth and transport network pressures. These markets are all seeing budget expansion – rail, through a switch of HS2 project spend into Control Period 7 maintenance and renewal; water, through a doubling of Asset Management Period 8 spend caused by well-publicised industry issues; and road, through a switch of improvement spend into repairs and maintenance.

Renew has a market capitalisation of over £800m, making it one of the larger companies on AIM. Despite this, it remains relatively unknown to main market focused institutions, and we see the quality of its business model as offering solid investment upside over the longer term.



Investment in smaller companies can be higher risk than investment in well-established blue chip companies. Funds investing significantly in smaller companies can be subject to more volatility due to the limited marketability of the underlying asset.



Amati AIM VCT

# Cambridge Cognition



Written by  
Dr Gareth Blades

**W**e invested in Cambridge Cognition in a qualifying fundraising during May this year. The company develops and deploys a suite of digital solutions to assess brain health for clinical trials.

Since 2020 management has doubled the sales of the business, growing at a 28% compound annual growth rate (CAGR). Outpacing the \$700m market for central nervous system (CNS) trials, which grows at a 15% CAGR. Management's ambition is to double sales again by 2027, by again growing above the market rate. Added to this attractive market for CNS trials is the increasing trend in outsourcing to specialist biotech, pharma and contract research organisations.

Cambridge Cognition offers three digitally enabled solutions for cognitive assessments used in clinical trials that remove manual processing, subjectivity, time and thus cost. These include voice-based analysis of cognition with a leading verbal biomarker database of 700 different speech and language elements that can be used across 11 languages, whereas competitors' products are generally just in English. Electronic Clinical Outcome Assessments or eCOA, provides bespoke digital questionnaires and universally recognised clinical scales, with a full audit trail and regulatory compliance. Finally, there is an automated quality assurance tool to audit the administration of patient assessments.

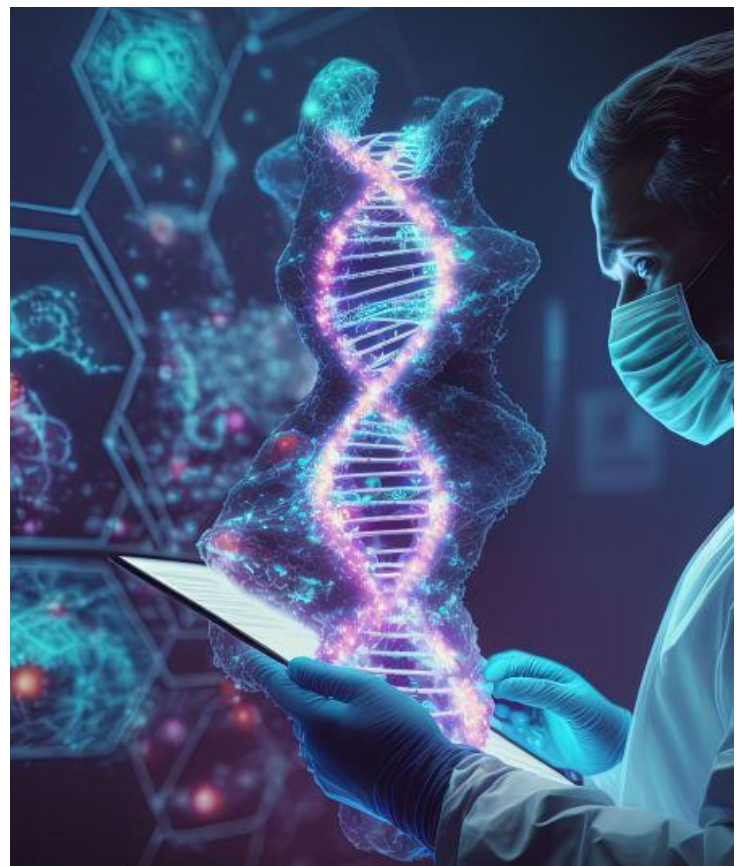
Two further offerings are operational and back office focused in what is a fully decentralised clinical trial platform.

The first can be used to recruit patients, store data and deliver assessments remotely and there is a separate patient recruitment offering for clinical consulting, patient tracking and clinical screening solutions.

The key for service providers, such as Cambridge Cognition, is to move away from the one-off engagements that have little or no contractually recurring elements. This is generally achieved by building out their technology and services portfolio, as the company has done, such that they offer something technologically differentiated as well as an end-to-end service. Naturally, this moves services companies up the value chain and enables them to tender for larger pieces of work with larger customers. The holy grail of this industry is "preferred provider status", as such being on the approved service providers lists at large Pharma and large contract research organisations (CROs).

This gives service providers visibility over what work is coming and a preferred status for this work. This will help smooth and increase revenue and improve profitability.

Cambridge Cognition's investment in its product portfolio coupled with the recruitment of a highly experienced Chief Commercial Officer and Senior Sales Staff is already enabling them to step up their engagement with these larger clients. They are tendering for three preferred provider opportunities currently. Regardless of preferred provider relationships, the knock-on effect of these changes to the product suite and staff will be a larger pipeline of business. The Company has traded profitably in the recent past when it's not been investing as heavily. Management are committed to returning to this state as they grow sales and manage costs.



Investment in smaller companies can be higher risk than investment in well-established blue chip companies. Funds investing significantly in smaller companies can be subject to more volatility due to the limited marketability of the underlying asset.

# A cure for ageing and death? Not yet, but a step in that direction



Written by  
Dr Gareth Blades

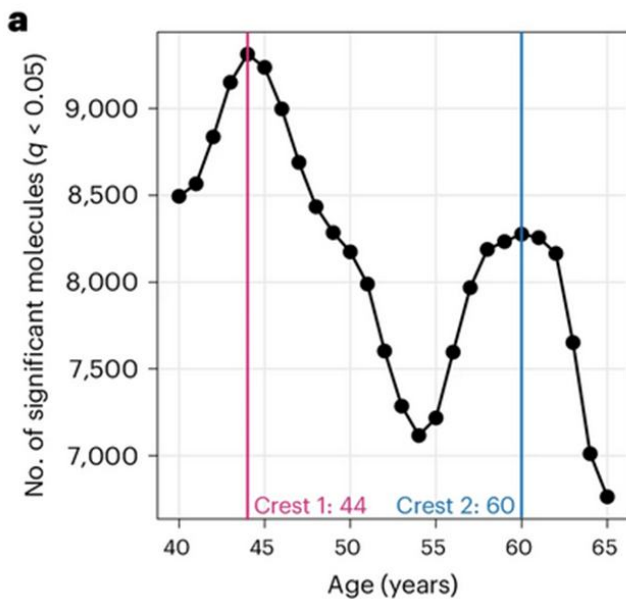
The biology of ageing is understandably an area of great interest to academic science, the healthcare industry and our society at large.

In a striking piece of work in Nature Aging (<https://lnkd.in/df2Fr7VQ>), Shen and colleagues demonstrate the power of Mass Spectrometry based multi-omic analysis for understanding the dynamics of aging. Having collected more than 246 billion data points from 108 participants for up to 7 years, they identified distinct clusters of molecules that change in non-linear ways during aging.

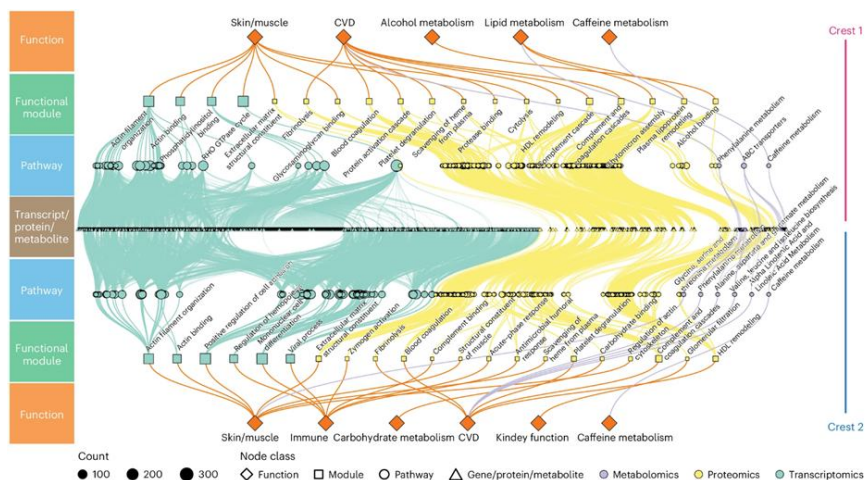
Their research highlights a symphony of changes that peak at ages 44 and 60 that underscore accelerated aging around these years, as shown in the graph below. These changes associate with cardiovascular disease, kidney dysfunction, risk of Type II Diabetes, muscle mass decline, skin elasticity (or lack thereof), declines in lipid metabolism and immune dysfunction.

As a recovering scientist I always like reading the methods sections, especially so with a fascinating piece of research like this one. To my delight, our portfolio companies' products are represented, including Qiagen's sample preparation kits and Danaher's SCIEX mass spectrometers.

Qiagen and Danaher are Enablers of our Multi-omics innovation frontier, an area of innovation that is just in its infancy but has exciting long term growth potential. It enables fundamental discoveries that weren't possible previously, such as those detailed above. Enabling researchers to "see" what wasn't possible previously and opening up new avenues for diagnostic and therapeutic development. We look forward to seeing what discoveries multi-omics tools enable in the future.



Source: Nature Aging



Source: Nature Aging

Mechanisms of ageing which showed there are two distinct periods of accelerated ageing, I've been keeping my eyes peeled for a solution that might lessen the effects as I approach the first of these periods.

What caught my eye was the wide reporting of the anti-ageing effects of GLP1 therapies. GLP1 is a naturally occurring hormone, an incretin, now used to treat obesity. The headlines reported in the media were based on comments made at the European Society of Cardiology Congress at the end of August. Anyone interested in more detail should view the special obesity collection on the JACC website, <https://www.jacc.org/special-collection/obesity>.

Staggeringly, analysis showed that treatment with a GLP1 agonist leads to a reduction of 19% in death from all causes. This is a composite measure of cardiovascular causes (heart attack, stroke etc) and non-cardiovascular causes (infections, malignant tumours etc). On the face of it this was slightly more than I was hoping for, being an anti-death solution rather than anti-ageing.

If you dig into the GLP1 agonist literature further <https://www.science.org/doi/10.1126/science.adn4128>, it is clear that they have multiple effects across the body.

One key mechanism appears to be reduction in systemic inflammation, acting through cells in the gut and central nervous system to influence immune cells.

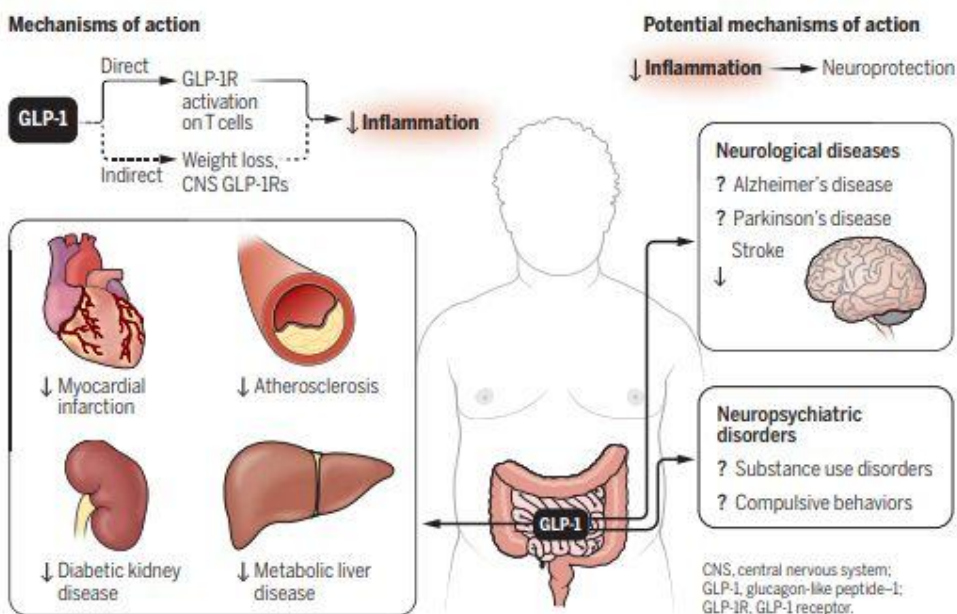
In our Global Innovation Fund we hold Eli Lilly, a large US pharma company. Its Mounjaro and Zepbound drugs are co-agonists of GLP1 and GIPR, two distinct yet complementary biochemical pathways. Lilly's drugs demonstrated leading levels of weight loss and blood sugar control in clinical trials.

Lilly and others are investigating the impact of their incretin drugs on many other chronic diseases: not just diabetes and obesity but kidney disease, cardiovascular disease, sleep apnoea as well as neurodegeneration, effectively diseases of older age. These recent findings regarding broad-based beneficial effects of this class of medicines are very encouraging.

While there is no prophylactic "anti-ageing" option yet, as we age incretins could become a treatment option to stave off the more severe elements of chronic diseases.

### The actions of GLP-1 medicines

GLP-1 exerts direct and indirect actions to reduce glucose and body weight. GLP-1 attenuates inflammation indirectly through weight loss and neuronal GLP-1R activation and directly through GLP-1R activation on T cells, while reducing complications by targeting GLP-1R in multiple organs. Originally shown to reduce blood glucose and body weight, subsequent trials demonstrated that GLP-1 medicines reduce the cardiorenal complications of metabolic disease. GLP-1 medicines are currently being explored in a wide range of neurological and psychiatric disorders.



Source: Science.org

## New People

**Gregor Paterson**  
Analyst



Gregor joined Amati in July 2024. He began his investment career in 1999 with Grieg Middleton & Co, as an investment manager, before joining Bell Lawrie as an equity analyst in 2002, covering an array of UK small and mid-cap stocks. He moved to Edinburgh into corporate & institutional stockbroking in 2008, holding senior positions at Cenkos, Cantor Fitzgerald and Zeus Capital. Gregor has a MA in Economics from the University of Aberdeen, is a Chartered Fellow of the Institute for Securities and Investment and, more recently, undertook the CFA Institute's Environmental, Social and Governance (ESG) qualification.

## Email Communications

We are conscious not to overload our investors with emails but also from an environmental standpoint we are looking to reduce this where possible. More recently we are tending to promote content and news via LinkedIn and so if you are not already following Amati via LinkedIn then we recommend you follow us by clicking [here](#).



## Risk Warning

This newsletter does not constitute investment, tax, or legal advice, and nor does it constitute an offer, invitation or solicitation to invest in the products described. Amati will not provide any investment, tax, or legal advice, or make any personal recommendations as to the suitability or otherwise of these products. Before investing in our products we recommend that you contact your financial adviser.

These investment products place your capital at risk and you may not get back the full amount invested, even allowing for any tax breaks. The value of your investment may go down as well as up. Past performance is not a reliable indicator of future performance. Investors should be aware that any investment in equities is subject to risk, and that investment in smaller companies, in particular unquoted companies and those quoted on the Alternative Investment Market (AIM), carries an even higher risk than that of larger companies listed on the main market of the London Stock Exchange. This is due to the higher volatility and lack of liquidity often found in smaller company shares, as well as typically higher levels of business specific risks. Illiquidity means that buying and selling portfolio holdings may take some time, and in a worst case scenario portfolio companies could be delisted from AIM, making them very difficult to buy or sell, which in turn could affect the value of your investment. Current tax rules and the available tax reliefs offered on investments into AIM-quoted stocks may change at any time, and there is a considerable risk that if the legislation changed in respect of these tax reliefs, then those portfolio companies that no longer qualified for such reliefs would be subject to heavy selling pressure, potentially leading to significant investment losses.



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