CHART AND TABLES: AGGREGATE ASSET MANAGEMENT

Deep Deep faces its first black swan event but thrives

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eep Deep faces its first mini black swan event and still triumphs. On a monthly basis, the Deep Deep portfolio lost out to Aggregate Value Fund (AVF), **Berkshire Hathaway** and the benchmark indexes. Deep Deep was up 1.1% for the past month. The primary cause was the recent US banking crisis which triggered a massive sale of US banking stocks.

Our US pick, **Home Bancorp**, fell 9.9% during our holding period over the past month. However, this drop was cushioned by 14 other stocks in the portfolio. The good news is that since the inception of the Machine versus Man competition, the Deep Deep portfolio has won most competing portfolios and indexes by gaining 19.9%. Deep Deep is still ahead of the pack.

This month, we bought Wajax Corporation, Alliance Global Group, Sempio Company, Tyman, Huntsman Corporation and Bai Sha Technology. Conversely, we sold Algoma Central Corporation, Central Asia Metal, Home Bancorp, DMCI Holdings, SNT Motiv and Asia Cement Corporation.

Our first mini-black swan event

The collapse of Silicon Valley Bank and the subsequent contagion effect was unexpected. We call this a mini–black swan event. While Home Bancorp, which was in our 15 picks, was not one of the US regional banks that suffered a run, or was at risk of a run, it has nonetheless suffered from collateral damage as investors fled from these stocks.

The lesson here, as we have said many times in this column, is that Deep Deep is a probabilistic AI. It does not foretell the future. AI cannot predict black swan events because there are insufficient data on such events for the AI to learn. Nassim Nicholas Taleb, the author who made this term famous, once said, "The problem with (human) experts is that they do not know what they do not know."

In the AI context, it can be rephrased as "The problem with AI is that it cannot predict what it did not learn". The good news is that there are 15 shares in the Deep Deep portfolio, and they collectively cushioned the devastating falls of a few picks.

Another valuable lesson worth noting is that Deep Deep is an extreme implementation of an AI-powered portfolio. As explained in January, the margin of safety is to have at least five stocks per country, amounting to 15*5=45 stocks in the Deep Deep portfolio. There is simply insufficient space to list all these stocks in this column so we settled with 15. Eric Kong, our fund



The recent US banking crisis was Deep Deep's first black swan event

15 stock picks for April

Stock	Country	Price (US\$)	% of portfolio
JB Hi-Fi	Australia	29.68	7.33
Wajax Corporation	Canada	17.49	6.14
Jointown Pharmaceutical Group Co	China	2.16	7.45
Mercedes-Benz Group	Germany	75.17	7.42
CK Hutchison Holdings	Hong Kong	6.41	7.48
PT Bukit Asam	Indonesia	0.27	6.18
Hamakyorex Co	Japan	24.56	7.38
IJM Corporation	Malaysia	0.37	6.91
Alliance Global Group	Philippines	0.23	6.29
Hutchison Port Holdings Trust	Singapore	0.19	5.77
Sempio Company	South Korea	39.78	6.16
Bai Sha Technology Co	Taiwan	0.72	6.61
TTW Public Company	Thailand	0.26	6.06
Tyman	United King-dom	2.88	6.03
Huntsman Corporation	United States	26.96	6.15

*Cash level at less than 1% *Price (US\$) as at April 12

manager and Deep Deep developer, felt that 15 stocks would be testing the extreme limits of Deep Deep's abilities. He reasoned that if Deep Deep can deliver an outstanding result in this competition with only 15 stocks, then our actual implementation in Aggregate's AVF portfolio will be even safer. In this case, the 15 stocks portfolio demonstrated the power of diversification. In start-up speak, our Minimum Viable Product (MVP) works!

Why can't you duplicate Deep Deep results in AVF now? Size matters

A few readers including our clients at Aggregate Asset Management asked us this question — if Deep Deep portfolio can deliver such spectacular results why can't the Aggregate fund managers convert their funds, the AVF, and the Aggregate Global Equities Fund, to a Deep Deep-like portfolios and earn similar returns?

The answer is simple. Firstly, the good news is that since last year, we have already started the process of transforming our two funds into AI-powered funds. Since the start of the Machine versus Man competition, AVF has delivered 19.03 % returns, versus its benchmark MSCI AP's 20.70%. Against the backdrop

of a choppy global stock market, the results are indeed stunning.

Secondly, we must understand the relative size between Deep Deep's portfolio and AVF. The Deep Deep portfolio started at US\$500,000 (\$663,518), while AVF is about \$500 million, or US\$376 million. Size matters in portfolio management. In an equally weighted Deep Deep portfolio with 15 stocks, we would allocate about US\$33,800 in each stock.

On the other hand, we have 1,500 stocks in the AVF portfolio, resulting in a theoretical average of US\$238,000 allocation per stock. It will take more than a week to fulfil a buy/sell order for each stock in AVF. Now multiply that by 1,500 stocks and you see the complexity of the transformation.

Visually, think of big, monstrous vessels like the *Titanic* trying to avoid the iceberg. Had the *Titanic* been a much smaller and nimbler ship, James Cameron would have had to film a happy ending for Leonardo Di Caprio, who then might be shown dry, but as wrinkled as Rose. For those who love sci-fi, think of the Imperial Star Destroyer versus Han Solo's Millennium Falcon.

Interestingly, Warren Buffett said the same. "Size is the enemy of performance. You cannot move a big



How the portfolios stack up (%)					
Portfolio	1-week change	1-month change	Since inception		
Machine	-0.93%	1.09%	19.90%		
AVF	0.82%	3.16%	19.03%		
Berkshire Hathaway	2.55%	7.76%	16.44%		
Dow Jones	0.50%	5.61%	12.85%		
MSCI ACWI	0.46%	6.06%	16.87%		
MSCI AC AP	-0.05%	4.04%	20.70%		

Top 5 performers of last month's picks (1–month performance)

Stock Name	Country	Performance
CK Hutchison Holdings (SEHK:1)	Hong Kong	7.57%
JB Hi-Fi (ASX:JBH)	Australia	5.20%
PT Bukit Asam (IDX:PTBA)	Indonesia	4.63%
Hamakyorex Co (TSE:9037)	Japan	2.99%
DMCI Holdings (PSE:DMC)	Philippines	2.97%

Top five countries (since Inception)

Country	Performance	Contribution
Thailand	48.40%	2.86%
South Korea	45.88%	3.02%
Germany	43.90%	3.01%
Australia	36.51%	2.38%
United States	34.98%	2.59%

ship quickly, and you cannot beat the market by being like the market." Essentially, Buffett has compared managing a large fund to steering an oil tanker, saying that it is much more difficult to change course quickly and that the fund's size can limit its agility and flexibility.

Human versus Machine – a lesson from AlphaGo

One of our investors asked, "Do the quant team in Aggregate gleefully celebrate every month when you beat the human portfolios and the competing benchmarks?" The answer is no.

I started my career in the financial industry as an intern equity analyst in a local stock brokering firm and I know how difficult it is to analyze a stock and ultimately make a buy/sell recommendation. It is hard work. It is a job that humbles you when you grow egoistical and yet occasionally rewards you for having the guts to stand by your convictions. Those with weathervane-like or suck-up-to-your-superior characteristics should avoid this industry.

It is with such a backdrop that I re-watched the award-winning documentary **AlphaGo** recently. It is about a group of Google programmers using AI to beat a South Korean Go world champion, Lee Sedol. Lee started the competition by dismissing his AI competitor politely but ended up in tears when he lost four games out of five to AlphaGo. The horror slowly dawned on him and the global Go community that no human will ever beat the AI. Contrast this to the Google team which looked like a bunch of precocious geeks from Revenge of the Nerds, high-fiving each other. Yet, in that single game in which Lee Sedol beat the AI, you could see the paradoxical reaction from the Google team — they were relieved that a human could still win.

The Aggregate team carries the same matured perspective. We are proud of Deep Deep's accomplishments but we see it as a tool that greatly enhances our stock-picking process and not as a master that overrides human ingenuity. We are chill about its outcome. We don't high-five. We are humans after all.

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