



Emerging Stocks Down Under

📖 *Change is inevitable. Growth is optional.* 📖

- John Maxwell, American Author



— **MAGNIS ENERGY
TECHNOLOGIES**

You have to risk it for the electric biscuit

— **AMAERO
INTERNATIONAL**

3D printing the future

— **SHEKEL
BRAINWEIGH**

Scaling up

MAGNIS ENERGY TECHNOLOGIES

You have to risk it for the electric biscuit

Stocks Down Under rating: ★★★★★

ASX: MNS
Market cap: A\$ 152M

52-week range: A\$0.047 / A\$0.28
Share price: A\$ 0.195

Headquartered in Sydney, Magnis Energy Technologies (Magnis) is a worldwide leader in the research, development and production of “green” focused Lithium-ion Battery (LIB) cells. One of the main advantages the company possesses is Non-Executive Director Professor M. Stanley Whittingham, 2019 winner of the Nobel Prize in Chemistry for his key part in the invention of LIB technology. While many analysts have previously focused on Magnis’ graphite mine, we believe this is a minor asset compared to the company’s battery intellectual property, manufacturing assets and world-renowned research resources.

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AMAERO INTERNATIONAL

3D printing the future

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Market cap: A\$ 130M

52-week range: A\$0.06 / A\$0.79
Share price: A\$ 0.75

Back in late June 2020, you could buy stock in Amaero International, a company involved in 3D printing, for just 11.5 cents per share. Then suddenly Amaero took off, and by 15 October it went through 70 cents and racing higher. We think the re-rating had something to do with the realisation that major defence, aerospace and automotive companies are doing business with this ambitious Melbourne start-up.

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Share price chart



Source: Tradingview

It's all Lithium-ion, what's so green about it?

Before we dive in, a little background, Magnis’ battery technology patents are owned by Charge CCCV (C4V) and the company has a five-year exclusive right to use them in its New York and Queensland factories. Magnis also owns 10% of C4V and has first right of refusal on any equity offered or sold by C4V.

On 6 October 2020, Magnis released a study conducted by Abt Associates, and paid for by the New York State Energy Research and Development Authority, on C4V’s battery technology. The study found that LIBs produced using C4V’s technology were made with around 87% fewer emissions per kilowatt-hour compared to most LIBs. This was achieved by C4V creating a process that uses extremely few toxic materials compared to most LIBs. One of the specific examples given was that C4V’s process uses only around 50% of the copper most LIBs use. Additionally, these batteries use no nickel or cobalt, causing significant cost savings while allowing for over 85% charge in only six minutes.

Strategic manufacturing asset placement gives Magnis an edge

In terms of major non-intellectual property assets, Magnis has three: a LIB plant in New York state called 'iM3NY', a stake in the so-called 'iM3TSV consortium', and its 100%-owned Nachu Graphite Project in Tanzania (one of the largest graphite deposits in the world). Only the iM3NY LIB plant has been constructed, and only the iM3NY LIB plant in New York state has a funding pathway visible to investors.

The iM3NY LIB plant was independently appraised at around US\$71m in FY20. This puts a value of approximately A\$58m (US\$41.2m) on Magnis' 58% ownership. In other words, about 38% of Magnis' market cap is its fair value ownership of the iM3NY LIB plant in New York (state), United States. However, Magnis still needs to receive the US\$13.3m funding package announced by the New York State Government in order to complete the equipment reassembly and hire key staff. Therefore, initial production is expected to begin in the first half of CY21 with commercial-scale production starting in the second half of CY21. All in all, getting its first significant asset off the ground is a huge milestone for Magnis and offers shareholders a potential pathway to profitability.

Magnis also owns a 33.3% stake in the iM3TSV consortium, which plans to build a A\$3bn factory in Townsville, Queensland. This project has the full backing of the Queensland government, who actually paid for the recently accepted feasibility study. However, as we mentioned above, this factory's estimated total cost is A\$3bn, with around US\$3.5bn of annual revenues at full production. While Magnis owns 33.3% of the consortium slated for this development, it remains completely unclear how the funding would be secured or even if Magnis would be on the hook for 33.3%, or A\$1bn.

High risk, extremely high reward

Looking at the three main non-intellectual property assets owned by Magnis, the New York plant is clearly the most exciting. While not yet operational, we believe it is highly likely that operations will start during the first half of CY21. Demand for LIBs is continuing to expand and the plant's location in the United States, near the major ports of the east coast, will allow for easy export across Europe, were legislative requirements are projected to see demand rise significantly.

Meanwhile, Magnis has a solid chance of capitalising on its access to significant amounts of low-cost graphite, a key component in LIB production and development, which will allow Magnis to sell its batteries at highly competitive rates. While it remains completely up in the air as to whether Magnis will find a way to fund the Queensland plant, the consortium has strong support from the Queensland government. That support could actually be the funding solution to the whole project as Townville is a regional area with high unemployment, and the federal and state economic infrastructure plans have put significant emphasis on funding major regional projects. The plant is estimated to provide 1,150 high paying jobs. However, it is important to clarify that this is pure speculation on our part, and there is no current indication that this will occur.

Magnis is certainly a highly speculative company with three major opportunities available to it. However, we believe the company is less speculative than its current market value would indicate. The strong support from the New York state government is a significantly stronger edge than just the funding grant. New York has legislated that its electricity production must be 100% carbon-free by 2040 and the state's main utility, Consolidated Edison, is focusing heavily on battery storage to make this happen. With the state's backing and regulator certification, in New York state alone, we believe there is huge potential demand. We believe the New York battery plant by itself makes this company a speculative company where the risk/reward ratio fully warrants a four-star rating.

AMAERO INTERNATIONAL

3D printing the future

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Source: Tradingview

Once upon a time if you wanted to manufacture something, you usually needed a big factory, preferably in an 'emerging' country with low wages, with a lot of people inside standing on assembly lines next to all that expensive equipment. It was time-consuming to tool everything up, and you needed a big production run to make it cost-effective. Then about 2011, it all started to change. That was when '3D printing', also called 'additive manufacturing', started to emerge as a serious alternative.

This is not your grandfather's manufacturing

In 3D printing, you don't make objects using moulds into which you pour the plastic or metal. You assemble the object layer by layer as though it is being printed, using a robot that takes its cue from a computerised three-dimensional model of what it is you're making. This way you can go from conception to production run very quickly given that the 'factory' can be in the corner of the design studio. Importantly, your costs are the same regardless of the size of the production run so that you can manufacture some very complex shapes without the hideous expenses you would incur using traditional manufacturing. 3D printing basically lets First World countries back into the manufacturing game, which is one reason why Amaero International estimates it'll be addressing a US\$24bn global market opportunity by 2025.

Amaero, which went public on the ASX only last December after raising \$8m at 20 cents per share, is one of the first listed companies on ASX that lets you invest directly into this new and revolutionary way to make things. The company originated as a spin-out from Monash University, whose Centre for Additive Manufacturing does basic research in the 3D printing field. Think of Amaero as a kind of one-stop-shop for companies looking to make things using 3D printing, where the Melbourne company designs and sells the software and equipment and also sells the consumables used.

Amaero hopes to build a sizeable business selling the safest and most cost-effective 3D printing systems in the 'Selective Laser Melting' part of the market, where lasers are used to print hot metal onto the object being manufactured.

El Supremo in El Segundo

With FY19 revenue of only \$180,000, Amaero is more-or-less a concept stock at the moment. We don't think it will stay that way for long. For one thing, the company has patents pending over high-performance titanium and aluminium alloys, which are better in terms of strength and fatigue life than anything that's out there and this could allow it to become more of a materials company than a service company once these alloys are commercialised. For another thing, in its foundation service business it has some pretty important customers who value what it does.

What customers? Well, we particularly liked this line from slide 5 of Amaero's 9 October 2020 presentation: '6 of top ten defence companies in the world are our clients.' Fighter jets, tanks, cannons, etc. have a history of requiring unusually-shaped parts that have to withstand enormous temperatures and pressures. 3D printing provides a way of supplying the new hardware the warfighters need and quickly resupplying when parts need to be replaced. We would remind our reads that when it comes to defence and national security, the rule of thumb is money is no object so long as the taxpayers get their money's worth.

Not long ago, in order to get closer to the defence and aerospace establishment, Amaero opened a facility at El Segundo, down near Santa Monica Bay in suburban Los Angeles where many aerospace companies can be found, including Amaero customers Boeing and Raytheon.

The possibilities are limitless

It's not just defence customers currently working with Amaero. In May the company signed a research agreement with the insulation unit of Fletcher Building (ASX: FBU), potentially opening up multiple opportunities in building materials. Amaero is helping an unnamed 'global automotive manufacturer' to 3D print its tooling, while one aerospace company is working with Amaero on satellite parts.

3D printing is useful in any industry where you need to manufacture things, so the possibilities are limitless. It's a reasonable bet that the news flow of new clients will be fairly brisk going forward given what Amaero has achieved to date. Also, Amaero is investing in its own capabilities, with a titanium powder manufacturing facility on the drawing board as well as a 3D printing facility to be built somewhere in the Middle East.

We think, given the quality of the client base - and you can see a few of their logos on slide 9 of the aforementioned presentation - that the current bull run in Amaero stock has some way to run. When a major defence or aerospace company lets you use their logo in an investor presentation, it means the relationship is a good one. However, one needs to be a little bit careful. Investors may get bored with 3D printing after a while if the case flow doesn't gradually tick up quarter by quarter. That's why we're calling this one four stars, but with a 'watch carefully' caveat.

SHEKEL BRAINWEIGH

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Share price chart



Source: Tradingview

Weighing bread and butter

Shekel Brainweigh's (ASX: SBW) company name should tell investors three things. Firstly, the Shekel part indicates that the company originated in Israel. Secondly, the "weigh" part of Brainweigh indicates that the company is involved in weighing things. Lastly, the "Brain" part in Brainweigh should tell you that, whatever they weigh, they do it in a very clever way. Let us elaborate.

At the heart of all of Shekel Brainweigh's products is very advanced weighing technology that, combined with proprietary algorithms, offers a range of solutions for retailers.

The company's bread-and-butter products are literally used to weigh bread and butter... and everything else that you find in a supermarket. Shekel Brainweigh sells its scales to Original Equipment Manufacturers (OEMs), such as Toshiba and Fujitsu, who integrate them into complete weighing systems that you might find at (self) checkouts at Woolies and Coles. In fact, those scales are sold to retailers around the world, including Walmart, Waitrose, Kroger and Lidl.

Shekel Brainweigh also sells its scales to OEMs in the Healthcare industry, including GE, who incorporate them into specialised weighing systems, e.g. for babies, and sell those to hospitals and clinics around the world.

While these retail and healthcare applications have been good to the company over the course of 40 years, generating around US\$15-16m in revenues in the pre-IPO years, we believe the more interesting side of Shekel Brainweigh centres around the company's Product Aware Technology.

Walmart gets what Shekel Brainweigh is doing

Here's how amazing Shekel Brainweigh's Product Aware Technology is. By analysing huge amounts of data about the weight of every stock-keeping unit (SKU) in a supermarket, vending machine or mini-market, Shekel Brainweigh's algorithms can tell the difference between a bottle of Coke and a bottle of Pepsi when someone puts it on one of the company's smart shelves. These shelves are the size of regular retail shelves and have highly advanced weighing elements at each of the four corners. Based on the specific weight profile of each SKU, like its average weight and the standard deviation, Shekel Brainweigh's Product Aware Technology can tell which product has been taken from, or placed on, that particular shelf. It also knows if a shopper has put a product back on the wrong shelf.

This kind of technology opens up a wide variety of applications. For instance, supermarkets now know when shelves are running low on product without having to send staff around to check visually. This can result in very substantial efficiency gains. Similarly, after shoppers scan their credit card, vending machines can now tell which products were taken from its shelves and charge the shopper accordingly. This obviates the need to have separate shelves for each product and, hence, allows for greater inventory flexibility on the part of the retailer.

Overall, Shekel Brainweigh's technology allows for a lot of optimisation in retailers' business models, including optimisation of inventory and supply chain management as well as staff optimisation, e.g. through autonomous and semi-autonomous stores. Think vending machines only a lot bigger. In a low margin world like food retailing, any optimisation is welcome. Walmart, the world's largest retailer, gets Shekel Brainweigh's technology and has been running trials.

The company hasn't generated much revenues yet with these so-called Retail Innovations, but we believe there will be strong demand once commercialisation starts. In the meantime, the company has developed its own smart vending machines, Innovendi and Soter, for which it has already received an order of 1,200 systems.

The bread-and-butter business lacks scale, pardon the pun

Revenues in FY19, which ended 31 December, amounted to US\$18.8m, growing US\$100k compared to a year earlier, all generated by the bread-and-butter scales business. In 1HY20, though, revenues from these products declined to US\$7.8m from US\$8.4m in the six-month period the year before, mostly due to the impact of COVID-19. On the bright side, Shekel Brainweigh generated its first US\$100k of revenues from Retail Innovations in the first six months of 2020. Overall, the company recorded an after-tax loss of US\$2.5m in 1HY20.

In our view, the company's core business lacks scale, pun intended. On revenues of US\$18.8m, it only generated an EBIT of US\$2m, and that's after being in business for 40 years. So, the transition towards Retail Innovations is an important one and should be monitored very closely, because we wouldn't want to own Shekel Brainweigh shares just for the legacy scales business.

The Retail Innovations unit just generated its maiden revenue in 1HY20, but we believe the potential could be very substantial. FY21 will be the first year in which this potential can start to manifest itself as measured by revenues, so there's a lot at stake, both for the company, and it's investors.

Assuming a flattish year in terms of revenue growth this year, Shekel Brainweigh is trading at an EV/Revenue of 1.7x for FY20. For FY21, that multiple is an inexpensive 1.4x, but it assumes 25% revenue growth compared to FY20. Part of that will likely be a COVID catch up effect for the core business in 1HY21, but this growth rate will definitely require a substantial revenue contribution from Retail Innovations.

At a market cap of just A\$40m, we believe Shekel Brainweigh is not expensive if the company can successfully scale up its new Retail Innovations unit, hence a four-star rating from us.

Pitt Street Research Pty Ltd

95 Pitt Street, Sydney, NSW 2000, Australia

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