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Dear investors

We had a solid month, up +0.9%. This takes our net return since inception (three quarters) up to +17.0%.

Investment in bluebird bio

I've watched gene-editing technology inch forward for over a decade, so it's exciting to relate the progress of bluebird bio, one of our portfolio companies (they don't capitalize their name, somewhat annoyingly).

A number of terrible genetic conditions have been traced to a single faulty DNA base pair, which leads to a single faulty protein and a host of subsequent symptoms. It always seemed plausible, theoretically, to correct the damaging base pair and cure the disease at its very cause.

bluebird bio has announced they have done exactly this, and appear to have cured a person with severe sickle cell disease. They extracted the patient's cells, corrected the wrong base pair (via infecting it with genetically engineered HIV), then reinserted the corrected cells back into the patient, who promptly began producing the correct protein. As the correction was done at the DNA level, the change should be for life, though only time will tell.

I remember reading about this approach over a decade ago. The idea itself has been around for quite a while. Unfortunately the initial methods of DNA insertion were somewhat crude, resulting in several high-profile cases of leukemia and at least one death. bluebird bio is the market leader of a far more sophisticated approach: using genetically engineered lentiviruses (HIV) to insert the payload.

It's ok to cheer on innovative companies from the sidelines without being an actual shareholder, so what makes bluebird bio a worthy investment?

In short, their approach is applicable to a wide variety of diseases, the value of which is well in excess of their risk-weighted pipeline. Unlike small-molecule drugs in pill form, their complex treatment requires significant infrastructure and development that is likely to create a competitive advantage, over and above what they receive from the patent office. Furthermore, given the life-changing nature of their treatments, they are likely to be able to charge a significant amount for their products.

As a quick aside: on the surface drug pricing seems unethical, but as a financial analyst I can assure you that arbitrarily cutting prices would result in an invisible disaster.

The size of the US pharmaceutical market – directly related to drug prices – is that magic essence that pulls cures for horrible diseases out of thin air. If you slashed prices and halved this market, you would kill the golden goose, and medical advances would inevitably stall. Insurance and progressive tax rates are the correct mechanisms by which we can all pay for these medical advances.

If anything, more capital should be directed towards finding cures, not less. I'm sure we'd all pay 5% more in health insurance to save a loved one from a terrible disease, but the issue is rarely framed that way.

Rest assured at the decision-making end, when pharmaceutical executives decide which research programs to support and which to axe, end-market pricing is extremely relevant.

To elaborate, by some estimates it costs $1.7 billion to develop a drug. This can only be justified if the revenue is forecast to be substantially more than that. Slashing drug prices would make a number of research programs unjustifiable. The US has higher drug prices than the rest of the world, but without US prices many commonly used drugs wouldn't exist. Six figure treatments in the States are often provided to African countries at cost. Advanced Western countries with low prices to some extent freeload on the soaring prices of the USA.

There's another key factor: if a treatment cures a debilitating disease that would otherwise require a lifetime of hospitalization or expensive surgery, then the cure is going to have huge commercial value.

In bluebird's case, if all goes to plan, patients with permanent genetic disorders would have decades more of healthy, productive life, resulting in vast savings to the medical system and offering a general

boost to the economy. This is why I expect bluebird to justify high prices to the regulators and insurance companies that decide pricing. Their target markets are highly attractive commercially.

Bluebird's products have yet to be approved by the FDA, but I'm optimistic about their prospects of passing Phase III for their key Lentiglobin product due to the very nature of genetic engineering.

Most drugs are small molecules, traditionally found by screening vast arrays of soil samples, where countless bacteria have evolved elaborate chemical attacks and defenses over millennia of ruthless Darwinian warfare. Biologically active small molecules that can survive the harsh hydrochloric acid of the stomach (and perhaps then the harsh basic environment of the small intestine), usually hit multiple active sites in the body, as the intended target. This leads to complex series of side effects that are often only discovered in progressively larger populations, leading to the high successive failure rates of Phase I, II, and III.

bluebird's gene editing technology is quite different, as it is highly targeted and specific, addressing the actual genetic cause of disease. Apart from the cases of leukemia mentioned above - which have been resolved through bluebird's use of engineered HIV - side effects should be very minimal indeed, and this has played out in early testing. bluebird's stock may advance 3x-5x if its pipeline is successfully de-risked.

bluebird bio is also developing a promising cancer treatment in a 50:50 partnership with Celgene, (which used to be part of the portfolio but was sold at a profit a few months ago). There is significant value being a market leader in such a highly promising and almost-proven technology, and bluebird bio seems an attractive target for major pharmaceutical firms facing a patent cliff. The firm is fully funded for the next few years, with $704 million of cash.

BHP vs Elliott

The Fund was boosted recently by a rally in BHP, who came under activist attack by Elliott.

Elliott was started by the arch-conservative Paul Singer in 1974, and is one of the most successful hedge funds, with over 30 billion of assets. They are famous for buying Argentina's debt and convincing a court in Ghana to impound one of Argentina's naval vessels when Argentina refused to pay. They eventually earned a more than 3x return on the trade, but given the time to realization, the costs and the risks, this outcome was more modest than it sounds.

Their strategy is to hedge every possible risk. In the words of an Elliott partner in London, if they buy Polish real estate, they won't just hedge out their broader market exposure as per usual, but they'll also find out how to hedge the real estate and sovereign component as well.

While their returns have been modest (13% for Elliott vs 11% for the S&P500), these are impressive given the substantial amounts they must have lost betting against the market since 1974. Ofcourse, their gross returns must have been 4% or so higher.

Elliott purchased a stake in BHP and demanded a significant return of capital and simplification of their structure. BHP is hardly a corrupt family business, and has access to the best advice in the business.

Their public proposals cover some fairly contentious areas of corporate finance:

1. Costs and benefits to dual listings
2. Should companies conglomerate?
3. Do buybacks add value?

In each case, the theory is at odds with the practice.

So, what does Elliott propose?

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CAPITAL PARTNERS

1. To end the dual-listing and adopt a new complex structure. All very well, but BHP asserts this will be inefficient tax-wise and could cost over a billion dollars. For savings of $30 million, that appears a poor return, and risky too.

2. They propose a sale of BHP's petroleum assets. Elliott's proposal would also result in an NYSE-listed shares for Australian and UK investors, which is inconvenient. Theoretically conglomerates are a bad idea. They add an expensive layer of management and professors argue that market participants are better judges of capital allocation than corporate CEOs, who are unavoidably incentivised to conquer territory.

It's odd to accuse BHP of unnecessary conglomeration when they recently demerged South32, after careful consideration of what assets where best left in the group, and which were best to float on their own.

In this case, oil is BHP's highest margin business and moreover has proven negatively correlated with copper and iron ore. These are actually quite good reasons to keep the group together.

3. They plan to dramatically increase buybacks. Theoretically buybacks should not add value. In practice, if you have a valuable company that is appreciating in value, you want to swap company cash for other investors shares.

But BHP already returns 50% of its cash by way of buybacks and dividends, and this seems an appropriate ratio. If anything, to maximize long term value creation, BHP should cut the dividend and purchase high quality distressed assets at the bottom of the cycle.

Despite disagreeing with Elliott's financial engineering – and opposing financial engineering is a good starting point in assessing all these cases – Elliott's approach is welcome as it forced BHP to give clear explanations over these parts of their strategy.

Finally, it's worth remembering that financial engineering of this kind has second and third order effects that only become apparent many years after.

By then Elliott will be gone and no doubt aggressively expropriating a defaulted third world county's last remaining transportable assets. Yes, they do actually do that, and I'm not talking about Argentina.

The BHP board should stand firm, and I'm sure they will.

Performance

Since inception our unleveraged stocks have run up circa 25% gross. Our shorts have made no substantial positive or negative impact, though commodities added 0.5%. Credit added 2% - this is our 4% position in Navios shipping bonds, which ran from 64c to 92c, all while yielding 12%. Our hedges subtracted the rest.

I feel like a little like Elliott must, when looking at their 2009 era hedges, but I'm confident the volatility strategy will pay off eventually, and indeed it already has in the first few days this month.

One reason we were so successful on the investment side is because we know we are hedged. If I was running a 100% long product, I would have had to be much more conservative.

Our two strategies (long equities and long volatility) are complementary, and the hedges will get their own time to shine. For those more financially inclined, it is also why I believe negatively correlated strategies, each with positive expected returns, are far superior to equivalent zero-correlated strategies.

Many institutional investors target zero-correlated assets, but zero-correlated assets tend to lose this characteristic at the worst possible times. In contrast, the inverse relationship between volatility and stocks is very tight.

New positions

We reduced our position in Alkane by 40% and reallocated the capital to bluebird bio. We initiated a position in Ramsay Healthcare, and will likely add Healthscope in the near future. Healthscope is quite interesting as the real estate may be worth more than the entire enterprise value at current prices. It's a good fit for the conservative long term part of our portfolio.

We also purchased Vertu Motors, which is trading on a 4x EV / EBITDA multiple, and an 8x after tax earnings multiple, while displaying modest growth and holding net cash on its balance sheet. These are the sort of valuation numbers we like, though the firm does face the risk of declining auto purchases.

Oil update

Our top two performing positions were quite unlikely: we were short US crude and long Beach Energy, and Australian petroleum company. As discussed in previous letters, this sized so that a modest fall in petroleum would cover Beach Energy, while a sharp rally in oil would benefit Beach far more, due to its operational leverage.

Since 31 March we decided to realise a ~9% profit in our short oil position, which was handy timing, as prices promptly bounced back to our entry point. But since the end of the month Beach has sold off, which was a handy reminder that that side of the story is not over yet.

Best regards

Mike

	ASX 200	S&P500	Frazis Fund Net
30-Jun-16	-1.5%	1.0%	-2.5%
31-Jul-16	6.3%	3.6%	5.4%
31-Aug-16	-2.3%	-0.1%	0.8%
30-Sep-16	0.2%	-0.1%	6.1%
31-Oct-16	-2.2%	-1.9%	-2.5%
30-Nov-16	2.2%	3.4%	3.9%
31-Dec-16	2.3%	2.7%	-0.1%
31-Jan-17	1.3%	0.8%	4.7%
28-Feb-17	1.5%	3.8%	-0.1%
31-Mar-17	2.7%	0%	0.9%
Since Inception	**10.4%**	**13.6%**	**17.0%**

Major gross contributions to the portfolio were approximately:

Contributors	
US Oil short	0.7%
Beach Petroleum	0.6%
Berkeley Group	0.6%
Santander	0.5%
Navios Shipping	0.4%

Detractors	
Volatility	-1.2%
Alkane Resources	-0.5%
Seaspan Shipping	-0.5%
Money3	-0.3%
CVRR Refining	-0.3%

Exposure

Country	**%**

USA	31%
Australia	24%
UK	22%
Europe	11%
China (US listed)	7%
India	4%
Total	**99%**

Investment Theme	**%**
Financials	23%
Energy and Refining	13%
Tech	11%
British Land Developers	10%
Blue Chip Mining	9%
Autos	7%
Mining Development	7%
Shipping	7%
Biotech and Pharmaceuticals	6%
Luxury	6%
Healthcare	1%
Other	0%
Total	**99%**

Short Positions	**%**
Shorts	-6%
USO WTI short	-9%
Total	**-11%**

Hedge book	**%**
S&P500 - covered with calls	-78%
Net Front Month Volatility	-6%
Total Equity Exposure with VIX at 4x	**-18%**

Credit and Macro	**%**
Corporate Credit Risk	5%
Long-dated US Treasuries	5%