OVERVIEW

The Geometrica Fund returned **-1.1%** in August, net of all costs bringing our calendar year to date return to **+9.4**%.

Currency was a headwind (AUDUSD appreciated +3.4% in August), shorts added and longs detracted.

After August month end, **Rightmove Plc** (RMV.LN, mkt cap £5.3bn) received an indicative takeover bid from **REA Group Ltd** (REA.AU, mkt cap A$26.6bn). Rightmove is a top 5 position for Geometrica.

PORTFOLIO

The biggest contributors to performance in August were two stocks we bought during the July / early August market correction (noted in last month's letter).

One of them, **Crowdstrike** (CRWD.US, mkt cap US$62.2bn), is a cyber security firm whose marquee product *Falcon* delivers a comprehensive endpoint security platform designed to *protect* its clients from attack.

But on 19 July 2024, Crowdstrike inadvertently *attacked its own customers*, by pushing a software update to them that contained faulty code, resulting in widespread system crashes (*see Appendix at the end for a fuller description).*

Crowdstrike has many multinationals as clients; airlines (Delta, United Airlines, KLM, Turkish Airlines et al), banks, hospitals, utilities etc. So, the outage caused by Cloudstrike got lots of media attention.

The ~40% share price plunge that followed in July wiped $20bn of value off the stock which duly caused it to pop onto one of our screens. The stock rose +19.5% in August, after the wave of selling abated.

Despite all the kerfuffle, it appears Crowdstrike's customer contract is clear and simple. Customers have limited recourse given Crowdstrike don't guarantee uninterrupted service.

Delta Airlines has been the most bellicose in threatening both Crowdstrike and Microsoft (Microsoft propagated the faulty update) with litigation. Delta provocatively retained David Boies as outside counsel, who is well known to Microsoft as he was the lead US Department of Justice attorney in the landmark antitrust case from the 1990s. Microsoft lost that case[1].

Reading response correspondence from Crowdstrike and Microsoft indicates that Delta likely has limited to no basis for a claim, which would sheet home to most customers.

More germanely, Crowdstrike appear to have recovered very quickly. Discussions with multiple high profile customer contacts indicates an unwillingness to churn given the belief that Crowdstrike have the best product in end point security. Recent earnings calls with competitors show no wave of defections from Crowdstrike spiking new customer acquisition.

Crowdstrike's growth will almost certainly moderate, but most likely for a short period of time, and at 40% down that's probably in the price and then some.

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[1] A separation order splitting the business was later overturned, but Microsoft was forced to change business practices.

The two biggest detractors from performance in August were our positions in oil services companies **Tidewater** (TDW.US, mkt cap US$3.7bn) and **DOF Group** (DOFG.NO, mkt cap €1.4bn). As noted in last month's letter we had been trimming and have now made a full exit. Combined, these two stocks added +2% to our returns, as day rates for offshore support vessels boomed over the last year or so. As the price increases have slowed, we've exited.

The key positive for oil right now is supply constraint, whereby OPEC (Saudi Arabia in particular) have curtailed supply to maintain price, which is a tenuous arrangement given the supply cuts are temporary and yet price maintenance relies on them being extended.

On top of that, China's oil demand appears unusually tepid.

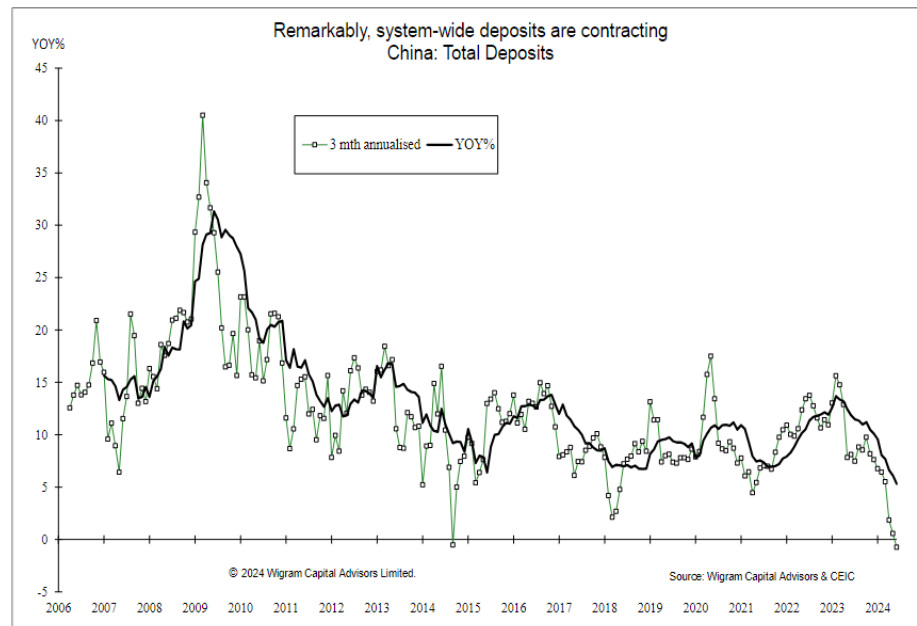China monthly crude oil imports (millions of tonnes) 3Mavg
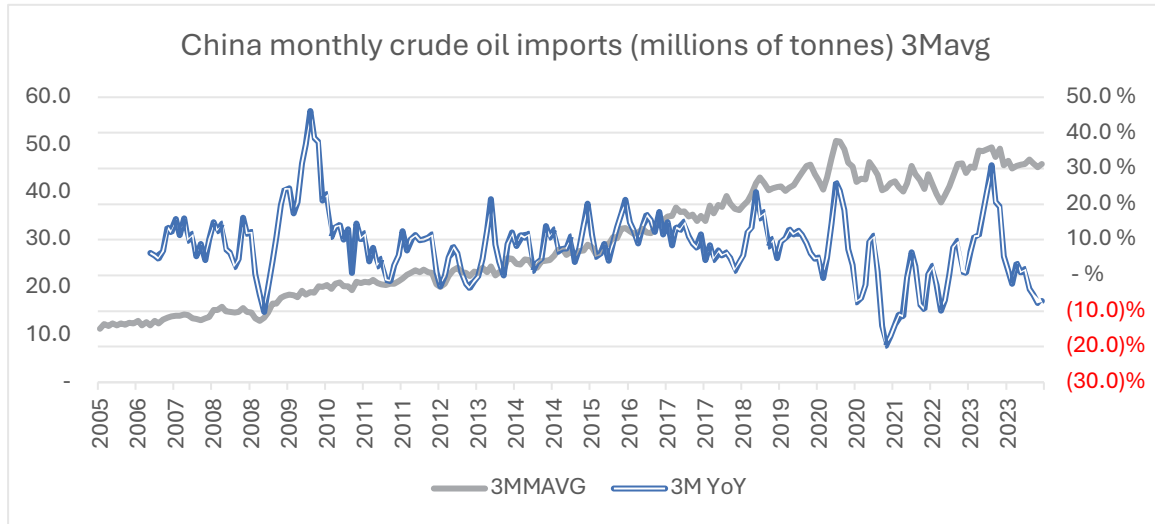
Source: China customs, Geometrica

Two other data points caught our eye and curb our enthusiasm for oil and related commodity stocks.

Firstly, Chinese banking system deposit growth is slowing rapidly and trending to contraction (see chart below). Deposit growth is also diverging from loan growth.

System wide bank deposits are heading towards contraction in China

Remarkably, system-wide deposits are contracting
China: Total Deposits

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Source: Wigram Capital Advisors & CEIC

Source: Wigram

China's banking institutions have a history of "evergreening" bad loans. A new loan in a fractional reserve banking system should axiomatically create a new deposit, but that isn't the case when a borrower's interest payable is capitalised as a new loan. So, the reported deposit base may be a cleaner read on the direction of credit growth.

System wide deposit contraction is rare and tends to occur in times of economic crisis or severe loss of confidence on the part of depositors. Things break in such times.

Secondly, China's response to the persistent contraction in its property and construction markets is at odds with a Keynesian framework. It is normal to have government receipts slide in an economic downturn, but outlays typically increase and diverge with a fiscal policy response aimed at cushioning the downturn.

In China's case the numbers show pro-cyclical, not counter-cyclical fiscal policy.

You don't often see a situation where private / quasi private credit growth is stalling and fiscal outlays are contracting.

Because China is the world's largest exporter, it makes us wonder whether in a year or so, inflation and in particular traded goods inflation might be lower than currently expected.

China is also the largest importer of hard commodities, such as iron ore, copper, nickel and such.

What stimulus?
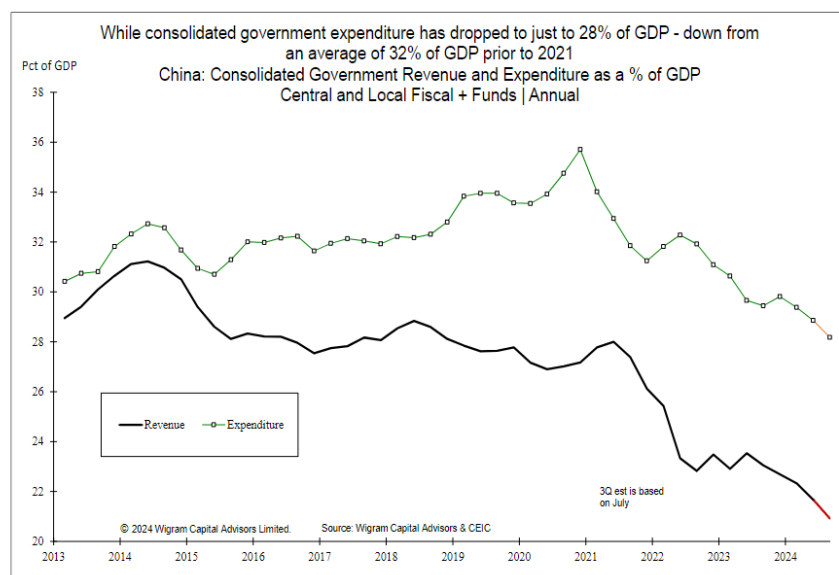
Source: Wigram

Applovin (APP.US, mkt cap US$34.4bn) rose +20.5% and was one of the top 3 contributors to performance in August.

AppLovin operate supply and demand side advertising networks, akin to Meta or The Trade Desk, where prospective advertisers purchase targeted ad campaigns or owners of advertising space can sell their inventory. Specifically, AppLovin operates in the mobile video game advertising space where it has become increasingly dominant. What is far more exciting about APP however is that it is facilitating this advertiser targeting of consumers in a sophisticated way using an AI engine called Axon 2.0.

AI is an overused buzzword, but in this case the proof is in market share. APP are rapidly taking share, to the point that the sell side are starting to fret that growth will slow as they approach 100% share in their core vertical: *"APP is now at a scale where outgrowing the market...means accelerating growth for the entire mobile game industry"* (sell-side analyst, 2024).

To be clear, APP still has multiple years of runway left in mobile gaming, even with the current pace of market share gains, but it is true that they are closer to the end of this journey than they are to the start.

It is for this reason that APP are, as we speak, actively pushing into another, *much* larger, vertical for digital advertising. We are watching this very carefully, as if it kicks, then the upside will be very large. APP trades at a meaningful discount to its peers – even those it is rapidly taking share from – we think due to scar tissue surrounding the IPO and subsequent machinations outside of their control in the mobile gaming market. This is a highly asymmetric set-up should AppLovin be successful.
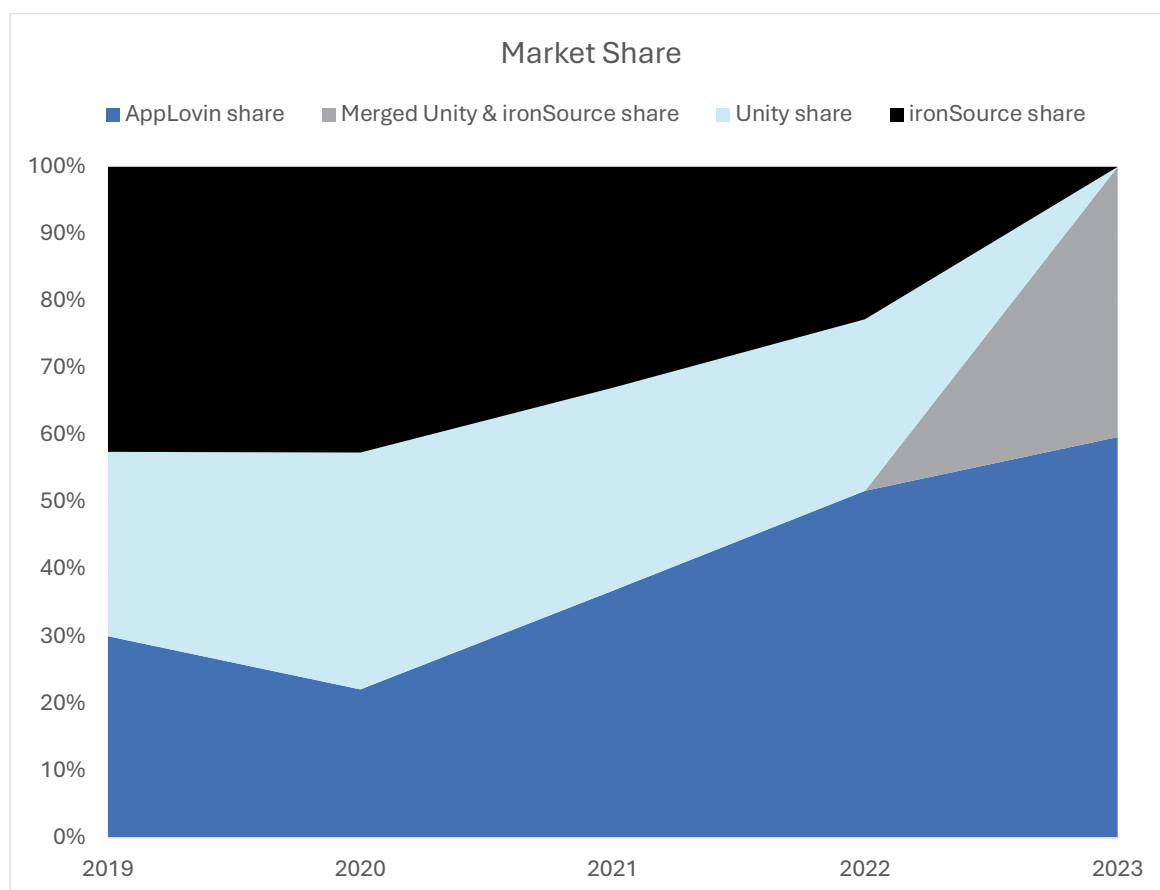
Source: Company filings, Geometrica

Vonovia (VNY.GY, mkt cap €27.2m) rose +9.8% in August. Vonovia is the German residential property REIT[2] we wrote about in February 2024.

REITs are spread businesses - their profit is largely the difference between the rent yield and their cost of capital. But unlike banks, they don't have the ability to rapidly reprice their assets or leverage off near free deposit liabilities. So, they tend to be vulnerable to rapidly rising interest rates. Because if they cannot refinance maturing debt other than at a negative spread, the market imputes significant downside.

And so, faced with this situation in 2022 and 2023, Vonovia was able to sell higher yielding (but lower growth) assets in order to manage debt maturities, without having to issue highly dilutive equity. Having an average maturity of 7 years on its debt helped.

Now, as German sovereign rates fall and credit spreads on Vonovia's debt also compress, Vonovia's health should rapidly improve.

In all of this, the backdrop is of a structural housing shortage in Germany, with regulated rent rises driving income upside.

Resmed (RMD.AU, mkt cap A$37.1bn) gained +10.2% in August, on the back of good results. The stock still trades at a discount to where it was prior to the GLP-1 fears hitting in August 2023. Far from a company killer, GLP-1s appear to be acting as an awareness tool when it comes to obstructive sleep apnoea.

Insulet (PODD.US, mkt cap US$16.0bn) gained +4.3% in August. Insulet make insulin patch pumps for diabetics. The flagship product, Omnipod 5, holds enough insulin for ~3 days and dispenses typically by integration with a continuous glucose monitor.

Staying within a tolerable range of blood glucose levels is crucial for a diabetic, to avoid serious issues such as kidney damage.
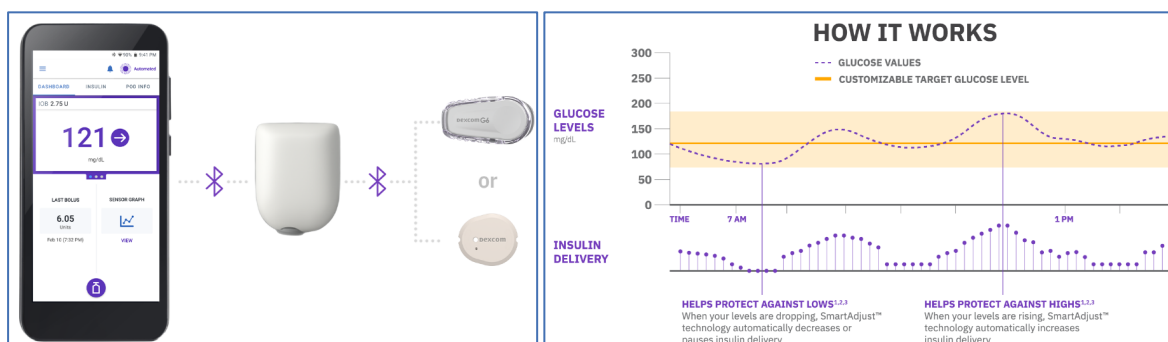
Source: Insulet

Thus far the indicated market for Omnipod 5 has been Type 1 diabetics, but after month end, Insulet gained a Type 2 indication.

Whilst a sizeable minority of new Omnipod 5 users are Type 2, these are coming from physicians prescribing off label. Which speaks volumes to the end Type 2 demand. Noting that prior to the very recent T2 indication, Insulet could not market for T2 use.

This has now changed.

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[2] Technically, Vonovia is not a trust structure, but we refer to it as such for simplicity sake.

This is crucially important because the population of insulin intensive Type 2 diabetics in the USA is much larger than that of Type 1 diabetics.

So, the probability of sales accelerating for Insulet, given their first mover status here, is high, and margins and earnings are heavily leveraged to top line growth.

Ambu (AMBUB.DC, mkt cap €4.6bn) fell -8.6% in August, driven principally by their earnings report on the final day of the month.

Sales growth had previously been upgraded; what surprised the market was that a larger portion of growth came from Ambu's legacy business and growth in the key endoscope segment slowed. Ambu also indicated a period of increased investment and associated cost which didn't help market sentiment on the day.

No long-term compounder travels in a straight line. One of the greatest crimes in this business is selling out of structural winners too easily.

In the context of slightly slower growth in endoscopes, the key thing we are watching is new product launch and take up. Ambu's non pulmonology endoscope sales were growing at over 30% per annum but a big chunk of that was new account growth, not replenishment of existing accounts.

Ambu's structural story of single use taking share from reusable scopes is still very much alive and strong. Ambu has several new products with large end markets nearing market launch with the capacity to reaccelerate revenue growth.

Micron (MU.US, mkt cap US$100.5bn) fell -12.4% in August. Micron are one of three companies making DRAM, a type of computer memory used in various forms across any device that has a computer.

We discussed Micron at length in our previous letter, noting the deeply cyclical nature of the memory industry which is currently being driven singularly by a particular type of DRAM called HBM or high bandwidth memory.

Contrary to what may seem intuitive, the bottleneck for current AI projects is not compute but in fact memory bandwidth. For GPUs intended for training, bandwidth is a big issue as a fast chip is only able to process as much data as can be served to it in any given timeframe.

High performance datacentre GPUs are being designed with this in mind, utilising a complex packaging process that enables stacking multiples of HBM modules vertically, with density increasing rapidly between generation. This change in packaging architecture was what drove the recent Blackwell delays.



TSMC CoWoS®-R Architecture
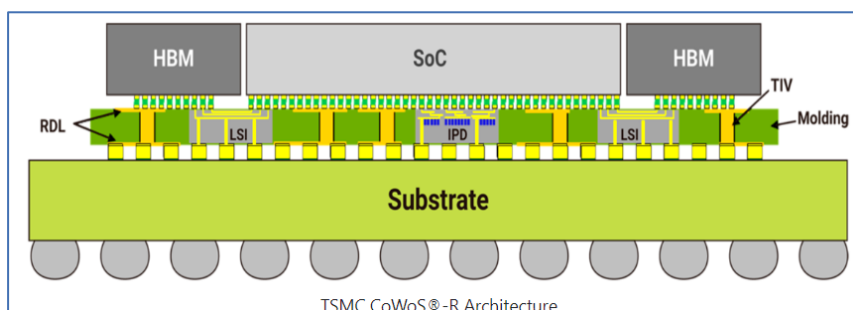
Because of this, HBM demand is growing rapidly. We are tracking a key production input, whose purchase volumes have literally gone vertical. As a qualified supplier to Nvidia and with a key competitor, Samsung, struggling to bring qualified supply to the table, Micron stands to benefit disproportionately from ongoing strength in AI-related demand.

PERFORMANCE (%, NET)[3]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Fund
2015	+0.1	-0.3	+0.0	+0.7	+2.1	-1.4	+2.0	-0.2	+1.5	+1.7	-0.2	-0.9	**+5.1**
2016	+0.0	+0.0	+2.9	+2.3	+11.8	-3.6	+5.3	-6.8	+0.6	+2.3	-3.5	-2.5	**+7.7**
2017	+1.9	-2.6	-1.0	+3.5	+2.2	+3.5	+1.7	+3.0	+2.4	+9.5	+4.1	-1.1	**+30.3**
2018	+6.5	-2.1	-0.7	+0.6	+9.1	+3.2	+5.6	+2.9	--	--	--	--	**+27.4**
2019	--	--	--	--	--	--	--	--	+1.1	+0.8	+0.1	-1.6	**+0.5**
2020	-1.3	-0.3	-5.2	+2.4	+7.9	+3.0	+9.5	+3.5	-1.4	-1.4	+4.8	+2.0	**+25.2**
2021	+4.5	+6.9	+1.2	+3.0	-1.5	-0.7	-1.4	+2.6	+3.1	-0.6	-4.6	-0.4	**+12.2**
2022	-4.1	-1.7	+1.5	+0.5	-2.0	-3.5	+1.4	+4.4	+5.8	+0.7	-0.4	-1.3	**+0.8**
2023	+1.7	-1.5	+2.4	-2.7	+1.2	+0.8	+1.2	-2.0	-3.1	-0.8	+0.2	+3.3	**+0.5**
2024	+4.0	+1.0	+3.4	-1.1	+4.3	-0.2	-1.0	-1.1					**+9.4**

2015 – 2018: CVF (same portfolio managers and strategy)
2019 onwards: Geometrica.

Manager ITD	+193.8
Manager p.a.	+13.2
Geometrica p.a.	+9.4

PERFORMANCE CHART (%, NET)[4]

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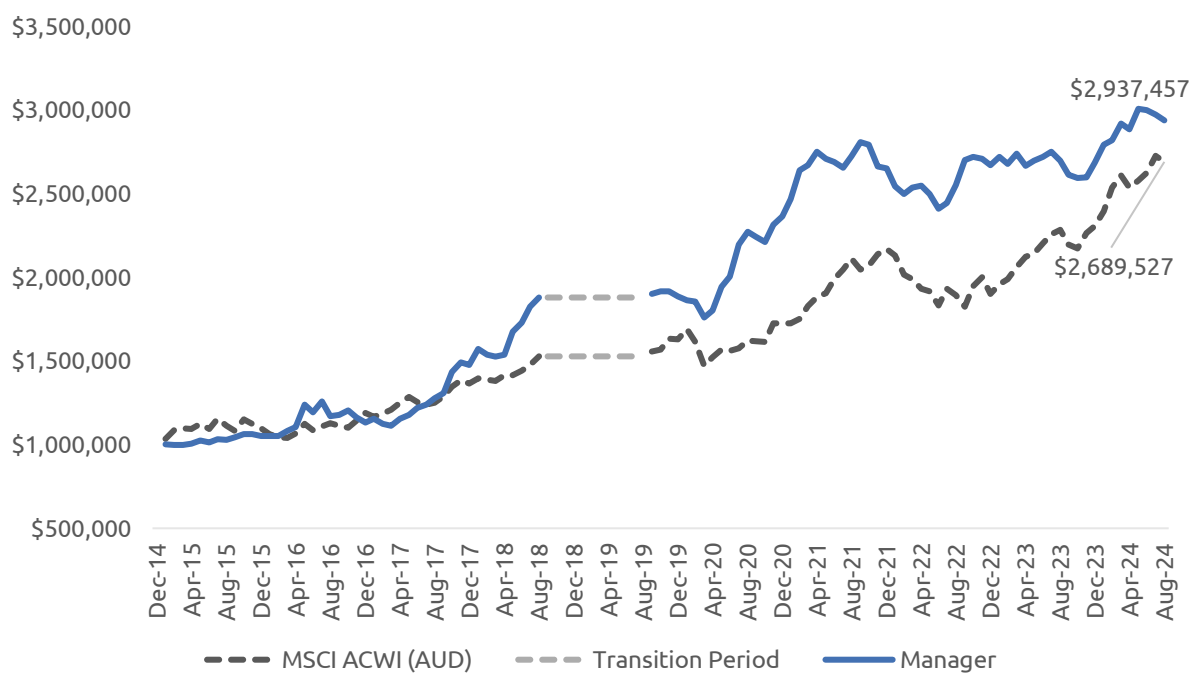
[3] Performance is after all fees, Founder Lead Series unit.
[4] 2015-2018: CVF (same portfolio managers and strategy); 2019 onward: Geometrica. Index = MSCI All Country World Index (AUD)

ASSET ALLOCATION

Country	Long	Short	Gross	Net
Australia	5.5%	(1.9)%	7.4%	3.5%
Americas	52.7%	(7.7)%	60.3%	45.0%
Asia	8.9%	(2.0)%	10.8%	6.9%
Europe	25.3%	(1.2)%	26.6%	24.1%
Total	92.3%	(12.8)%	105.1%	79.5%

GROSS & NET EXPOSURE
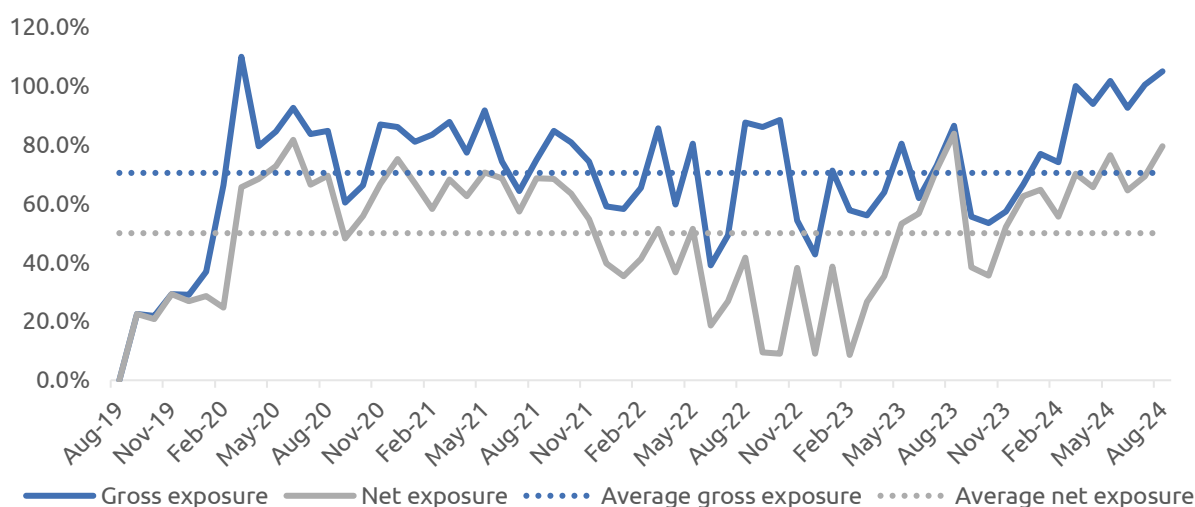
GROSS EXPOSURE BY MARKET CAPITALISATION
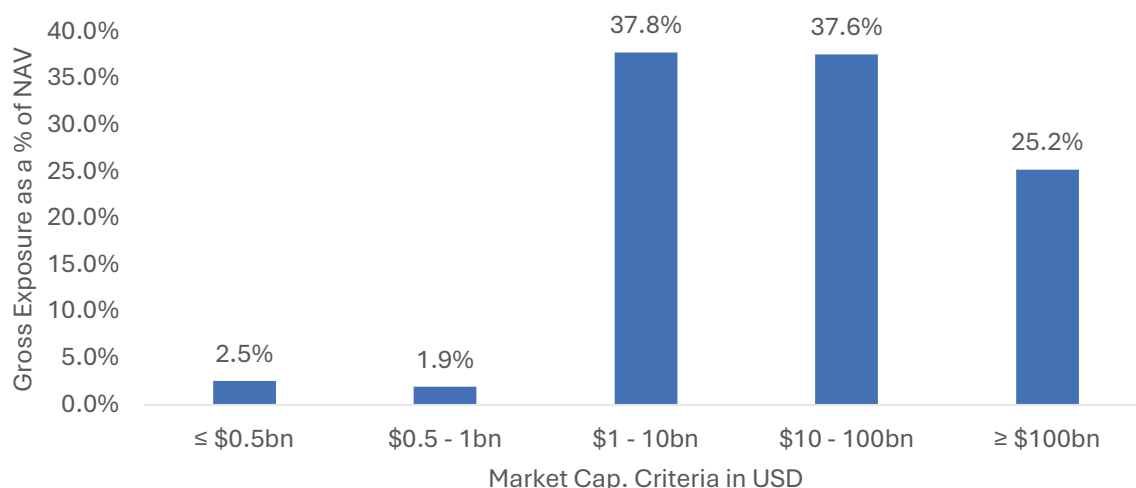
FUND OVERVIEW

Fund	Geometrica Fund
Structure	Wholesale unit trust
Mandate	Global long short Mid-cap focus
Gross exposure range	0 - 200%
Net exposure range	up to 100%
Single stock long limit	15% at cost
Single stock short limit	5% at cost
Buy / Sell Spread	Nil / 0.25%
Investor Eligibility	Wholesale only
Platforms	Ausmaq, Hub24, Powerwrap, Netwealth
Fees (Founders Class)	1% management (+GST) 15% performance (+GST)
Benchmark	RBA Cash Rate
High water mark	Yes
Liquidity	Monthly
Administration & custody	Apex
More information	www.GeometricaFund.com

APPENDIX – CROWDSTRIKE FALCON SENSOR CHANNEL FILE 291 INCIDENT

For those interested, we offer a more fulsome review of the Crowdstrike outage below, focussing on the technical details of what occurred. We believe that this perspective offers some additional insight into the veracity of claims made against the company and dispels the notion that the software is fundamentally broken or that this could occur repetitively. This is key in the context of customer churn.

Technical account

The faulty update was only pushed to Windows OS systems and not Linux / MacOS systems. This is because the update deals with named pipe execution that only occurs on the Microsoft Windows OS.

The stack trace dump of the error is below (from a real affected system), you can see the fail point is an attempt to read (specifically a mov operation) from memory at 0x9c which is hexadecimal for 156 which does not make sense given memory is typically in units of 8.

An invalid memory read could indicate a bug in the code or worse, a security threat. For a normal piece of software, this would likely result in the program being forced to shut down with no interruption to the overall system. But because Crowdstrike software is "privileged" in that it has administrator access, Microsoft will kill the entire system out of caution causing the "blue screen of death".

The reason that Microsoft exercises such caution with respect to a simple incorrect memory address is best illustrated with an example of a genuine security threat that could originate from a malformed memory read. For context, software is typically allocated virtual memory which gives the illusion of a larger amount of memory than may exist physically on the system. To the software it will appear as though it has a large, continuous block of memory to work with but it will be accessing disparate parts of physical memory. Once an attacker compromises a piece of software, they could initiate a buffer overflow attack by sending more data than the virtual memory space can effectively store resulting in the excess data being written to blocks of memory that it shouldn't have physical access to. This excess data will contain malicious code which when read by the system, will execute whatever the attacker wishes.

```
EXCEPTION_RECORD:  fffffb0d18d3ec28 -- (.exr 0xfffffb0d18d3ec28)
ExceptionAddress: fffff8021df335a1 (csagent+0x00000000000e35a1)
   ExceptionCode: c0000005 (Access violation)
   ExceptionFlags: 00000000
NumberParameters: 2
   Parameter[0]: 0000000000000000
   Parameter[1]: 000000000000009c
Attempt to read from address 000000000000009c

CONTEXT:  fffffb0d18d3e460 -- (.cxr 0xfffffb0d18d3e460)
rax=fffffb0d18d3f2b0 rbx=0000000000000000 rcx=0000000000000003
rdx=fffffb0d18d3f280 rsi=ffff9a81b596f9a4 rdi=ffff9a81b596605c
rip=fffff8021df335a1 rsp=fffffb0d18d3ee60 rbp=fffffb0d18d3ef60
 r8=000000000000009c  r9=0000000000000000 r10=0000000000000000
r11=0000000000000014 r12=fffffb0d18d3ef28 r13=fffffb0d18d3f0d0
r14=000000000000001a r15=0000000000000004
iopl=0         nv up ei pl nz na po nc
cs=0010  ss=0018  ds=002b  es=002b  fs=0053  gs=002b             efl=00050206
csagent+0xe35a1:
fffff802`1df335a1 458b08          mov     r9d,dword ptr [r8] ds:002b:00000000`0000009c=????????
Resetting default scope

BLACKBOXBSD: 1 (!blackboxbsd)

BLACKBOXNTFS: 1 (!blackboxntfs)

BLACKBOXPNP: 1 (!blackboxpnp)

BLACKBOXWINLOGON: 1

PROCESS_NAME:  System

READ_ADDRESS:  000000000000009c

ERROR_CODE: (NTSTATUS) 0xc0000005 - The instruction at 0x%p referenced memory at 0x%p. The memory could not be %s.

EXCEPTION_CODE_STR:  c0000005

EXCEPTION_PARAMETER1:  0000000000000000

EXCEPTION_PARAMETER2:  000000000000009c

EXCEPTION_STR:  0xc0000005

STACK_TEXT:
...
```

The question then becomes: why is the address 0x9c trying to be read from?

Crowdstrike's Falcon sensor updates are published in the coding language C++ which is a "memory unsafe" language. C++ does have automatic memory allocation, the two options for doing so either result in variables being deleted once they go out of scope or existing indefinitely.

Generally speaking, if you can get away with automatic memory allocation you should prefer it because it's easier but as software becomes more complex and requires more optimisation, it usually becomes preferrable to use dynamic allocation where the user specifies memory allocation themselves using something called a "pointer".

Programmers typically include checks for "null" memory addresses in their code to avoid errors. That check might look something like this:

```
int * some_ptr;
// ...
if (some_ptr == NULL)
{
    // Handle null-pointer error
}
else
{
    // Proceed
}
```

<int* some_ptr> indicates that there is a pointer (a memory address) which we have called "some_ptr" that contains an integer. The following line <if (some_ptr == NULL)> checks whether the data stored in this address is NULL or not. If that's true, then there will be some failsafe logic but if it is not, then the program can continue.

So essentially, **had the Crowdstrike programmer included this simple Boolean in their code, it would have caught the incorrect memory address access** (more specifically, a mov operation is making an out of bounds read into [r8] *from* 0x9c) and the crash would not have occurred. This is an extremely basic programming error that could easily be captured in debugging software or by human review.