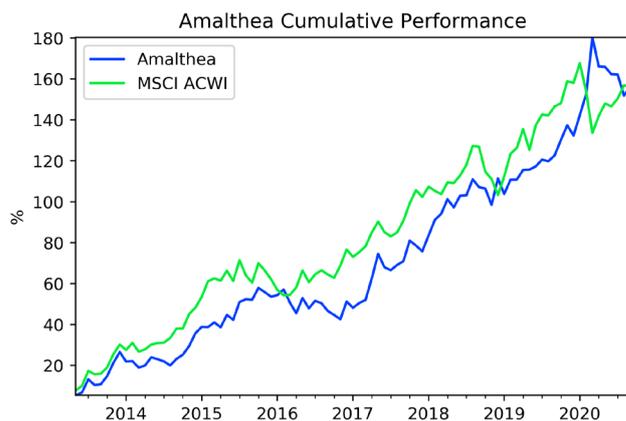


The Bronte Amalthea Fund is a global long/short fund targeting double digit returns over the long term, managed by a performance orientated firm with a process and portfolio that we feel is genuinely different. Objectives include lowering the risk of permanent loss of capital and providing global diversification without the market/drawdown risks typical of long-only funds. We believe a highly diversified short book substantially reduces risk and enables profits to be made in tough markets

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	FYTD
<b>FY13</b>											5.4%	1.3%	6.8%
<b>FY14</b>	6.0%	-2.5%	0.4%	3.6%	5.7%	4.3%	-3.7%	0.2%	-2.6%	0.9%	3.4%	-0.8%	15.2%
<b>FY15</b>	-0.9%	-1.6%	2.7%	1.7%	3.4%	4.9%	2.3%	-0.1%	1.7%	-1.7%	4.4%	-1.7%	15.6%
<b>FY16</b>	6.1%	0.9%	-0.2%	3.8%	-1.3%	-1.4%	0.5%	1.8%	-4.1%	-3.4%	5.1%	-3.4%	3.8%
<b>FY17</b>	2.5%	-0.8%	-2.5%	-1.3%	-1.5%	6.1%	-2.0%	1.6%	1.0%	7.0%	7.2%	-3.7%	13.6%
<b>FY18</b>	-0.9%	1.5%	1.1%	5.9%	-1.3%	-1.6%	4.4%	4.1%	1.5%	3.7%	-2.0%	2.9%	20.8%
<b>FY19</b>	0.1%	3.8%	-1.8%	-0.4%	-3.9%	6.5%	-3.6%	3.4%	0.0%	2.2%	0.1%	0.7%	7.1%
<b>FY20</b>	1.5%	-0.4%	1.3%	3.4%	3.1%	-2.1%	4.3%	4.2%	11.0%	-5.1%	-0.1%	-4.8%	16.5%
<b>FY21</b>	-0.1%	-3.9%	1.7%										-2.4%



The fund was up by 1.66% whereas the globally diversified MSCI ACWI index (in \$A) lost 0.27%.

Bronte has had a good calendar year so far but monthly performance has varied. In January and February, when the world was mostly normal, our performance was acceptable. During the Covid crisis our performance was stellar. Yet when the market ripped up out of that crisis our performance was relatively poor. In September, when the market weakened, our performance was better again. (cont.)

Fund Features		Portfolio Analytics <sup>1</sup>		
Investment Objective	Maximise risk-adjusted returns with high double-digit returns over 3-year periods.	Metric	Amalthea	MSCI ACWI (in AUD)
Min. initial investment	\$100,000 (for qualifying investors)	Sharpe Ratio <sup>2</sup>	1.02	1.11
Min additional investment	\$50,000	Sortino Ratio	2.03	1.95
Applications/redemptions	Monthly	Annualised Standard Deviation	11.20%	10.69%
Distribution	Annual	Largest Monthly Loss	-5.06%	-8.00%
Management fee	1.5%	Largest Drawdown	-13.30%	-12.73%
Performance allocation	20%	Winning Month Ratio	0.60	0.64
Administrator	Citco Fund Services	Cumulative return <sup>3</sup>	146.48%	156.23%
Auditor	Ernst & Young	1-year annualised return	10.95%	3.93%
Custodians/PBs	Fidelity, Morgan Stanley, JP Morgan	3-year annualised return	13.06%	10.36%
		5-year annualised return	10.15%	9.81%
		Annual return since inception	12.93%	13.53%

<sup>1</sup> Performance and analytics are provided only for Amalthea ordinary class units. Actual performance will differ for clients due to timing of their investment and the class of their units in the Amalthea fund

<sup>2</sup> Sharpe and Sortino ratios assume the Australian cash rate as the applicable risk-free rate

<sup>3</sup> Returns are net of all fees

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For Australian dollar clients this performance swing has been amplified by movements in the Australian dollar. During the March crisis the Australian dollar was very weak and measuring performance in Australian dollars flattered what were already good numbers. When the market rallied out of the virus crisis the Australian dollar rallied with it. Measuring performance in Australian dollars further dampened what were already lackluster results.

In September the Australian dollar again flattered what were pretty good numbers.

The monthly swings in performance this year were partly a direct result of our fairly large short book, but they also reflect our analytical successes and mistakes. We generally will not gloat—or often recount—our successes. But to improve, we do need to analyze our mistakes, and when that analysis is useful we will share it in our letters. But that is for later. First, two housekeeping items.

### ***Housekeeping item one: closing the fund to new clients***

We have frequently commented that our strategy, particularly on the short side of our book, is size constrained. We closed our funds from May 2018 to August 2019 whilst we built better systems to deal with the size and complexity of our short book.

We re-opened when we thought we could manage more capital, but we have now reached our target of \$1bn USD. At the same time the market now offers us a plethora of shorting opportunities less limited by size.

We are closing again. The reason is the same: the size and scope limitations on our short book remain, and closing maintains a pathway for organic growth.

### ***Housekeeping item two: leverage rules***

We previously operated with a gross leverage rule. The rule was that the absolute value of long and short positions should not exceed 200 percent of the fund's assets.

During the quarter this rule began to interfere with rational funds management decisions. The most notable issue is that we were shorting some debt trading at par. The most that we could lose on this debt was the coupon (maximum losses were small) but the gross positions were larger. There were other hedging issues that inflated our gross number.

The new rule is 230 percent not including debt shorts (and as before the rule can be amended should the Funds' directors require).

At month end the gross (inclusive of some debt shorts) was 188 (112 long, 64 short and few odd positions which gross up the fund to 188).

## **What we got wrong**

As noted, our performance (by month) this year has ranged from ordinary to stellar. On *average* performance was good, but with an eye toward self-improvement we prefer to reflect upon what we got wrong.

We were well positioned going into the virus. But since then we have got two (big) things wrong:

- a) we misunderstood virus epidemiology in humans; and
- b) we underestimated just how hostile the super-accommodative monetary policy would become to our strategy, particularly to what we call “political stock frauds”.

The bulk of this letter will cover those topics.

## **Our first big conceptual mistake – not having a behavioral model of the virus**

We spent a large part of this year trying to understand the virus and its effect on the economy. As is our bent we sucked up *scientific* papers, some in august journals such as JAMA, others pre-prints of dubious quality. We know a few things for sure. For example, singing in a choir is a very effective mechanism for spreading the virus. But our level of knowledge and understanding is low. For instance, our estimated range of the infection fatality rate is from about 0.5 percent to about 2.5 percent. (We regard estimates outside this range as wildly suspect and indicators that the estimate is driven by ideological bent rather than data.)

We have also made the trite observation that there is a paper that supports whatever ideology you have. If your bent is highly libertarian for instance you will find papers to support an anti-lockdown position. If your bent is otherwise you will find papers to support a strong public health response and a pro-lockdown position.

In the early stages of this virus the work we did was highly productive. We realized with a high degree of likelihood that it was going to be pretty nasty. And we put on decent trades. After that, reading the papers tended to make us more bearish than we should have been. A *science* understanding was in fact misleading – deeply misleading.

With the benefit of hindsight, we can now explain what we did wrong. *We did not have a decent behavioral epidemiology model.*

So, for yours (and our) benefit we will lay out a very simple model. The simplest behavioral model is both highly explanatory and highly predictive.

### ***Viruses in nature***

Epidemiologists have modelled viruses in nature – say – to use an Australian example – myxomatosis amongst rabbits, or phages in bacteria. They have a curve – familiar in all the text-books – which is exponential growth on the way up until something interferes with viral growth (mostly herd immunity) and sharp decline on the way down. Observed reality closely matches these mathematical models, indicating the models are sound.

Incidentally these models work regardless of the severity of the disease. If the disease causes mild sickness it will spread through the population of animals roughly the same way as it would if the disease were mostly fatal. Speed at which the disease spreads is a more notable parameter in these models than severity of the disease.

## ***The virus in humans***

The early stages of this virus in the West matched these models quite closely. This was particularly true in February where the spread was below the threshold of public perception. What was spreading in February was a silent disease that would wind up killing a large number of people.

Since the latter part of March, no country has had a virus infection/fatality curve that matched these mathematical models. And the new curves are being interpreted according to one's preferred ideology. A libertarian interpretation is that the virus isn't that bad and you should eliminate lockdown. Sweden is the favorite example for an anti-lockdown stance. Alternatively, those with opposing points of view observe the lower death rates as indicative of the success of public policy and maintain a pro-lockdown stance. Sweden is characterized instead as a failure, with a higher death rate than its nearest neighbors (Norway, Finland).

We argue that the new curves do not indicate anything much about the virus. They are just what you would expect to happen (although to be fair we did not expect it at the time). The idea is simple. For any individual there is a risk to social activity. Getting on a bus entails risk. Singing in a choir much more risk. Working from home and minimizing exposure entails very little risk.

And there is a benefit from taking risk. You might be able (or need to) go out to work to earn a living and feed your family. You might have a good time at a party (or choir practice). Any individual will make a decision (partly in knowledge, partly in ignorance) that equilibrates the perceived risk of doing something with the perceived benefit of doing something. This is true across society.

As the virus becomes more common the real and perceived risk of going out becomes higher. People will choose to stay at home or take less risk. As the virus becomes less common the risk of going out and doing things is lower so risk taking will increase. The end result is a rough equilibrium where the virus goes sideways. To use the jargon,  $R_0$  tends to one. This seems to happen everywhere. (The idea has been expounded elsewhere – see this [article by Joshua Gans](#).)<sup>4</sup>

Incidentally again  $R_0$  tends to one irrespective of the severity of the virus. It will tend to one with Ebola where you bleed from the eyes and there is a 60-90 percent mortality. It will tend to one with SARS (which had about ten percent mortality) and it will tend to one with COVID-19 which is far less nasty than either of those diseases. (Obviously this generalization does not work in extrema. If the virus is too mild to bother avoiding like the common cold  $R_0$  will not tend to zero. Likewise, if the virus were airborne and transmissible at a huge range then it might be too contagious for behavior to slow it, and  $R_0$  will not tend to zero.)

That the virus is going sideways is neither proof that the virus is much less dangerous than the public are led to believe (a belief common amongst our libertarian friends). Nor is it

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<sup>4</sup> <https://voxeu.org/article/reproduction-numbers-tend-1-and-reason-could-be-behavioural>

proof that the public health measures (such as lockdown) are working and the solution is stronger public health measures.

It took us a while to realize this. Almost all of John's personal (and very smart and very opinionated) friends are wrong (regardless of political persuasion and policy recommendation) and for the most part we were wrong too.

Having accepted that  $R_0$  tends to one, the question is how long does it tend to one for. And the answer seems to us to be until it is interrupted, either by herd immunity or by artificially generated herd immunity (i.e. a vaccine) or by enforced lockdown. If there is no vaccine it will tend to one for several years and the bulk of the population will eventually get it.

If that were Ebola (60-90 percent mortality) that would be an unbelievably bad result. If this had a mortality of 10bps (a wild underestimate of the current virus) then it would be tragic but would not threaten civilization as we know it.

If this were Ebola we would really want to eliminate the virus. Eventual outcomes where half the population dies are not acceptable. Fortunately fear alone will drive Ebola to manageable case numbers, simply because people would be justifiably very scared of the virus. But fear alone will not eliminate the virus because once case numbers are low people will take more risks.

To solve the behavioral dilemma when people are no longer scared of the virus you need them to behave as if they are still scared of the virus. You might be able to do this by brainwashing (i.e. convince people risks are higher than they perceive) or by massive social pressure, but the easiest way is probably just to make them scared of the police. That is how China controlled the virus and is how Melbourne, Australia is currently controlling the virus. In other words *enforced* lockdown works.

That doesn't mean that enforced lockdown is the right policy. It would be with Ebola (huge mortality). It almost certainly was the right policy with SARS (it worked, and mortality was high). But it is not the right policy with say a seasonal influenza. We will leave open where this virus sits (although we have our personal views).

You can however control this virus if you are prepared to trample civil liberties enough. China did. Suffice to note authoritarianism is good for the virus and the virus is good for authoritarians. The virus has cemented Xi's power in China for instance. Again, note that all of this is true for a wide range of virus severity.

### ***The behavioral model explains some cross-country comparisons***

The behavioral model is extremely useful for cross-country comparisons of the virus. Sweden famously never enforced any lockdown. It had an explosion in virus cases which rapidly ameliorated, and case numbers went sideways at fairly low levels.

America did have a wide range of variable lockdown policies (but relative to say Melbourne weak policies with weak enforcement). It also had an explosion of cases, but the virus is now going roughly sideways at levels much higher than Sweden.

Early in the outbreak we thought that Sweden's policy would be a spectacular disaster. We were wrong. Libertarians however have argued that the relative success of the Swedish policy (versus say the American policy) means that if you had adopted the Swedish policy in America you would have got better results in America. They are likely wrong too.

The reason is obvious. Sweden is one of the strongest welfare states in the world. America is the weakest welfare state amongst rich countries. The cost of not going out (i.e. not taking risk) in Sweden is largely that you collect (generous) welfare. The cost of not going out (and hence avoiding risk) for a low-income American is that they and their family starve. Americans – especially poor Americans – will take more risk because the lack of welfare dictates that they take more risk. The net effect is that the virus will stabilize at a higher level in America than Sweden at any level of non-effective lockdown policy. Incidentally this is true for a wide range of virus severity.

Also, you should note that the cost of not going out and taking risks in America differs quite a deal depending on profession and wealth. If you have a nice home to stay in and you do not starve by staying home then you are much more likely to stay home. If you are poor and do not have savings and will starve if you do not go out then you will go out. Again, this is true for a wide range of virus severity.

It should be no surprise the virus skews very poor in the US. There may be little difference in mortality by say wealth status (we do not know). But there is likely to be far higher mortality amongst people with lower financial security.

### ***A comment on JobKeeper and Australia***

Australia has implemented an extremely generous welfare program during the virus called "JobKeeper". JobKeeper pays employers to keep employees on and gives employees wages that are more than sufficient to live on and in many cases have repaired private balance sheets with their generosity.

Australia has also been able to control the virus at low levels in all states (except Victoria) without very harsh lockdown measures.

We think those are related. Very generous welfare (combined with favorable weather) has allowed Australia to keep the virus at track-and-trace levels in most States. With rigorous track-and-trace and some enforcement it looks like the virus may even be eliminated. If virus spread drops in warmer weather (as we think it does) that may mean the Australian policy is even more effective.

We have seriously underestimated how effective the Australian policy stance would be.

### ***The behavioral model is also predictive***

The behavioral model is predictive too and in quite useful ways. We think (for good scientific reasons) that the virus is much harder to contain when the weather is 4 degrees centigrade than when it is 30 degrees centigrade. (This is for instance consistent with the only serious Australian outbreak, in Melbourne in winter. It is also consistent with data

showing meat processing facilities, which are really large cold-rooms, have been major clusters.)

If that is the case, the risk of socializing in the northern hemisphere increases in Winter. Much of the US goes to 4 degrees centigrade as Australia enters Summer.

This means that virus numbers will just rise and rise as we are going into an American election. But they will not rise indefinitely because behavior adjusts to the new riskier reality and  $R_0$  will still tend to one, albeit at a higher underlying level of virus cases and deaths. If we are right about this there will be fear as the virus numbers go up. But that fear will ameliorate.

Note again all of this is independent of how severe the virus actually is. You do not need to estimate case fatality rates for this model to be explanatory.

### ***What would happen if you removed American lockdowns?***

We are writing this up as American because most of the friends we have debated this with are American. But this could apply to lockdown measures in other countries as well. America has a partial (and variable) policy which does not appear to be very effective. In some instances public schools are closed but private schools are open. There are high risk behaviors but there are also old people who have barely been outside since February because of fear.

We have friends who think that sharply reducing American lockdowns would result in unconstrained spread like Milan or New York in their epidemic stages. They think the outcomes would be instantly terrible. We also have friends who point to Sweden and think that you would get better outcomes and less economic damage.

It is likely both positions are wrong. If you reduce restrictions on some people it is likely that virus spread will go up. But that will make everyone's activity riskier. Other people will thus constrain their behavior more. Mortality will rise, but not very much.

Incidentally if it makes it riskier for people (say middle aged people) who have high economic value it is entirely possible that you reduce lockdowns and the high-value people constrain their behavior and GDP goes down.

### ***A quick policy comment***

All of the above analysis works for a wide range of virus severity.  $R_0$  tends to one whether this is Ebola or COVID-19.

But we can say something about rational policy.

As we have explained, partial lockdown does *much less than you would think*. It doesn't change mortality very much. And it doesn't even have predictable effects on economic activity (that could go either way). But it is expensive.

Full lockdown (with police pressure and/or massive social pressure) however is effective. It has been effective in China and will almost certainly be effective in Melbourne.

You either thus go the “drive to elimination” route (Melbourne) or the “welfare plus no lockdown” route (Sweden). Which you choose depends on the mortality of the virus and how you weight that mortality versus the considerable costs of harsh lockdown.

The middle ground here looks pretty stupid actually. Strangely we agree with both our libertarian friends here (who hate all lockdowns) and our public health orientated friends here (that think the lockdown is not harsh enough). Both are rational positions. It is hard for an instinctive centrist (like John) to say this – but in this case the middle ground is plain stupid.

America alas is in that middle ground and the current American policies are plain stupid. Give us the very strong lockdown policies of the Premier in Melbourne. He is colloquially known as “Dictator Dan”. That is harsh enough to defeat the behavioral trap. Or give us Sweden. Just do not give us the middle.

### ***We wish we understood all this sooner***

It is trite to say this, but we wish we understood all this sooner. The initial period of the virus behaved very like the virus-in-nature model and the market rewarded our trades. The epidemiology then transited to the behavioral model and we were wrong. And being wrong we underperformed.

## **Our second big conceptual mistake – underestimating how accommodative monetary policy would drive the portfolio**

Our big mistake this year was the one detailed above. We overestimated the economic effects of the virus because we did not have a behavioral model of how society would respond to the virus. This meant we were way too bearish at the end of March (when it was already clear if you thought about it carefully) that  $R_0$  was going to go to one in every developed country that did not drive for elimination.

Into a world where virus outcomes surprised to the upside (at least in the medium term) came two things

- a) increases in political division (partly driven by the virus) and
- b) highly accommodative monetary policy.

Combined they caused us some grief in the short book. But first we need to explain “politics driven stock scams”.

### ***Gold mining scams and the politically committed***

A few years ago there were some innovative gold mining scams that worked through Facebook.

They worked by specifically targeting people who were either just retired or just about to retire. They also targeted only people who were conservative or very conservative and preferably people who had posted pro-Trump material.

They fed them a conspiracy theory view, about how government pensions to unionized state employees would bankrupt the United States, and how loose monetary policy would smash the US Dollar and make their savings worthless.

Having hooked their marks, potential investors were led through otherwise invisible web sites which primed them for certain investment advice. Eventually they would be led to investing in various gold mining companies which were just ways to scam them of their money.

The scammers use their mark's political predisposition against them.

### ***The ESG version of the same scam***

If gold mining scams are not your thing, there is a left-of-center version of the same thing. Your fraudster targets people who believe that greenhouse gasses are an existential threat to civilization. Luring their mark with feel-good investment hooks and a touch of greed they get them to invest in the next ESG scam, or hydrogen scam, or solar scam or electric car scam. Whatever is flavor of the day.

And, of course, these investors too are stripped of their money.

### ***Not all gold mines or ESG investments are scams***

We do not think that all gold mines or all ESG investments are scams. But many are, and they are easy to pull off because they are sold to people (marks) whose decision is made as much by political predisposition as by rational analysis.

We are sure there are good ESG investments and some mines that are also viable investments. They do not interest us much, except perhaps as hedges.

We seek to find (and short) the bad mines and the bad ESG investments. We admit to owning a few mining stocks, but entirely as hedges. We would own some ESG stocks too if we could find ones that mathematically were good hedges to our shorts.

This usually works, but very easy monetary policy combined with a highly politicized environment have made these scams run faster and further than usual.

For short-sellers like us that is painful.

We think that pain may be ameliorating. It is unlikely monetary policy will get substantially looser than it currently is. And the supply of scams (whether scam gold mines or scam ESG companies or possibly a SPAC<sup>5</sup> with dreams of purchasing one or other of them) is likely

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<sup>5</sup> <https://www.investopedia.com/terms/s/spac.asp>

infinite. The supply should put downward pressure on the prices of scams. And make us money as short sellers.

That worked in September – and we hope it continues to work – but we were “early” on the trade and for a shortseller “early” is a synonym of “wrong”.

## **A final note**

This has been a long client letter.

It is our intention to write a quarterly letter and whilst they might not always happen quarterly we should write at least four letters per year in the future and mostly on quarter end. Most letters will be shorter than this letter, but when we have something to say, as we did this month, the letters may be longer.

We prefer to keep our successes to ourselves and to analyze (often to excess) our failings. Longer letters probably mean more failings. So it is probably better our letters are short even if they are less interesting.

Thanks for placing your trust in us.

The Bronte Capital team

