

INVESTMENT MANAGEMENT

VT Astute Funds

Quarterly Commentary

Q1 2023



Introduction

Thank you for taking the time to read our Q1 commentary. Just as we put the travails of 2022 behind us, and start the year in a relatively positive manner, a mini-banking crisis emerges in March. Rapidly rising interest rates are applying significant stress to the global economy; that pressure eventually finds a weak spot, and something breaks. Living through the volatility this creates is very uncomfortable, and it requires significant discipline to focus on fundamentals when markets are driven by sentiment. We see these stresses as a sign that the interest rate cycle is nearly complete however, and so remain laser focused on how we can achieve our long-term investment objectives as markets begin to move past this post-pandemic inflation cycle.

As stress fractures appear in our global economy, our CIO letter this quarter considers the seachange that "higher for longer" interest rates represent for investors.

In our Astute Overview section, we look in more detail at the recent bank failures and ask if this represents the point at which rate hikes undermine financial stability.

Our regular Astute Perspective shows our current conviction views, while Astute Positioning covers how those views translate into the portfolios, and what changes we have made in the past three months.

Finally, Astute Observations highlights some of the more interesting research, data, or charts we have encountered recently with a few short (and hopefully enlightening) comments.

As always, we take a long-term approach to investing our clients' assets, but success is a journey, not a destination, and the short-term views expressed herein are aimed at managing risk and making your investment journey as smooth as possible. By taking a risk-adjusted approach to your investments, we aim to deliver reliable growth in line with our stated risk profiles and provide you, and your financial planner, with the consistency and security to plan for your long-term financial future. Thank you for your continued support. If you have any further questions or require any additional information, please do not hesitate to contact your usual financial planner.

Fund Management Team



Scott Osborne
Chief Investment Officer



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The Gravity of the Situation (don't let it get you down)

There's no better, or perhaps I should say worse, representation of sentiment driven markets than the fear associated with a banking run. No business can survive if its customers decide wholesale to stop purchasing its products, but only in banking is that force so acutely felt. Trust is a fragile thing at the best of times, and the implicit promise that money in the bank is safe remains in the shadow of the global financial crisis. When doubts emerge, trust evaporates and even a perfectly good bank can quickly find itself in trouble.

It's hard to argue that Silicon Valley Bank (SVB) was a "good" bank, the mismanagement of its balance sheet gave depositors a clear reason to worry, but it's striking how quickly the problem escalated. This rate of change is aptly summarised by Ernest Hemmingway's quote about bankruptcy as something that happens in two ways "gradually... and then very suddenly". Rather than cogitating on the specifics of SVB however (more on that in our Astute Overview) it is the rate of change, and what that tells us about sentiment that I am interested in.

The second order effects of the mini banking crisis are still rippling through markets, and we expect them to have a very real impact on lending, growth, and very probably interest rates. We can already conclude, however, that behaviour is changing because of the higher interest rate environment we are in. The willingness to shift deposits to maximise interest on cash holdings is one aspect of this change, but more generally we perceive risk aversion as the main driver. When it comes to markets, the "buy the dip" mentality that typified the last decade has been replaced by "sell the rally", de-risk and ask questions later.

This makes perfect sense given the withdrawal of central bank liquidity and commitment to monetary tightening. The US Federal Reserve no longer has your back. In December last year, noted value investor Howard Marks compared the last decade of investing to walking forward on an airport travelator. Even standing still you made progress; the main concern was keeping up. Now the tailwind is gone, you must work harder to get where you need to go, something companies are learning both in terms of the customers they serve but also the investors they report to. This pressure to adapt amidst changing sentiment should also provide opportunities to those willing to search for the best companies and take well considered risks while others remain fearful.

Another slightly more abstract metaphor to explain the same change, is that rising interest rates is like switching gravity back on. Certainly it caused plenty of assets to fall back to earth, but the point is it continues to exert a force for as long as rates remain higher than zero. While we expect rates to fall from current levels, it might happen slowly, and they are unlikely to return to zero when they do. So, the world has to learn again what it means to live with this force. There are plenty of interpretations about what that means for markets, usually with a fantastic idea or solution attached, but working capital harder to generate return will certainly be a part of it.

Which brings me to my last observation about behaviour in this higher inflation world: the exaggeration of the money illusion. This concept describes our habit to think about wealth in nominal rather than real terms. To illustrate a simple case, a person receiving 4% interest on their bank account when inflation is 6% will feel better about their wealth than one receiving no interest when inflation is 2%. Of course there is no difference in economic terms, in both cases the real spending power is eroded by 2%, but cash going up *feels* good.

With the offer of high rates on cash and a difficult period for risk assets, the temptation to sit on the side-lines is greater than ever, but don't fall for the money illusion. Remember that the real objective is beating inflation, and it already has a head start. That's what we are focused on. On a travelator or treadmill, with gravity or without, you have to take risk to enhance returns, and we firmly believe the only way to achieve that sustainably is with a well diversified portfolio, and a disciplined and patient approach.

Scott Osborne PhD CFA
Chief Investment Officer

A s t u t e O v e r v i e w



Astute Quarterly Commentary | April 2023

THE MONETARY END GAME - HIKE UNTIL IT'S BROKEN

Just three months ago, the slowing of inflation amid strong economic data brought about optimism that we could be nearing an end to interest rate increases, and may see a so called "soft-landing" for the economy. Today, this optimism has waned, and resilience has turned into nervousness. We are only one year on from the US Federal Reserve's initial interest rate hike in this cycle, and they marked the occasion with an emergency plan to restore confidence in US banks, in the midst of a mini-crisis that has already seen two banks fail. This serves as a blunt reminder: raising rates at an unprecedented pace will have its consequences (intended or not), and vulnerabilities within the system can appear from anywhere, at any time.



The reasons for the demise of Silicon Valley Bank (SVB) are twofold: firstly, bond portfolio losses causing a hole in its balance sheet and widening a mismatch in assets and liabilities, and secondly, the loss of confidence in the bank to bridge the gap, i.e. be able to return depositors money. When you add into this mix a high concentration of business depositors more inclined to withdraw their cash, a highly interconnected base of deposit holders in the technology community (within which rumours of insolvency spread like wildfire), and a high-tech platform which allowed a fast and efficient electronic transfer of cash from the bank (no need for physical queuing, as remembered from the infamous images of Northern Rock in 2007), it is easy to see why this was the fastest run on a bank in history.

Regardless of the reason why, if a bank fails, then supervision has failed, and therefore fear begins to grow of systemic risks elsewhere. Like a virus searching for a host with a weakened immune system, that fear found its next victim in Credit Suisse, a troubled bank already approaching a restructure after years of scandal and mismanagement. While Credit Suisse had a substantially better ability to fund withdrawals than SVB, and had done so throughout, the potential insolvency (even a well-managed one) of a systemically important financial institution was more than regulators were willing to risk and thus a shotgun wedding to its nearest and fiercest rival, UBS, was hastily arranged.

As the dust had (barely) settled on the deal, the European Central Bank's (ECB) interest rate decision fell due. This was a huge moment for Christine Lagarde, the President of the ECB, as she had to balance the commitment to price stability (tackling inflation) with the risks posed to financial stability from hiking rates. One can only keep hiking until something eventually breaks. In the end the central bank increased rates by 0.5%, and set the playbook for the Fed and the Bank of England, who would follow suit with 0.25% increases in the days following. The message was clear, inflation remains the priority but central banks have additional tools (think printing money) to support banks if, and when, they need it. Crisis averted? For now at least.

The bigger question remains: what will the banks themselves do? There will almost certainly be some tightening in credit conditions through higher borrowing rates and stricter lending standards; there were signs of this already emerging earlier in the year. If this trend accelerates, then economic growth could slow more quickly than expected. This puts central bankers in a difficult spot, as any additional drag on growth may be a substitute for future interest rate increases. With the next round of central bank meetings occurring in May, decision makers have a month to decide if they should pause - or push on. For what it's worth, markets already believe a recession is coming and rate cuts will be necessary.

Taking a step back to look at the economy, you may have read the dramatic news headlines questioning "is this a Minsky Moment?!". In the 1970s, American economist Hyman Minsky set out economic theory which laid out framework postulating that a period of prolonged speculative activity in a bull market will lead to its epic collapse – whilst there is much to the economic theory that wouldn't be suitable to delve into here*, generally, this theory is built around excessive borrowing and increasing leverage which is why it came to prominence as a blueprint for explaining the Global Financial Crisis (GFC).

We don't believe we have seen an archetypal "Minsky" cycle since the GFC. The fact that multiple banks have failed in the last month without causing a wider crisis is testament to the regulations implemented in the wake of 2008. The phrase "banks are well capitalised" sends a shiver down the spine of any investor, raising uncomfortable memories of that time, but so far banks have passed the stress test that markets have given them. There is still a lesson to be learned however, as we transition into a world of higher interest rates. You don't have to have taken excessive risk to suffer in this environment; practices which were acceptable, or even desirable when debt was cheap (even free) will no longer be acceptable. Adaptation is required to survive (and thrive), and that can have significant consequences for companies and markets.

As a final note on this piece, it's interesting to note that one major bank which avoided a government bailout and came out of the GFC relatively unscathed was Credit Suisse, celebrated at the time whilst its rival UBS was forced into serious introspection and re-structure. 15 years on, and a lot of lessons learned later, it is UBS who adapted and grew into a profitable, well managed bank. It seems it is UBS who will have the last laugh.

*For more detail, you can find an Analyst Explainer on our website in the blog section.

Astute Response:

Our in-depth analysis of the financial sector gave us the confidence that the risk of financial contagion was relatively low, however we remained vigilant due to the dangers associated with the potential residual effects. The knock-on effects of tighter lending conditions will have likely increased the probability of a policy error from central banks and, on the margin, the chance of a more severe recession. Despite this, we believe markets are overestimating the likelihood of interest rate cuts. We will look to tactically add to bonds to provide additional protection from a prolonged recession, but only if market expectations moderate somewhat from current pricing.

Astute Perspective

STUTE

Japan - Neutral/Overweight

Good value but corporate nationalism persists

Research & innovation remains strong suit BoJ the last bank standing with loose policy

Asia & Emerging - Overweight

End of zero-Covid leading to release of pent-up demand

Company valuations attractive vs western equivalents

Covid exit waves looks to have been well managed

UK - Neutral

UK markets biggest beneficiary of energy stock rally
Prefer smaller companies with growth opportunities
Underlying economic growth challenged but improving

N. America - Neutral

Peak in interest rates looks imminent
Fed remains worried about labour markets
Big question around credit conditions

Europe - Neutral

ECB playing catch up in rate hiking cycle
Falling gas prices easing some inflation pressure
Growth proved resilient but rates still rising

Conviction Views

A key part of our process is building conviction ideas which are then expressed across each of the portfolios. While asset class and regional views are an important input into this process, the opinions outlined below will be the driving force behind any potential future returns.

1. Focus on Quality

- Economic rebound will broaden growth opportunities, benefiting cyclical sectors most.
- Risks arising from inflation and geopolitics necessitate a refocus on quality, in both expensive secular growers and cyclical value rebounders.

2. Overweight Technology

- Technological revolution will continue, lean into disruptive areas, the strong get stronger.
- Look beyond current global leaders and use specialists to stay ahead of the curve.

3. Invest Sustainably

- ESG will become the default option, and the market will shift accordingly.
- If sustainable investing is the future, invest with those who have ESG way into their past.

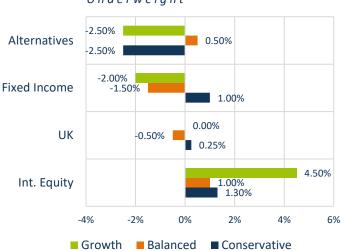
Asset Class Views

Fixed Income	Negative			Ро	sitive	
rixed income						
Sovereign Bonds						
Corporate Bonds						
High-yield bonds						
EM Debt						
Alternatives	Nega	tive			Ро	sitive

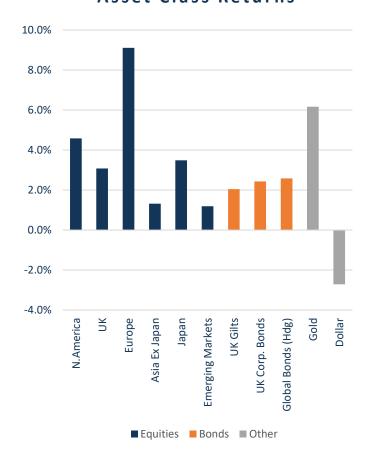
Equities	Negative		Positive			
UK						
Europe						
Asia & Emerging						
Japan						
US						

Tactical Asset Allocation¹

Underweight



Asset Class Returns²



A stute Positioning



Fund Activity

New Purchase

	Man GLG Sterling Corporate Bond	Con, Bal
	L&G ESG Corporate Bond ETF	Con, Bal
	BlueBay Financial Capital Bond	Con, Bal, Gro
	Federated Hermes China	Bal, Gro
N	atixis EuroStoxx Banks Reverse Conv (8% p.a.)	Con, Bal
	NinetyOne EM Blended Debt	Bal, Gro
	L&G ESG Corporate Bond ETF	Con
	iShares Core UK Gilts ETF	Con
	Man GLG Sterling Corporate Bond	Con
4		
	iShares China CNY Bond ETF GBP Hdg	Con, Bal
	LXI REIT Ord	Con
	Tritax EuroBox Euro Ord	Bal, Gro
	Abrdn European Logistics Income	Bal, Gro
	Allianz China A Shares Equity	Bal, Gro
	JPM UK Equity Core	Gro
	iShares MSCI EM SRI ETF	Gro
	iShares \$ Treasury Bond 1-3yr UCITS ETF	Con
	Royal London Diversified ABS Fund	Con
	Allianz Fixed Income Macro	Con
	Aquila European Renewables Income	Con
	Real Estate Credit Investments Ord	Con
	iShares China CNY Bond ETF GBP Hdg	Con, Bal
	LXI REIT Ord	Bal, Gro
	Comgest Growth Europe ex UK	Bal, Gro
	HarbourVest Global Private Equity	Gro
	iShares \$ Treasury Bond 1-3yr UCITS ETF	Bal
	Chrysalis Investments Limited Ord	Gro

Evidence of slowing inflation and thus the potential need for less rate hikes placed equity markets on a positive footing at the beginning of the year. Although this led to a small contraction in both credit spreads and government bond yields, absolute yields were still at historically elevated levels. As a result, we continued to reduce our exposure to investment trusts and Chinese government bonds in favour of introducing more conventional UK corporate bonds. This allowed us to reduce our underweight position to fixed income, whilst locking in higher yields, as we believed there was a stronger case to be made for a pause in monetary tightening.

We also added financial capital bonds into the portfolio during the period. Since the Global Financial Crisis, regulatory changes have meaningfully improved the strength of the banking sector, such that asset quality and capital buffers are now extremely robust and default rates are very low, which gives most financial institutions the ability to absorb any exogenous shocks. Whilst adding such positions increases portfolio risk, the double-digit yields on offer provided an enhanced return profile that complemented the other parts of our fixed income component well.

We also took this opportunity to realise gains across our UK and European equity components to further help diversify our fixed income duration risk by introducing some emerging market (EM) debt. Unlike developed market central banks, policymakers in the EM space are experienced with the twin challenges of inflation and liquidity, and thus they were quick to raise rates to prevent inflation from spiralling out of control. This has made the overall investment landscape much more robust, given that most EM countries are already done with their rate hiking cycle and are now in the position to ease policies in order to support a recovery. The region had also seen large capital outflows as investors de-risked their portfolios, which we believe offers an opportunity to enter the space at a discount to fair value.

Given the number of trades we executed in January, February saw no changes to the portfolio. Heading into March, we made a small adjustment within the Conservative portfolio by selling the remaining capital in our defensive asset backed manager to increase our positioning in UK corporate bonds and longer dated gilts. This was backed by the slight change in guidance from the Bank of England Governor Andrew Bailey, who despite raising rates to 4%, suggested the there were signs that inflation was turning the corner, which gave us further assurance that we were approaching the peak in UK interest rates.

Shortly after this, the failure of several high-profile banks including Credit Suisse created significant amounts of volatility as fears of financial contagion and broader systemic risk rippled through financial markets. Consequently, bond prices moved higher as investors started to believe that a recession was coming, and rate cuts would be necessary. Given our conviction on the quality of the banking sector, accumulated from the work we completed only in January, we were very confident that valuations were not reflective of the underlying fundamentals. We decided to take some profits on our short-term US government bonds that had rallied strongly and to purchase a structured product linked to European banks. This provided us with an unconditional 8% per annum yield with capital losses only occurring if banks were to fall by a further 50%, a level of which we were comfortable with given that we have not seen that type of drawdown since the GFC.

Looking ahead, the recent events in the banking sector will likely place policymakers in a difficult situation as they attempt to gauge the extent to which credit conditions have tightened, and therefore what this means in terms of the appropriate monetary response. In the short-term, we remain cautious while looking to selectively add bonds to provide protection against recession risk if the recent volatility passes and market expectations moderate from the current levels.

VT Astute

Conservative

The Conservative fund underperformed its market comparator this quarter but outperformed benchmark inflation. Returns were driven primarily by our exposure to shorter term government bonds, which had a relatively muted rally versus longer duration bonds, and the re-pricing within the European hybrid debt market which held back our financials capital bond manager.

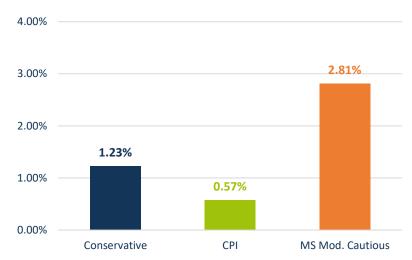
The recent failing of multiple banks raised fears of financial contagion and led to a fall in government bond yields as investors believed a recession was coming. This repricing held back our relative performance as our short duration bonds are less sensitive to changes to interest rates. Furthermore, the decision by the Swiss regulators to change the treatment of hybrid capital debt in order to facilitate the UBS takeover of Credit Suisse also detracted from returns as prices fell to reflect the increase in risk.

The outstanding performers have been concentrated towards our US equity holdings who have all delivered very strong gains led by a more resilient than expected economy. The other strong contributors included ES R&M European who rose +6.69% as European companies continued to navigate margin pressures well, and our passive Treasury position which benefitted from the recent contraction in yields as investors bet on rate cuts.





Q1 Returns²



Asset Classes

Asset class	Avg Weight	Return	Contribution to Portfolio Return
Cash & Equivalents	6.63%	1.63%	+0.11%
Government	20.32%	1.45%	+0.26%
Credit	24.63%	0.18%	-0.04%
UK	4.14%	2.27%	+0.08%
N. America	10.35%	5.45%	+0.46%
Europe	3.23%	7.86%	+0.22%
Japan	2.00%	4.36%	+0.05%
Asia & Emerging	4.67%	1.73%	+0.07%
Thematic	2.95%	1.07%	-0.00%
Alternatives	21.07%	-0.50%	+0.02%

Top Funds

Fund Name	Avg Weight	Return	Contribution to Portfolio Return
L&G US Equity ETF	5.05%	5.12%	+0.26%
iShares \$ Treasury Bond ETF GBP H Dist	7.02%	3.09%	+0.17%
iShares Core S&P 500 ETF GBPH Dist	2.03%	7.01%	+0.15%
Federated Hermes US SMID Hedged	3.27%	4.08%	+0.15%
ES R&M European	2.19%	6.69%	+0.13%

Sources: Refinitiv Lipper for Investment Management & Astute Investment Management as at 31/03/2023. Past Performance is not a reliable indicator of future results. All performance is shown net of ongoing charges. Morningstar Target Allocation indices are used as performance comparators. ¹ Data for the period 20/07/2020 to the 31/03/2023. ² Data for the period 31/12/2022 to the 31/03/2023. * 2020 data covers the period 20/07/2020 to 31/12/2020. Contribution to return may not sum to the total return due to rounding and averaging.

VT Astute

Balanced

Over the quarter, the Balanced fund underperformed its market comparator but outperformed benchmark inflation. Returns were driven by lower sensitivity to interest rates within fixed income and some weaker stock performance within equities. Being underweight the US and overweight diversifiers also detracted on a relative basis.

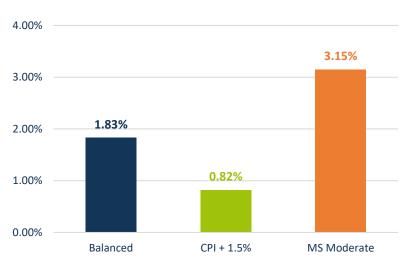
Although our short duration bonds posted positive returns over the period, the fund naturally lagged the recovery as the repricing lower in interest rate expectations was more beneficial to longer duration bonds due to their higher sensitivity to interest rate movements. In addition to this, our financials capital bond manager also struggled as the change in the treatment of hybrid capital debt during the UBS takeover of Credit Suisse meant that prices fell sharply to reflect the increase in risk.

The top performers have been concentrated towards our US equity holdings who have all delivered healthy gains led by a more resilient than expected economy. The other strong contributors included ES R&M European who rose +6.69% as companies continued to navigate margin pressures well, and Polar Capital EM Stars who rose +4.08% supported by the reopening in China and improving emerging market fundamentals.





Q1 Returns²



Asset Classes

Asset class	Avg Weight	Return	Contribution to Portfolio Return
Cash & Equivalents	2.63%	0.94%	+0.01%
Government	10.78%	1.32%	+0.16%
Credit	15.88%	0.11%	-0.04%
UK	7.21%	2.28%	+0.14%
N. America	21.64%	5.20%	+0.95%
Europe	6.27%	6.66%	+0.39%
Japan	4.56%	4.92%	+0.15%
Asia & Emerging	9.09%	1.11%	+0.09%
Thematic	3.44%	1.40%	+0.01%
Alternatives	18.51%	-0.78%	-0.04%

Top Funds

Fund Name	Avg Weight	Return	Contribution to Portfolio Return
L&G US Equity ETF	9.01%	5.12%	+0.48%
iShares Core S&P 500 ETF GBPH Dist	4.46%	7.01%	+0.33%
ES R&M European	3.28%	6.69%	+0.20%
Polar Capital EM Stars	4.04%	4.70%	+0.14%
Federated Hermes US SMID Hedged	3.02%	4.08%	+0.14%

Sources: Refinitiv Lipper for Investment Management & Astute Investment Management as at 31/03/2023. Past Performance is not a reliable indicator of future results. All performance is shown net of ongoing charges. Morningstar Target Allocation indices are used as performance comparators. ¹ Data for the period 20/07/2020 to the 31/03/2023. ² Data for the period 31/12/2022 to the 31/03/2023. * 2020 data covers the period 20/07/2020 to 31/12/2020. Contribution to return may not sum to the total return due to rounding and averaging.

VT Astute

Growth

Despite the rise in equity markets, the Growth fund underperformed its market comparator this quarter but outperformed benchmark inflation. The change in regulation in the hybrid capital debt market by the Swiss regulators held back our newly purchased financials bond manager, offsetting components however overall contributed strongly to performance, particularly in the US.

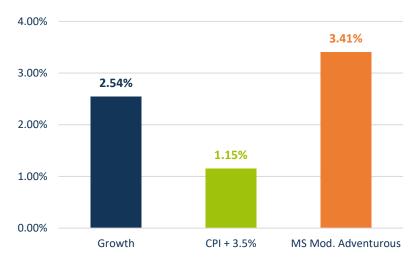
The decision by the Swiss regulators to change the treatment of hybrid capital debt such that it ranked lower than equities meant that our financials bond manager suffered as prices fell to reflect the increase in risk. Whilst all our equity components contributed positively to performance, the risk off sentiment late in the quarter surrendered the relative outperformance generated in January. Underweight the US and overweight diversifiers detracted on a relative basis.

Most of the standout performers have been concentrated around our US equity holdings who all generated very solid returns led by a more resilient than expected economy as companies continued to report good earnings. The other strong contributor included ES R&M European who rose +6.69% as European companies continued to navigate margin pressures well despite weaker demand and rising input costs.





Q1 Returns²



Asset Classes

Asset class	Avg Weight	Return	Contribution to Portfolio Return
Cash & Equivalents	2.79%	0.00%	-0.03%
Government	0.00%	0.00%	0.00%
Credit	3.65%	-3.00%	-0.46%
JK	12.27%	2.23%	+0.26%
N. America	34.04%	5.60%	+1.68%
Europe	10.78%	6.69%	+0.71%
apan	7.00%	4.83%	+0.24%
Asia & Emerging	14.11%	1.19%	+0.18%
Thematic	7.40%	1.75%	+0.04%
Alternatives	7.96%	-1.99%	-0.08%

Top Funds

Avg Weight	Return	Contribution to Portfolio Return
12.98%	5.12%	+0.72%
8.01%	7.01%	+0.60%
5.68%	6.69%	+0.36%
3.01%	10.67%	+0.29%
5.05%	4.08%	+0.25%
	12.98% 8.01% 5.68% 3.01%	12.98% 5.12% 8.01% 7.01% 5.68% 6.69% 3.01% 10.67%

Sources: Refinitiv Lipper for Investment Management & Astute Investment Management as at 31/03/2023. Past Performance is not a reliable indicator of future results. All performance is shown net of ongoing charges. Morningstar Target Allocation indices are used as performance comparators. ¹ Data for the period 20/07/2020 to the 31/03/2023. ² Data for the period 31/12/2022 to the 31/03/2023. * 2020 data covers the period 20/07/2020 to 31/12/2020. Contribution to return may not sum to the total return due to rounding and averaging.

<u>Astute Observ</u>ations

SOMEBODY PUT THE NICKELBACK!

Fortunately, this isn't a piece on the early noughties band – this story is about an alternative rock...

In March, the London Metal Exchange (LME) said in a notice that it had received information that several physical shipments out of the same LME licensed warehouse, were all subject to the same 'irregularity'. The victim in this case was JP Morgan Chase, after traders at the warehouse found that instead of having the requested amount of nickel, they found a consignment full of rocks – \$1.3mn worth!

The fake consignment's acceptance into the LME's system is another setback for the 146-year-old exchange, which had already been tarnished by its contentious resolution to cancel nickel trades last year due to an unprecedented surge in prices (as shown in the graph on the right). Given that this decision had also triggered regulatory investigations and legal actions from investors, it's not looking great for the exchange. Upon discovering the fake consignment, the LME requested the warehouse operator to conduct an examination, which revealed nine instances of absent nickel, totaling 54 tonnes. Consequently, the LME has mandated all of its authorised warehouse operators to carry out additional inspections on stored nickel, to ensure that it's all there

What's most shocking, is that this isn't the first time this has happened. The driving force behind this seems to be a combination of the widespread reliance on paper-based documentation (a long-standing system in commodity markets), which provides an ongoing opportunity for deception, in conjunction with the increased demand for nickel. The source of that demand is electrification, as countries around the world pledge to increase electric vehicle (EV) use and battery storage markets grow. Looking at the table to the right, you can see the typical differences in critical minerals needed in the construction of an internal combustion engine (ICE) car versus an EV. What the LME is going to have to avoid is a crisis of confidence in key commodity supply chains, and a potential solution could be for the industry to go digital - but there's yet to be a universally accepted standard that could replace the current paper-based approach...

Source: Refinitiv Lipper & Visual Capitalist



Mineral Usage for Conventional ICE Car vs. EV

Mineral	Conventional Car (kg/vehicle)	Electric Car (kg/vehicle)
Copper	22.3	53.2
Lithium	0	8.9
Nickel	0	39.9
Manganese	11.2	24.5
Cobalt	0	13.3
Graphite	0	66.3
Zinc	0	0.1
Rare Earth Elements	0	0.5
Other	0	0.3
Total	33.5	207

All data is valid to the 31st March 2023 and collated by Astute Investment Management. The views expressed herein should not be taken as statements of fact or relied upon when making investment decisions. This document does not constitute an offer to subscribe for, buy or sell the investment mentioned herein. An investment into the Astute Funds should only be made having read the Key Investor Information Document ("KIID"). Past performance is not a reliable indicator of future results. Investors may not get back the amount invested.

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