EGP Concentrated Value Fund

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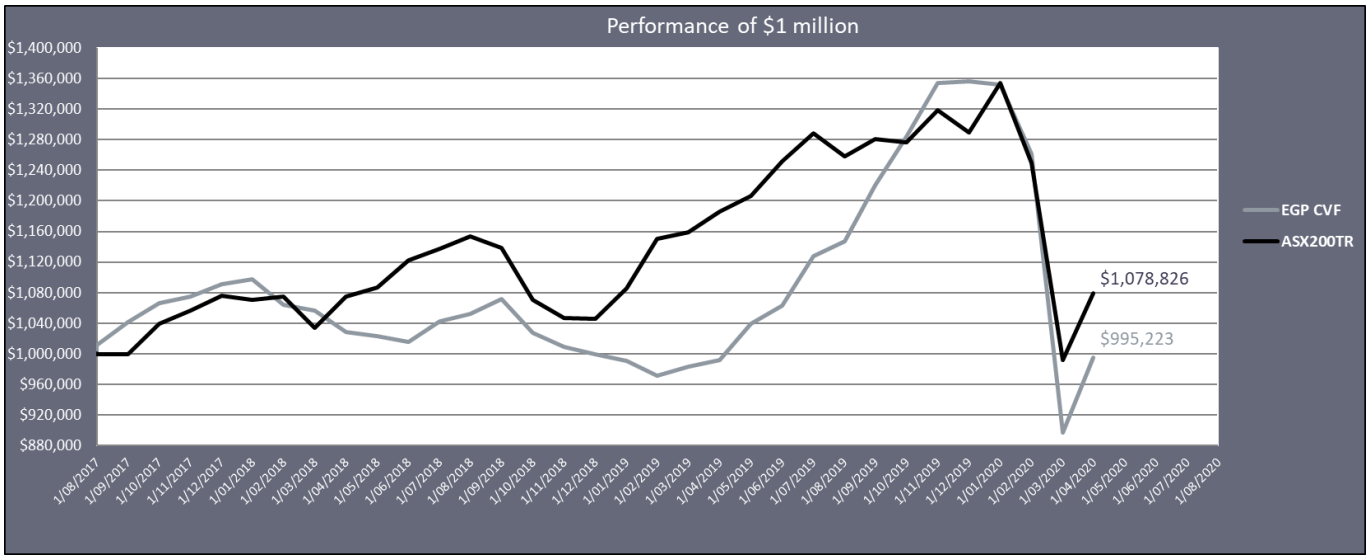
EGP Concentrated Value Fund – 30 April 2020

EGP Concentrated Value Fund is a managed investment scheme focused primarily on owning Australian listed businesses. It targets 3 – 5% annual outperformance of Australia's preeminent ASX200 index over the long term. Managed by a performance-oriented co-owner, we run a portfolio that is genuinely different. The sole objective is to deliver the strongest possible risk adjusted returns. The fund manager has their entire investable asset base in the fund, meaning focus on risk is unusually intense.

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	FYTD
EGPCVF FY18	N/A	1.1%*	3.0%	2.4%	0.8%	1.6%	0.5%	(3.0%)	(0.7%)	(2.7%)	(0.6%)	(0.7%)	1.58%
Benchmark FY18	N/A	(0.1%)*	(0.0%)	4.0%	1.6%	1.8%	(0.5%)	0.4%	(3.8%)	3.9%	1.1%	3.3%	12.18%
EGPCVF FY19	2.6%	1.0%	1.8%	(4.2%)	(1.7%)	(1.0%)	(0.9%)	(1.9%)	1.2%	0.9%	4.8%	2.3%	4.63%
Benchmark FY19	1.4%	1.4%	(1.3%)	(6.1%)	(2.2%)	(0.1%)	3.9%	6.0%	0.7%	2.4%	1.7%	3.7%	11.55%
EGPCVF FY20	6.1%	1.8%	6.4%	5.2%	5.5%	0.1%	(0.3%)	(6.7%)	(28.9%)	11.0%			(6.36%)
Benchmark FY20	2.9%	(2.4%)	1.8%	(0.4%)	3.3%	(2.2%)	5.0%	(7.7%)	(20.7%)	8.8%			(13.78%)

*August 2017 is the period from August 15th-31st for both the fund and the benchmark in the above tables.



The Month That Was: -

The fund rose by 11% in April. Our benchmark rose by 8.8%.

Most would have ridiculed the idea of a "V-shaped" recovery for investment markets in April given the awful news delivered by the COVID-19 pandemic throughout March. Most managers and analysts who "sagely moved to cash" or shorted the market in March had their faces ripped off by the recovery in April. Markets are hard, I like to mangle a famous Ayn Rand quotation for my own purposes "run for your life from anyone who says they know what direction the market is headed. That sentence is the leper's bell of an approaching charlatan".

The enormous stimulus packages released by governments the world over along with case and death numbers beginning to roll over steadily as April progressed saw investment markets start to "look through" the horrific unemployment and economic figures. Gains in the portfolio were broad, with a handful of the likely beneficiaries (such as DDR) discussed in last month's newsletter performing especially well.

The outcome of COVID-19 remains far from certain, with a second wave highly likely as Governments try to balance the avoidance of permanent and horrific economic destruction with potentially substantial and horrific loss of life.

A reminder for those erring on the side of "we overreacted" should be set out here. The number of deaths globally at the end of April would only need to increase another 2.5-fold and the outcome from COVID-19 to be as bad as a severe year for influenza globally. When one factors the massive efforts that have been made to contain the virus, if the global toll can be contained to match a bad year for influenza, that will probably be considered extraordinarily successful (notwithstanding the horrific economic consequences).

Philosophers' Stone: -

Alchemy was the forerunner to modern chemistry. Its primary leftover in modern day minds was the pursuit of turning low value (base) metals such as mercury and lead into high value (precious) metals such as silver and gold. The attraction was obvious, with gold even in antiquity around 20,000 times more valuable than lead. Our alchemic predecessors, however, did not have the more complete understanding of the periodic tables and the immutable characteristics of their elements we do in modern times.

As alluded to in last months report, our portfolio company PPK Group (PPK) may have commercialised (in conjunction with their partners at Deakin University) a modern-day form of alchemy. Not to turn lead into gold, but to turn Boron and Nitrogen into Boron Nitride Nanotubes (BNNT). The difference with alchemy is that this is not turning one element into a different element, rather synthesising elements via a chemical process to create a by-product which has different characteristics. The other difference is that this is a proven process, which has been observed in production by people I have an enormous amount of trust in.

The one extraordinarily strong resemblance between the creation of BNNT and alchemy is the fact that Boric Acid is about US$6.50 per kilogram, while high purity BNNT are presently retailing for US$900,000 to US$1.1m per kilogram. This makes the production of BNNT manifold more attractive than turning lead into gold as the value uplift is much higher.

The trick of economics ancient alchemists may not have considered is that if one could ever find a way to turn a plentiful and inexpensive thing (such as lead, or boron) into a scarce and valuable thing (such as gold, or BNNT), then the newly mass-produced, but previously scarce thing would become much less valuable. The advantage the production of BNNT has in this regard is that the small handful of people who have been able to synthesise BNNT have required incredibly high temperatures to do so. Producers are naturally cagey about their exact process, but it is understood most current producers (There are only a few globally, production is understood to have been around 36kg worldwide in 2018) require a temperature in the order of 5000°C to synthesise BNNT.

The process developed by Professor Ian Chen at Deakin University evidently requires a temperature something like one quarter of the temperature others require (around 1300°C). If one understands the "J-Curve" of the cost of power to produce extremely high temperatures, it is easy to understand the competitive advantage this lower temperature process creates.

The PPK/Deakin process can produce high purity BNNT and sell profitably at prices below that which other global producers are able to create BNNT.

The shortcoming the current process has is they have not been able to automate production. As I understand it presently, the process at present is something like this:

1. Turn on the machine

2. Wait several hours for it to reach temperature
3. Run the process until the chamber is filled
4. Wait several hours for the machine to cool down
5. Open the chamber and remove the BNNT and the waste

The company has not been completely clear what the current production capability from this "batch" process is, but it is thought to be in the order of 5-10 grams per production run (the only public statement was 3-5g, but we expect they will likely get to >10g per machine per day through experimentation). The input costs are not high, between consumables including power and base materials, I understand production cost per gram is below AU$100.

The capital cost of the machines is not especially high, below $500,000 each. At the US$1,000 per gram price presently attainable under extremely constrained global BNNT production conditions, if 50 grams per week can be produced under batch conditions, the payback period per machine would be less than seven weeks (ignoring labour costs, which should not be a material component of such a high-value process).

The "mass" batch processing would likely require many machines, which would be switched on sequentially. To get a sense of what value could be generated, it is best to visualise how a "BNNT batching factory" using the Deakin/PPK process might operate. To that end, imagine a factory operating 24 machines:

- Each machine is turned on sequentially at 10-minute intervals.
- We assume each machine takes 3 hours to reach production temperature.
- We assume the production run takes an hour.
- We assume the post-production cool-down also takes 3 hours
- Removing the BNNT and preparing for the next production run takes an hour.

Under this model the implied time per production run would be 8 hours. So, if we imagine a factory set to run continuously (i.e. 24 hours per day), if each production run yields 7.5 grams of BNNT, the production per machine would be 22.5 grams per day and the factory production would be about half a kilo per day (540g assuming no machine failure or downtime).

Half a kilo per day would yield about 125kg per year or more than three times the current global production. This tripling of global production is unlikely to substantially alter the sale price as there are many researchers wanting to investigate some of the many applications for BNNT. But for the sake of wrapping some numbers around it, and to keep it simple, assume the market clearing price falls to US$650,000 per kilogram.

It is important to note purity is particularly important for sale price, and I've spoken with fellow PPK shareholders who have purchased BNNT from all major manufacturers and found PPK's BNNT is meaningfully higher purity than most the competitor samples they received.

The factory would be producing circa AU$125m of revenue with a cost of goods of around AU$12.5m. There would of course be a capital cost to acquire the 24 machines of around AU$12m, but conceptually, batch production could be conceived that saw a business capable of producing in excess of AU$100m per annum of profits. Assuming the market withstood the tripling of production, reinvestment into a larger batching capability could produce an even larger batching factory with the scale only limited by the perceived size of the end market.

The preceding calculations for batch production assume no improvements are made in the process, which is highly unlikely. Once significant production was achieved, it is highly likely that means to improve the yield per run would be developed. Consider the fall in the cost of most manufactured goods over time. Processes would surely improve, and yields increase.

As I pointed in last months newsletter, the global market for Carbon Nanotubes (CNT) is now approximately US$10b per annum from a standing start in 2014. BNNT are meaningfully more widely useful than CNT, the only thing likely to limit the commercial applications is likely to be the remarkably high cost. The lower the retail price

of BNNT can be driven by mass-production, the wider the range of applications that will become commercially viable. I will discuss the known and theorised applications for BNNT below.

The Magnum Opus: -

The "Great Work" in alchemical lore was the perfection of "Prima Materia", in the case of PPK's BNNT ambitions, the "Magnum Opus" is likely to be successful automation of the BNNT production process, with "Prima Materia" being full process automation. If this can be achieved, in the absence of a competitor developing a lower cost process, PPK will be worth many multiples of the current valuation.

Process knowledge is imperfect here, but as I understand it, the key complication impeding automation is the fact that production of BNNT's occurs in a sealed chamber, with BNNT produced and a sort of "boron sludge" from the un-synthesised boron. If only BNNT was left in the chamber, some sort of vacuum process could be used to suck it out as the BNNT is exceptionally light, resembling cotton wool. This would still leave the excess boron in the chamber. I have spoken to people close to the company and they all sound remarkably confident they will solve the automation problem.

If the company successfully achieves automation, the potential value of the business is multiples of the same business under a batch process. If you return to the batch process described in the last section, but instead remove everything after the machine hits production temperature and begins to run. If the device can produce say 8 grams per hour, that implies nearly 200g per automated machine per day. That assumes no down-time, which given the high-temperature, complex process is unlikely. Assume instead each device spends half a day being cleaned and maintained. That would mean circa 100g per day per machine.

If the engineering solution that enables automation does not meaningfully increase the capital cost of each device, the payback on an outcome as imagined above (100g per day) would likely be measured days.

Assume the same factory of 24 devices, producing 100g per device, 5 days per week. Such a factory would produce about 625 kilograms of BNNT per annum. It is reasonable to assume the value of BNNT would fall sharply. If it fell by 60% to around US$400k per kilogram, that would imply such a factory would be capable of generating about US$250m per annum of revenue. Presumably, the input cost would be able to be reduced under such mass production, but even if we assume the AU$100k per kilogram remained static, the gross profit such a factory would be capable of would be in the order of AU$300m per annum (for context, PPK's market cap at the end of the month was AU$260m), which PPK would share with their partner.

The greatest constraint in such a situation would be developing end uses for BNNT at a similar pace as global BNNT production capability increased. To this end, PPK have already begun a process of vertically integrating in preparation for when full scale BNNT production is underway. In October 2019, they announced (.PDF of announcement) a Joint Venture with Deakin to commercialise a variety of applications that have been under research for years. Later that same month, they announced the acquisition (.PDF of announcement) of 45% of Craig Ballistics, a manufacturer of soft and hard ballistic (body armour) products primarily for the security and defence sectors.

Features of and Applications for BNNT: -

Some of the remarkable qualities BNNT possess include:

- Thermal conductivity and dielectric properties (More than 20-fold thermal conductivity improvement in BNNT-containing polymers is obtained, and such composites maintain good electrical insulation.)
- Strength. BNNT is reputedly 100 times stronger than steel and 30 times stronger than Kevlar. This is the basis of the association with Craig Ballistics, lightweight ballistic protection is incredibly valuable to military applications and much lighter body armours are likely to be produced with BNNT as a core ingredient.
- Flexibility. CNT's have similar strength properties, but they are brittle, snapping under pressure, whereas BNNT has flexibility which significantly increases the range of potential applications.

- Heat resistance. BNNT can withstand approximately 1000 °C, whereas CNT can only cope with approximately 4-500 °C.
- Polymer bonding capability. (BN nanotube bond strengths were higher than those reported for CNT – 35% higher for a poly methyl methacrylate interface and approximately 20% higher for the epoxy interface)
- Colour. CNT's are black. BNNT can be dyed different colours and in low concentration in composites, can even be translucent.
- Radiation resistance. This is important in space travel applications as described in this short paper (.PDF)

The "Initial List" the JV with Deakin presented in the announcement gives a good sense of where the early commercial applications for BNNT are though to lie. PPK management are particularly excited about the prospects of a Lithium Sulphur (Li-S) battery, which employs BNNT for insulation and accelerates charging times. There are myriad applications for smaller, faster batteries that charge more rapidly, hold greater charge and have a longer battery life (all capabilities the Li-S battery will possess). The most obvious application is in Electric Vehicles (EV), where "range anxiety, and slow charging times are primary handicaps to accelerating EV uptake. Phones and computers are also obvious applications for improved battery tech.

The application we view as most immediately addressable is ballistic applications. Polycarbonate, perspex, acrylics and glass have all been either successfully bonded with BNNT or are thought to be capable of so doing. The global bulletproof glass market is a US$6-7b market annually. Bulletproof glass is a market ripe for disruption if the application of relatively small amounts of BNNT into an alternative product can produce something lighter that is comparably bullet resistant and priced. Particularly in the vehicular market, stripping weight out of a product will be valuable as handling and fuel economy are significantly hampered by how heavy traditional bulletproof glass is.

BNNT will be adapted into the nascent 3D printing industry to make lighter, stronger and more durable air and spacecraft parts. When craft can be substantially lightened, it enables higher loads, longer trips and lower fuel consumption.

There are also potential applications in water purification, ceramics, thermally conductive and electrical insulating materials, blended polypropylene, polyethylene and PVC. There are other (probably more distant) potential applications in biomedical and orthopaedic products.

Our view of the BNNT opportunity can be best summarised thusly; the opportunity for a reasonably profitable, but relatively small business making BNNT for the research industry exists. If, however, a significant reduction of the production cost of BNNT is accompanied meaningful commercial applications, the potential for PPK's BNNT business in limited almost only by imagination. This is all underwritten by a small, profitable mining services business.

The Zero Fee Collective: -

Despite the remarkable response we've had in respect of The ZFC, in practical terms, it is now unlikely we will launch a new vehicle until we have recovered the losses the fund has suffered in the COVID-19 crisis. This is likely to mean this project will drag out until at least 2021. Once we have returned EGPCVF ahead of our benchmark and recovered the recent falls, I will employ a CEO for The ZFC business to take it to launch.

We will continue to register interest and remain fully committed to eventually launching this much needed product to widen the mainstream prevalence of fund managers available with a more investor friendly fee-structure.

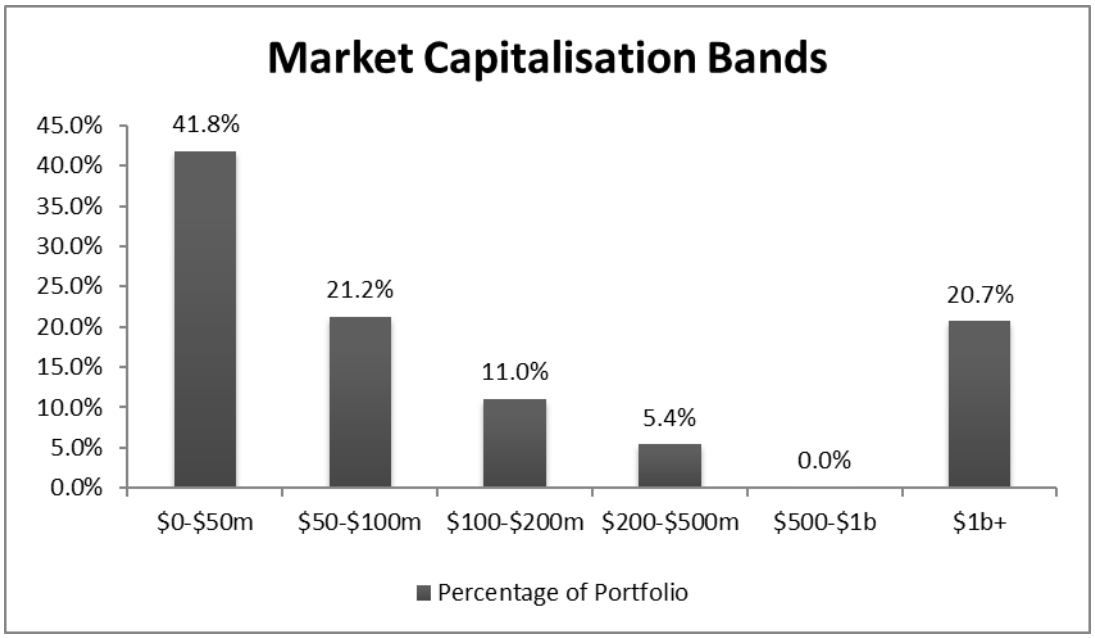
The November 2019 newsletter (.PDF) gave a more detailed outline of what we have in mind for The ZFC. Please keep sending emails expressing interest to ZFCInvestors@egpcapital.com.au to ensure you're kept abreast of developments. We remain committed to a launch in the second half of 2020 at this stage. Fund managers interested in being part can continue to contact us ZFCManagers@egpcapital.com.au so we can discuss how you might be part of the initiative.

Key Portfolio Information: -

Our top 10 holdings at 30 April 2020 were:

Rank	Holding	Percentage Equity Weighting	Percentage Portfolio Weighting
1	United Overseas Australia (UOS.ASX)	13.3%	11.4%
2	LawFinance (LAW.ASX)	6.5%	5.6%
3	Site Group International (SIT.ASX)	5.6%	4.8%
4	Dicker Data (DDR.ASX)	5.5%	4.7%
5	Smartpay (SMP.ASX)	5.0%	4.3%
6	WOTSO	3.5%	3.0%
7	PPK Group (PPK.ASX)	3.3%	2.8%
8	Kangaroo Plantation (KPT.ASX)	3.2%	2.8%
9	SDI Limited (SDI.ASX)	3.1%	2.7%
10	SRG Limited (SRG)	3.1%	2.6%

Our largest 5 holdings now comprise 36% of our invested capital, our top 10 holdings are 52.2% and our top 15 represent 62.6%. Cash and cash equivalents are 15.4% of the portfolio. The median market capitalisation is $61.8m. Weighted average market capitalisation is $298m.



As always, investors with any questions, suggestions, comments or investment ideas should feel free to drop me a line – Tony@egpcapital.com.au

Fund Features		Portfolio Analytics	
Min. Initial investment Max. Initial investment	$50,000	Sharpe Ratio[1]	-0.40
Additional investments	$5,000 (Minimum) $200,000 (Maximum)	Sortino Ratio[1]	0.10
Applications/redemptions	Monthly	Annualised Standard Dev. – EGP Annualised S/D - Benchmark	21.59% 17.53%
Distribution	Annual 30th June	Largest Monthly Loss – EGP Largest Monthly Loss - Benchmark	-28.9% -20.7%
Management fee	0%	Largest Drawdown – EGP Largest Drawdown - Benchmark	-33.9% -26.7%
Performance fee (<$50m) Performance fee (>$50m)	20.5% (inc GST) 15.375% (inc GST)	% Of Positive Months – EGP % Of Positive Months - Benchmark	60.6% 60.6%
Auditor	Ernst & Young	Cumulative return[2] – EGP Cumulative return[2] – Benchmark	-0.5% 7.9%
Custodian/PB	NAB Asset Services	1-year return[2] – EGP 1-year return – Benchmark	0.4% -9.1%
Responsible Entity	Fundhost Limited	3-year annualised return[2] – EGP 3-year annualised – Benchmark	N/A N/A
Fund Size	$66m	5-year annualised return[2] – EGP 5-year annualised – Benchmark	N/A N/A
Mid-Price for EGPCVF Units Accumulated Franking per Unit	$0.9048 $0.0123	Buy Price for EGPCVF Units Sell Price for EGPCVF Units	$0.9061 $0.9034

1 Sharpe and Sortino Ratios calculated using the Monthly Benchmark ASX200 Total Return Index

2 Return is net of all fees and costs and assumes reinvestment of dividends. 1, 3 and 5 year figures are rolling annualised figures.

Past performance is not an indicator of future performance.